nanometrics

2014 ANNUAL REPORT | 2015 PROXY STATEMENT

NANOMETRICS INCORPORATED

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Letter to Our Stockholders

Nanometrics Incorporated

LETTER TO OUR STOCKHOLDERS

For Nanometrics, 2014 was a year of significant progress against our key strategic initiatives of strengthening our revenue base through new account penetration, growing our foundry footprint, and industry outperformance through market share gains.

During the year, we successfully became a critical technology supplier to every manufacturer of FinFET logic devices; to every memory company developing or producing 3D-NAND devices; and to every major foundry company in the world.

These successes represent a key inflection point for our company and help set the stage for continued outperformance in the years to come.

Of particular note is the expansion of our Tool-of-Record positions to include the top seven customers in our served market – who collectively represent greater than 80% of the total spending on Wafer Fabrication Equipment, or WFE.

In 2014, for the first time ever, we reported four 10% customers, and narrowly missed adding a fifth – all members of the top seven target group.

Importantly, our key account market share wins in 2014 have positioned us to benefit from the investments of these leading semiconductor capex spenders in the strong investment environment expected for 2015 and 2016.

There are a number of reasons behind our competitive successes and share gains, however the primary one is being a leading provider of solutions that address the process control challenges encountered in developing and manufacturing the new advanced 3D structures such as FinFET, 3D-NAND memory devices, and advanced packaging architectures.

These advanced semiconductor technologies and the process changes behind them create incremental demand for our optical metrology solutions that provide in-line, high-speed, non-destructive, and extremely precise measurements necessary for the successful fabrication of these complex 3-dimensional structures.

And while these important technology inflection points have proven to be instrumental in giving us the opportunity to increase our relevancy within the industry, industry trends going forward will help further drive our business to even higher levels of performance – as spending on Process Control technologies and tools, and in particular Optical Critical Dimension or OCD, outpace other areas of investment in the WFE market.

Taking a brief look at these important trends:

- 3D structures are systematically displacing planar architectures for leading edge devices for both the memory and logic applications. OCD is the only metrology solution that meets the combined demands for precision, resolution, speed and non-destructive measurements of these complex features, which in turn creates increased demand and thus above-industry growth for our flagship metrology solutions.
- Reduced feature sizes and complex process flows - accompanied by tighter process tolerances - are driving a greater dependence upon process control technologies, which in turn is driving increased demand for our products and applications solutions.
- The expanded use of advanced process control or APC strategies, utilizing feed-forward and feed-back techniques to improve yields, is expanding the use of both our integrated and automated metrology platforms.
- Growth and the increasing adoption of 3D packaging technologies is creating incremental demand for specialized metrology and inspection tools which address this emerging market.

It cannot be overstated just how critical it is that we provide not only the best in technology, but that we are also a trusted partner with our customers. Our team has done a tremendous job of working closely with each of our key customers, collaborating on their technology roadmaps, working tirelessly to address their issues and challenges, and providing the very best applications support in all key customer locations around the globe. This is a key mission of Nanometrics; to not only meet our customers' needs, but exceed their expectations and earn their trust in all respects.

LETTER TO OUR STOCKHOLDERS

Looking forward to 2015, our priorities are to defend our key customer positions, continue to seek ways to increase our market share, and importantly, further improve our financial performance, delivering bottom line results consistent with being a leader in the industry.

We have undertaken a number of actions to improve our gross margins, streamline our cost structure, and drive operational leverage. As our revenues benefit from the business won at each of the leading semiconductor manufacturers, we believe we can deliver substantial flow-through to gross and operating profitability.

We are also committed to maintaining a strong balance sheet, generating positive cash flow while opportunistically repurchasing stock to return capital to our stockholders. We have continued to improve our working capital management, and will continue to drive improved metrics in all areas, such as increasing inventory turns.

All told, with our success in gaining key market share, industry trends favoring our tools and technologies, and sustained healthy investments by the leaders in our industry – we believe we can deliver a strong year, with above-industry revenue growth, improved financial performance, and profitability for 2015.

Summing it up, our corporate mission is to be a world-class supplier of innovative process control products and solutions – measured by customer loyalty, market share and financial performance.

We believe we will achieve our mission through maintaining our focus while continuously improving our execution. The credit for all we do well belongs entirely to the outstanding team of Nanometrics employees and Nanometrics business partners, whose talents, energies and creativity help us successfully compete in a challenging and highly competitive industry.

Sincerely,

Dr. Timothy J. Stultz
President and Chief Executive Officer

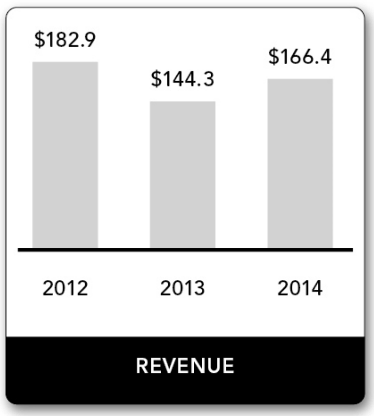
Bruce C. Rhine
Chairman of the Board

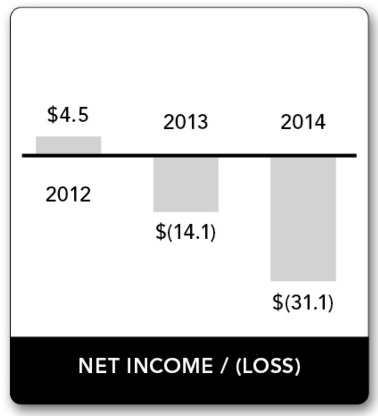
FINANCIAL NOTES

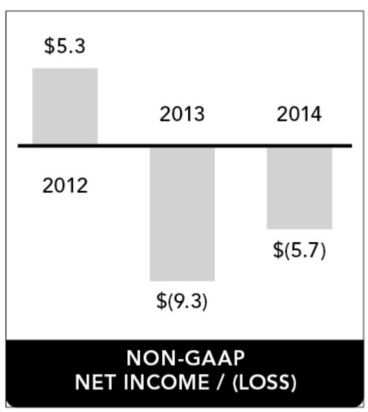
The company ended fiscal 2014 with cash, cash equivalents and marketable securities of $84.0 million, working capital of $119.6 million and tangible book value (stockholders' equity excluding goodwill and other intangible assets) of $164.7 million.

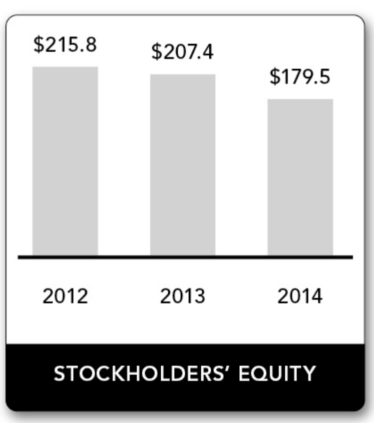
A reconciliation between GAAP operating results and non-GAAP operating results follows the financial notes below. Non-GAAP results exclude acquisition-related expenses such as amortization of acquired intangibles and transaction costs, asset impairments including certain excess and obsolete inventory charges related to a discontinued product line, restructuring charges, legal settlements, and certain discrete tax items.

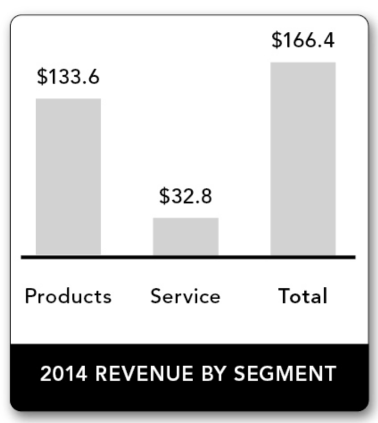
(Dollars in millions, except per share amounts)











(Amounts in millions, except per share amounts)

	2012	2013	2014
GAAP net income (loss)	$ 4.5	$ (14.1)	$ (31.1)
Non-GAAP adjustments:			
Amortization of intangible assets	3.3	3.3	3.1
Inventory write-down	–	2.4 [(a)]	–
Restructuring charge	–	1.7	2.3
Income tax effect of non–GAAP adjustments	(1.2)	(2.6)	(1.4)
Discrete and other tax items	(1.3)	–	21.4
Non–GAAP net income (loss)	$ 5.3	$ (9.3)	$ (5.7)
GAAP net income (loss) per diluted share	$ 0.19	$ (0.61)	$ (1.30)
Non-GAAP net income (loss) per diluted share	$ 0.22	$ (0.40)	$ (0.24)
Shares used in diluted income (loss) per share calculation	23.8	23.3	23.9

(a) Represents charges associated with the inventory write-off associated with the discontinuation of the Mosaic product line.

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NOTICE OF 2015 ANNUAL STOCKHOLDERS MEETING AND PROXY STATEMENT

NANOMETRICS INCORPORATED

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NANOMETRICS INCORPORATED
1550 Buckeye Drive
Milpitas, California 95035

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

To Be Held On May 19, 2015

Dear Stockholder:

You are cordially invited to attend the Annual Meeting of Stockholders of **NANOMETRICS INCORPORATED**, a Delaware corporation. The meeting will be held on Tuesday, May 19, 2015, at 9:00 a.m. local time, at our Corporate Headquarters located at 1550 Buckeye Drive, Milpitas, California 95035 for the following purposes:

1. To elect the Board's five nominees for director to serve until the next annual meeting and their successors are duly elected and qualified.
2. To approve, on an advisory basis, the compensation of Nanometrics' named executive officers, as disclosed in this proxy statement.
3. To ratify the appointment by the Audit Committee of the Board of Directors of PricewaterhouseCoopers LLP as the independent registered public accounting firm of Nanometrics for its fiscal year ending December 26, 2015.
4. To conduct any other business properly brought before the meeting.

These items of business are more fully described in the Proxy Statement accompanying this Notice.

The record date for the Annual Meeting is March 26, 2015. Only stockholders of record at the close of business on that date may vote at the meeting or any adjournment thereof.

Important Notice Regarding the Availability of Proxy Materials for the Stockholders' Meeting to Be Held on May 19, 2015, at 1550 Buckeye Drive, Milpitas, California 95035.

The proxy statement and annual report to stockholders
are available at www.proxyvote.com

By Order of the Board of Directors

/s/ Bruce C. Rhine

Bruce C. Rhine
Chairman of the Board

Milpitas, California
March 30, 2015

You are cordially invited to attend the meeting in person. Whether or not you expect to attend the meeting, please complete, date, sign and return the proxy card that may be mailed to you, or vote over the telephone or the Internet as instructed in these materials, as promptly as possible in order to ensure your representation at the meeting. Even if you have voted by proxy, you may still vote in person if you attend the meeting. Please note, however, that if your shares are held of record by a broker, bank or other nominee and you wish to vote at the meeting, you must obtain a proxy issued in your name from that record holder.

NANOMETRICS INCORPORATED

2015 ANNUAL MEETING OF STOCKHOLDERS

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NANOMETRICS INCORPORATED
1550 Buckeye Drive
Milpitas, California 95035

PROXY STATEMENT FOR THE 2015 ANNUAL MEETING OF STOCKHOLDERS

May 19, 2015

QUESTIONS AND ANSWERS ABOUT THESE PROXY MATERIALS AND VOTING

Why did I receive a notice regarding the availability of proxy materials on the Internet?

Pursuant to rules adopted by the Securities and Exchange Commission (the "SEC"), we have elected to provide access to our proxy materials over the Internet. Accordingly, we have sent you a Notice of Internet Availability of Proxy Materials (the “Notice”) because the Board of Directors of Nanometrics Incorporated is soliciting your proxy to vote at the 2015 Annual Meeting of Stockholders, including at any adjournments or postponements of the meeting. All stockholders will have the ability to access the proxy materials on the website referred to in the Notice or request to receive a printed set of the proxy materials. Instructions on how to access the proxy materials over the Internet or to request a printed copy may be found in the Notice.

We intend to mail the Notice on or about April 8, 2015, to all stockholders of record entitled to vote at the annual meeting.

Will I receive any other proxy materials by mail?

We may send you a proxy card, along with a second Notice, on or after April 18, 2015.

How do I attend the annual meeting?

The meeting will be held on Tuesday, May 19, 2015, at 9:00 a.m., local time, at our Corporate Headquarters located at 1550 Buckeye Drive, Milpitas, California 95035. Directions to the annual meeting may be found on our website www.nanometrics.com by clicking on “Contact” then “Map & Local Driving Directions.” Information on how to vote in person at the annual meeting is discussed below.

Who can vote at the annual meeting?

Only stockholders of record at the close of business on March 26, 2015, will be entitled to vote at the annual meeting. On this record date, there were 23,968,541 shares of common stock outstanding and entitled to vote.

Stockholder of Record: Shares Registered in Your Name

If on March 26, 2015, your shares were registered directly in your name with Nanometrics' transfer agent, Computershare Trust Company, N.A., then you are a stockholder of record. As a stockholder of record, you may vote in person at the meeting or vote by proxy. Whether or not you plan to attend the meeting, we urge you to fill out and return a proxy card (if you have received one), or vote by proxy over the telephone or on the Internet as instructed below, to ensure your vote is counted.

Beneficial Owner Shares Registered in the Name of a Broker or Bank

If on March 26, 2015, your shares were held, not in your name, but rather in an account at a brokerage firm, bank, dealer or other similar organization, then you are the beneficial owner of shares held in “street name” and the Notice is being forwarded to you by that organization. The organization holding your account is considered to be the stockholder of record for purposes of voting at the annual meeting. As a beneficial owner, you have the right to direct your broker or other agent regarding how to vote the shares in your account. You are also invited to attend the annual meeting. However, since you are not the stockholder of record, you may not vote your shares in person at the meeting unless you request and obtain a valid proxy from your broker or other agent.

What am I voting on?

There are three matters scheduled for a vote:

- Election of five directors;
- Advisory approval of the compensation of Nanometrics' named executive officers, as disclosed in this proxy statement in accordance with SEC rules; and
- Ratification of appointment by the Audit Committee of the Board of Directors of PricewaterhouseCoopers LLP as the independent registered public accounting firm of Nanometrics for its fiscal year ending December 26, 2015.

What if another matter is properly brought before the meeting?

The Board of Directors knows of no other matters that will be presented for consideration at the Annual Meeting. If any other matters are properly brought before the meeting, it is the intention of the persons named in the accompanying proxy to vote on those matters in accordance with their best judgment.

How do I vote?

You may either vote "For" all the nominees to the Board of Directors or you may "Withhold" your vote for any nominee you specify. For each of the other matters to be voted on, you may vote "For" or "Against" or "Abstain" from voting.

The procedures for voting are as follows:

Stockholder of Record: Shares Registered in Your Name

If you are a stockholder of record, you may vote in person at the annual meeting or vote by proxy over the telephone, or vote by proxy through the Internet, or vote by proxy using a proxy card that you may request or that we may elect to deliver at a later time. Whether or not you plan to attend the meeting, we urge you to vote by proxy to ensure your vote is counted. You may still attend the meeting and vote in person even if you have already voted by proxy.

- To vote in person, come to the annual meeting and you will receive a ballot when you arrive.
- To vote using the proxy card, simply complete, sign and date the proxy card that may be delivered and return it promptly in the envelope provided. If you return your signed proxy card to us before the annual meeting we will vote your shares as you direct.
- To vote over the telephone, dial toll-free 1-800-690-6903 using a touch-tone phone and follow the recorded instructions. You will be asked to provide the company number and control number from the **Notice**. Your telephone vote must be received by 11:59 p.m., Eastern Time on May 18, 2015, to be counted.
- To vote through the Internet, go to www.proxyvote.com to complete an electronic proxy card. You will be asked to provide the company number and control number from the **Notice**. Your Internet vote must be received by 11:59 p.m., Eastern Time on May 18, 2015, to be counted.

Beneficial Owner: Shares Registered in the Name of Broker or Bank

If you are a beneficial owner of shares registered in the name of your broker, bank, or other agent, you should have received a Notice containing voting instructions from that organization rather than from Nanometrics. Simply follow the voting instructions in the Notice to ensure that your vote is counted. To vote in person at the annual meeting, you must obtain a valid proxy from your broker, bank or other agent. Follow the instructions from your broker or bank included with these proxy materials, or contact your broker or bank to request a proxy form.

Internet proxy voting may be provided to allow you to vote your shares online, with procedures designed to ensure the authenticity and correctness of your proxy vote instructions. However, please be aware that you must bear any costs associated with your Internet access, such as usage charges from Internet access providers and telephone companies.

How many votes do I have?

On each matter to be voted upon, you have one vote for each share of common stock you own as of March 26, 2015.

What happens if I do not vote?

Stockholder of Record: Shares Registered in Your Name

If you are a stockholder of record and do not vote by completing your proxy card, by telephone, through the Internet or in person at the annual meeting, your shares will not be voted.

Beneficial Owner: Shares Registered in the Name of Broker or Bank

If you are a beneficial owner and do not instruct your broker, bank, or other agent how to vote your shares, the question of whether your broker or nominee will still be able to vote your shares depends on whether the New York Stock Exchange (“NYSE”) deems the particular proposal to be a “routine” matter. Brokers and nominees can use their discretion to vote “uninstructed” shares with respect to matters that are considered to be “routine,” but not with respect to “non-routine” matters. Under the rules and interpretations of the NYSE, “non-routine” matters are matters that may substantially affect the rights or privileges of stockholders, such as mergers, stockholder proposals, elections of directors (even if not contested), executive compensation (including any advisory stockholder votes on executive compensation and on the frequency of stockholder votes on executive compensation), and certain corporate governance proposals, even if management-supported. Accordingly, your broker or nominee may not vote your shares on Proposals 1 or 2 without your instructions, but may vote your shares on Proposal 3 even in the absence of your instruction.

What if I return a proxy card or otherwise vote but do not make specific choices?

If you return a signed and dated proxy card or otherwise vote without marking voting selections, your shares will be voted, as applicable, “For” the election of all five nominees for director, “For” the advisory approval of executive compensation, and “For” the ratification of the appointment by the Audit Committee of the Board of Directors of PricewaterhouseCoopers LLP as the independent registered public accounting firm of Nanometrics for its fiscal year ending December 26, 2015. If any other matter is properly presented at the meeting, your proxyholder (one of the individuals named on your proxy card) will vote your shares using his or her best judgment.

Who is paying for this proxy solicitation?

We will pay for the entire cost of soliciting proxies. In addition to these proxy materials, our directors and employees may also solicit proxies in person, by telephone, or by other means of communication. Directors and employees will not be paid any additional compensation for soliciting proxies. We may also reimburse brokerage firms, banks and other agents for the cost of forwarding proxy materials to beneficial owners.

What does it mean if I receive more than one Notice?

If you receive more than one Notice, your shares may be registered in more than one name or in different accounts. Please follow the voting instructions on the Notices to ensure that all of your shares are voted.

Can I change my vote after submitting my proxy?

Stockholder of Record: Shares Registered in Your Name

Yes. You can revoke your proxy at any time before the final vote at the meeting. If you are the record holder of your shares, you may revoke your proxy in any one of the following ways:

- You may submit another properly completed proxy card with a later date.
- You may grant a subsequent proxy by telephone or through the Internet.

- You may send a timely written notice that you are revoking your proxy to Nanometrics' Secretary at Nanometrics Incorporated, 1550 Buckeye Drive, Milpitas, California 95035.
- You may attend the annual meeting and vote in person. Simply attending the meeting will not, by itself, revoke your proxy.

Your most current proxy card or telephone or Internet proxy is the one that is counted.

Beneficial Owner: Shares Registered in the Name of Broker or Bank

If your shares are held by your broker or bank as a nominee or agent, you should follow the instructions provided by your broker or bank.

When are stockholder proposals and director nominations due for next year's annual meeting?

To be considered for inclusion in next year's proxy materials, your proposal must be submitted in writing by December 10, 2015, to Nanometrics' Secretary at Nanometrics Incorporated, 1550 Buckeye Drive, Milpitas, California 95035. If the date of our 2016 annual meeting is changed by more than 30 days from the one year anniversary of the date of the 2015 annual meeting, the proposal must be received a reasonable time before we begin to print and mail our proxy materials. The submission of a stockholder proposal does not guarantee that it will be included in our proxy statement.

If you wish to submit a proposal (including a director nomination) at the meeting that is not to be included in next year's proxy materials, you must do so by December 10, 2015, to Nanometrics' Secretary at Nanometrics Incorporated, 1550 Buckeye Drive, Milpitas, California 95035. If we set the date of our 2016 annual meeting to a date more than 30 days from the one year anniversary of the date of our 2015 annual meeting, then the deadline for receipt of stockholder proposals will be no later than the close of business on the later of 120 calendar days in advance of the 2016 annual meeting or ten days following the date on which we first publicly announce the date of the 2016 annual meeting. You are also advised to review Nanometrics' Bylaws, which contain additional requirements about advance notice of stockholder proposals and director nominations.

How are votes counted?

Votes will be counted by the inspector of election appointed for the meeting, who will separately count: for the proposal to elect directors, votes "For," "Withhold" and broker non-votes; and with respect to other proposals, votes "For" and "Against," abstentions and, if applicable, broker non-votes. Abstentions will be counted towards the vote total for each of Proposals 2 and 3. Broker non-votes have no effect and will not be counted towards the vote total for any proposal.

What are "broker non-votes"?

As discussed above, when a beneficial owner of shares held in "street name" does not give instructions to the broker or nominee holding the shares as to how to vote on matters deemed by the NYSE to be "non-routine," the broker or nominee cannot vote the shares. These unvoted shares are counted as "broker non-votes."

How many votes are needed to approve each proposal?

For Proposal 1, the election of directors, the five nominees receiving the most "For" votes from the holders of shares present in person or represented by proxy and entitled to vote on the election of directors will be elected. Only votes "For" or "Withheld" will affect the outcome. However, the Board of Directors has adopted a Majority Vote Policy, pursuant to which any director-nominee that is elected but fails to receive more "For" votes than "Withheld" votes must submit his/her resignation for consideration by the Board. The Board will then decide whether to accept the director's resignation. Details of the Majority Vote Policy are set out below under "Corporate Governance - Voting for Directors - Majority Vote Policy."

Proposal No. 2, advisory approval of the compensation of Nanometrics' named executive officers, will be considered to be approved if it receives "For" votes from the holders of a majority of shares present in person or represented by proxy and entitled to vote on the matter. If you "Abstain" from voting, it will have the same effect as an "Against" vote. Broker non-votes will have no effect.

To be approved, Proposal No. 3, ratification of the appointment by the Audit Committee of the Board of Directors of PricewaterhouseCoopers LLP as the independent registered public accounting firm of Nanometrics for its fiscal year ending December 26, 2015, must receive “For” votes from the holders of a majority of shares present in person or represented by proxy and entitled to vote on the matter. If you “Abstain” from voting, it will have the same effect as an “Against” vote. Broker non-votes will have no effect.

What is the quorum requirement?

A quorum of stockholders is necessary to hold a valid meeting. A quorum will be present if stockholders holding at least a majority of the outstanding shares entitled to vote are present at the meeting in person or represented by proxy. On the record date, there were 23,968,541 shares outstanding and entitled to vote. Thus, the holders of 11,984,271 shares must be present in person or represented by proxy at the meeting to have a quorum.

Your shares will be counted towards the quorum only if you submit a valid proxy (or one is submitted on your behalf by your broker, bank or other nominee) or if you vote in person at the meeting. Abstentions and broker non-votes will be counted towards the quorum requirement. If there is no quorum, the holders of a majority of shares present at the meeting in person or represented by proxy may adjourn the meeting to another date.

How can I find out the results of the voting at the annual meeting?

Preliminary voting results will be announced at the annual meeting. In addition, final voting results will be published in a current report on Form 8-K that we expect to file within four business days after the annual meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the meeting, we intend to file a Form 8-K to publish preliminary results and, within four business days after the final results are known to us, file an additional Form 8-K to publish the final results.

PROPOSAL 1:
ELECTION OF DIRECTORS

At the 2015 annual meeting of stockholders, unless otherwise instructed, the proxy holders will vote the proxies received by them for the nominees named below, each of whom has been nominated by the Board of Directors and is currently a director of Nanometrics.

The Board of Directors currently has six members. All current directors are standing for election at the 2015 annual meeting, other than Stephen Newberry who informed the Board that he is declining to stand for reelection at the 2015 annual meeting. Effective at the annual meeting, the size of the Board of Directors will be reduced by one to be five members. The nominees were recommended by the Nominating and Governance Committee of the Board of Directors. All of the nominees named below with the exception of Ms. Tsingos were previously elected as directors by our stockholders. Ms. Tsingos was identified by and recommended to the Nominating and Governance Committee as a member of our Board of Directors by a non-management director.

If the nominees are unable or decline to serve as a director at the time of the annual meeting, the proxies will be voted for any nominee who shall be designated by the present Board to fill the vacancy. We do not have any reason to believe that any of the nominees will be unable or will decline to serve as a director. Directors are elected by a plurality of the votes of the holders of shares present in person or by proxy and entitled to vote on the election of directors. The five nominees receiving the highest number of affirmative votes will be elected. Pursuant to our Majority Vote Policy, if a nominee for director receives a greater number of “Withhold” votes than “For” votes, that director shall promptly tender to the Nominating and Governance Committee his/her offer of resignation. Within 90 days following certification of the stockholder vote, the Committee shall recommend to the Board the action to be taken with respect to such offer of resignation, and the Board shall consider and act upon the Committee’s recommendation. Unless marked otherwise, the proxy holders will vote proxies returned to us for the nominees named below.

Director Nominees

Set forth below is information regarding each of our directors, including their ages, as of April 6, 2015, the periods during which they have served as a director, and certain information as to principal occupations and directorships held by them in corporations whose shares are publicly registered.

J. Thomas Bentley, 65, has served as a director since April 2004. Mr. Bentley served as a Managing Director at SVB Alliant (formerly Alliant Partners), a mergers and acquisitions firm, from 1990, when he co-founded the firm, until October 2005. Mr. Bentley currently serves on the board of directors of Rambus, Inc., a chip interface technology company. Mr. Bentley holds a B.A. degree in Economics from Vanderbilt University and a Master of Science in Management from the Massachusetts Institute of Technology. Mr. Bentley’s extensive knowledge of the capital markets, strategic planning and mergers and acquisitions from his experience at SVB Alliant provides expertise to the Board in matters regarding Nanometrics’ capital requirements and strategic direction.

Edward J. Brown, Jr*.,* 57, has served as a director since February 2013. Mr. Brown is currently the chief executive officer of the Cymer Light Source Division of ASML, a supplier of light sources for deep ultraviolet photolithography systems. Mr. Brown has held this position since the completion of Cymer’s merger with ASML Holding, Ltd. in May 2013. Prior to the merger with ASML, Mr. Brown served as president and chief operating officer of Cymer, Inc. since September 2005. From 1984 to 2005, Mr. Brown was employed at Applied Materials, Inc. where he held numerous high-level management positions including group vice president and senior advisor to the president, vice president and general manager of the Intel business unit, as well as managing director heading up their largest product division, global operations. Prior to Applied Materials Inc., Mr. Brown held key engineering positions at TRW Corporation and Burroughs Corporation. Mr. Brown is a member of SEMI North American Advisory Board. Mr. Brown received a master’s degree in business administration from National University and a bachelor’s degree in industrial studies from San Diego State University. Mr. Brown’s qualifications to serve as a director include his 30 years of experience in the semiconductor industry and his operations expertise.

Bruce C. Rhine, 57, has served as our Chairman of the Board of Directors since July 2007 and as a director since July 2006. From July 2006 to February 2008, Mr. Rhine served as our Chief Strategy Officer. From March 2007 to August 2007, Mr. Rhine served as our Chief Executive Officer. From 2000 to 2006, Mr. Rhine served as Chairman and Chief Executive Officer of Accent Optical Technologies, Inc. and as its President from January 2003 to April 2005 and from August 2000 to September 2001. Mr. Rhine holds a B.S. degree in Chemical Engineering and an M.B.A. in Finance from The Pennsylvania State University. In addition to his experience from his prior senior management service to Nanometrics, Mr. Rhine brings extensive industry knowledge and executive management experience to the Board.

Timothy J. Stultz, Ph.D., 67, has served as President, Chief Executive Officer and a director since August 2007. From June 2003 to August 2007, Dr. Stultz served as the President and Chief Executive Officer and a director of Imago Scientific Instruments Corporation, a supplier of proprietary 3-D atom probe microscopes to the research materials and microelectronics industries. Prior to Imago, Dr. Stultz served as President and Chief Executive Officer for ThauMDx, a developer of diagnostic systems and technologies for the analysis of biomolecules, drugs and chemicals. Dr. Stultz also serves on the Board of Directors of Tessera Technologies, Inc. Dr. Stultz received his B.S., M.S. and Ph.D. degrees in Materials Science and Engineering from Stanford University. In addition to his institutional knowledge as the executive leader of Nanometrics, Dr. Stultz's scientific background and significant senior executive management experience in high-tech industries is important to the Board.

Christine A. Tsingos, 56, has served as a director since May 2014. Ms. Tsingos is currently the Executive Vice President and Chief Financial Officer of Bio-Rad Laboratories. In 2002, Ms. Tsingos was named Bio-Rad's Chief Financial Officer; in 2003, she became Vice President and in 2012, she was named Executive Vice President. Bio-Rad designs, manufactures and distributes a broad range of innovative products and solutions for the global life science and clinical diagnostic markets. Prior to Bio-Rad, Ms. Tsingos held executive positions at Autodesk, The Cooper Companies, and Attest Systems. Prior to that, Ms. Tsingos was a consultant to Attest Systems from 2000 to 2002. She earned her bachelor of arts in International Studies from the American University in Washington D.C. and an M.B.A in International Business from the George Washington University. In 2010, Ms. Tsingos was awarded the prestigious Bay Area CFO of the Year. Ms. Tsingos's qualifications to serve as a director include over 25 years of financial and operational experience.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE IN FAVOR OF EACH NAMED NOMINEE.

CORPORATE GOVERNANCE

Board Structure

Bruce C. Rhine serves as the Chairman of the Board and Timothy J. Stultz, Ph.D. serves as both the Chief Executive Officer and a director of Nanometrics. We believe that having a separate Chairman and Chief Executive Officer is appropriate and is consistent with corporate governance best practices. From July 2006 to February 2008, Mr. Rhine served as our Chief Strategy Officer, and from March 2007 to August 2007, Mr. Rhine served as our Chief Executive Officer. Because of his previous roles with Nanometrics, Mr. Rhine is intimately familiar with Nanometrics' business and industry, and very capable of effectively identifying strategic priorities, leading discussions of the Board of Directors and defining Nanometrics' strategic objectives. The Board of Directors determined that Mr. Rhine became an independent member of the Board effective February 2011 under the NASDAQ Listing Rules due to the passage of time subsequent to his previous management role with Nanometrics. Dr. Stultz, as the Chief Executive Officer, is the individual selected by the Board of Directors to manage Nanometrics on a day-to-day basis, and his prior experience and direct involvement in Nanometrics' operations allows him to provide valuable insights with respect to strategic planning and the operational requirements to meet Nanometrics' short- and long-term objectives. Nanometrics' independent directors bring experience, oversight and expertise from outside the company and industry.

The Board's Role in Risk Oversight

One of the Board's primary responsibilities is reviewing Nanometrics' strategic plans and objectives, including oversight of the principal risk exposures of the company. The Board does not have a standing risk management committee, but rather administers this oversight function directly through the Board as a whole, as well as through various Board standing committees that address risks inherent in their respective areas of oversight. In particular, the Board is responsible for monitoring and assessing strategic risk exposure, including a determination of the nature and level of risk appropriate for the company. The Audit Committee assists the Board in oversight and monitoring of the legal and financial risks facing Nanometrics, and management's approach to addressing these risks and strategies for risk mitigation. The Audit Committee is also responsible for discussing guidelines and policies governing the process by which management and other persons responsible for risk management, assess and manage Nanometrics' exposure to risk, as well as Nanometrics' major financial risk exposures and the steps management has taken to monitor and control such exposures, based on consultation with Nanometrics' management and independent auditors. Our Compensation Committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking. The Board addresses, at least annually, the principal current and future risk exposures of Nanometrics. The Board receives regular reports from members of senior management on areas of material risk to Nanometrics, including operational, financial, legal and regulatory, strategic and reputation risks.

Board of Directors Meetings and Committees

The full Board of Directors met five times during the fiscal year ended December 27, 2014. During the fiscal year ended December 27, 2014, all directors attended at least 75% of the aggregate number of meetings of the Board of Directors and meetings of committees on which they served. The standing committees of the Board of Directors include an Audit Committee, a Compensation Committee and a Nominating and Governance Committee.

Directors are encouraged to attend the annual meeting of stockholders. All members of the Board of Directors then in office attended the 2014 annual meeting of stockholders.

The Board of Directors has determined that all of its directors meet the independence requirements of the NASDAQ Stock Market, with the exception of Timothy J. Stultz, Ph.D., due to his position as our President and Chief Executive Officer.

Audit Committee

The Audit Committee of the Board of Directors oversees our financial reporting, our internal audit and control functions, the results and scope of the annual audit and quarterly reviews conducted by our independent registered public accounting firm, and our compliance with legal matters that may have a significant impact on our financial reports. In addition, the Audit Committee has the responsibility to consider and recommend the engagement of, and to review and approve fee arrangements with, our independent registered public accounting firm. The Audit Committee also monitors transactions between Nanometrics and our officers and directors for any potential conflicts of interest and assists the Board of Directors in its risk oversight role.

During the 2014 fiscal year, the Audit Committee consisted of Howard A. Bain III (Chairman), J. Thomas Bentley and Bruce C. Rhine until May 20, 2014, and thereafter of Christine A. Tsingos (Chair), J. Thomas Bentley and Bruce C. Rhine. Mr. Bain did not stand for reelection at the 2014 annual meeting of stockholders, and was succeeded by Ms. Tsingos who was appointed as chair of the Audit Committee on May 20, 2014. The Board of Directors has determined that each member of our Audit Committee is "independent" within the meaning of the rules of the Securities and Exchange Commission and the Listing Rules of NASDAQ, and has the qualifications or previous experience to be able to read and understand financial statements. Further, the Board of Directors has determined that each of Ms. Tsingos, Chair of the Audit Committee, and Mr. Bentley qualify as an "audit committee financial expert," as such term is used in the Securities and Exchange Commission rules.

The Audit Committee met eight times during the 2014 fiscal year.

The report of the Audit Committee is included on page 12 of this Proxy Statement. The Board of Directors has adopted a written Audit Committee Charter, which is available on our website at http://investor.nanometrics.com/governance.cfm.

Compensation Committee

The Compensation Committee has overall responsibility for evaluating and approving our executive officer compensation, including incentive compensation, benefit, severance, equity-based and other compensation plans, policies and programs. During the 2014 fiscal year, the Compensation Committee reviewed and approved our compensation policies and programs for the chief executive officer, as well as established and had oversight responsibility with regard to the compensation of other executive officers of Nanometrics. The Compensation Committee also has the responsibility to recommend to the Board of Directors a compensation program for non-employee members of the Board.

The Compensation Committee is also responsible for approving the grant of stock options and stock awards to our employees under our equity compensation plans. The Compensation Committee has delegated to Nanometrics' officers the authority, within certain parameters, to approve the grant of stock options with respect to employees and consultants who are not executive officers for purposes of Section 16 of the Exchange Act. The Compensation Committee also assists the Board of Directors in assessing the risks, if any, associated with Nanometrics' overall compensation policies. Although the Compensation Committee has not done so to date, the Compensation Committee may, to the extent permitted under applicable law, the rules of NASDAQ and the Securities and Exchange Commission, and Nanometrics' Certificate of Incorporation and Bylaws, form and delegate its authority to a subcommittee, when appropriate, including delegating to a subcommittee consisting solely of independent, non-employee, outside directors to make grants of stock options to executive officers and directors, provided that such grants are presented to the full Compensation Committee for approval at the following Compensation Committee meeting.

During the 2014 fiscal year, the Compensation Committee consisted of Stephen G. Newberry (chairman), J. Thomas Bentley, and Edward J. Brown Jr. Each current member of our Compensation Committee is an "outside" director as defined in Section 162(m) of the Internal Revenue Code of 1986, as amended, and a "non-employee" director within the meaning of Rule 16b-3 of the Exchange Act. The Board of Directors has determined that each of the directors serving on our Compensation Committee is "independent" within the meaning of the Listing Rules of NASDAQ as currently in effect.

The Compensation Committee met five times during the 2014 fiscal year.

The Compensation Committee Report is included on page 27 of this Proxy Statement. The Board of Directors has adopted a written Compensation Committee Charter, which is available on our website at http://investor.nanometrics.com/governance.cfm.

Compensation Committee Processes and Procedures: Typically, the Compensation Committee meets at least quarterly, and with greater frequency, if necessary. The Compensation Committee meets regularly in executive session. However, from time to time, various members of management and other employees as well as outside consultants may be invited by the Compensation Committee to make presentations, to provide financial or other background information or advice, or to otherwise participate in Compensation Committee meetings. The Chief Executive Officer may not participate in, or be present during, any deliberations or determinations of the Compensation Committee regarding his compensation. The charter of the Compensation Committee grants the Compensation Committee full access to all books, records, facilities and personnel of Nanometrics, as well as authority to obtain, at the expense of Nanometrics, advice and assistance from internal and external legal, accounting or other advisers and consultants and other external resources that the Compensation Committee considers necessary or appropriate in the performance of its duties. In particular, the Compensation Committee has the authority to retain compensation consultants to assist in its evaluation of executive and director compensation, including the authority to approve the consultant's reasonable fees and other retention terms.

The Compensation Committee typically makes most of the significant adjustments to annual compensation, determines bonus and equity awards, and establishes new performance objectives, at one or more meetings held during the first quarter of the year. However, the Compensation Committee also considers matters related to individual compensation, such as compensation for new executive hires, as well as high-level strategic issues, such as the efficacy of Nanometrics' compensation strategy, potential modifications to that strategy and new trends, plans or approaches to compensation, at various meetings throughout the year. Generally, the Compensation Committee's process comprises two related elements: the determination of compensation levels and the establishment of performance objectives for the current year. As discussed further in the Compensation Discussion and Analysis below, for executives other than the Chief Executive Officer, the Compensation Committee solicits and considers evaluations and recommendations submitted to the Committee by the Chief Executive Officer. In the case of the Chief Executive Officer, the evaluation of his performance is conducted by the Compensation Committee, which determines any adjustments to his compensation as well as awards to be granted. For all executives, as part of its deliberations, the Compensation Committee may review and consider, as appropriate, materials such as financial reports and projections, operational data, tax and accounting information, tally sheets that set forth the total compensation that may become payable to executives in various hypothetical scenarios, executive and director stock ownership information, company stock performance data, analyses of historical executive compensation levels, current company-wide compensation levels, and recommendations of the Compensation Committee's compensation consultant, including analyses of executive compensation paid at other companies identified by the consultant. Under its charter, the Compensation Committee may select, or receive advice from, a compensation consultant, legal counsel or other adviser to the Compensation Committee, other than in-house counsel and certain other types of advisers, only after taking into consideration six factors, prescribed by the SEC and NASDAQ, that bear upon the adviser's independence; however, there is no requirement than any adviser be independent.

During the past fiscal year, the Compensation Committee engaged Compensia, Inc. as its compensation consultant. Compensia has advised the committee for several years and is very familiar with the industry and geographies in which Nanometrics operates. The Compensation Committee requested that Compensia:

- evaluate the efficacy of Nanometrics' existing compensation strategy and practices in supporting and reinforcing Nanometrics' long-term strategic goals;
- assist in refining Nanometrics' compensation strategy and in developing and implementing an executive compensation program to execute that strategy; and
- make recommendations regarding 2014 executive compensation.

As part of its engagement, the Compensation Committee requested that Compensia develop a comparative group of companies and to perform analyses of competitive performance and compensation levels for that group. The Committee instructed Compensia to select comparator companies similarly sized and in the same or closely related industry to that of Nanometrics using factors such as, but not limited to, revenue size, market capitalization, and number of employees. At the request of the Compensation Committee, Compensia also provided information regarding the labor markets in which Nanometrics competes. Compensia ultimately developed recommendations that were presented to the Compensation Committee for its consideration. Following an active dialogue with Compensia, the Compensation Committee made its independent determinations regarding the compensation of Nanometrics' executive officers. These decisions are discussed in the Compensation Discussion and Analysis section of this Proxy Statement.

Nominating and Governance Committee

The Nominating and Governance Committee assists the Board of Directors in identifying and qualifying candidates to join the Board of Directors and addresses various governance issues. The Nominating and Governance Committee utilizes a variety of methods for identifying and evaluating nominees. Its general policy is to assess the appropriate size and needs of the Board of Directors and whether any vacancies are expected due to retirement or otherwise. In addition, candidates for director nominees are typically reviewed in the context of the current composition of the Board, the operating requirements of Nanometrics, the current needs of the Board, and the long-term interests of stockholders, with the goal of maintaining a balance of knowledge, experience and capability. In the event those vacancies are anticipated, or otherwise arise, the Nominating and Governance Committee will consider recommending various potential candidates to fill such vacancies. Candidates may come to the attention of the Nominating and Governance Committee through its current members, stockholders or other persons. Pursuant to the Nominating and Governance Committee charter, the Committee will consider properly submitted stockholder recommendations for nominations for candidacy. Stockholders who wish to recommend individuals for consideration by the

Nominating and Governance Committee to become nominees for election to the Board may do so by delivering a written recommendation to the Nominating and Governance Committee at our principal offices. Nominees may also be submitted directly by stockholders in accordance with Nanometrics' Bylaws as discussed under "Stockholder Proposals" above. Although the Nominating and Governance Committee does not have a formal policy regarding stockholder recommendations for director nominees because the Board of Directors has an open policy regarding communications with stockholders and has not deemed it necessary to develop a formal policy regarding recommendations for director nominations by stockholders, the Nominating and Governance Committee intends to consider director candidates properly submitted by stockholders under the same criteria as candidates recommended by directors or others.

The Nominating and Governance Committee has no specific minimum qualifications for director candidates. In general, however, persons considered for Board of Directors positions must have demonstrated leadership capabilities, be of sound mind and high moral character, have no personal or financial interest that would conflict or appear to conflict with the interests of Nanometrics and be willing and able to commit the necessary time for Board of Directors and committee service. The Nominating and Governance Committee also intends to consider such factors as possessing relevant expertise upon which to be able to offer advice and guidance to management, demonstrated excellence in his or her field, having the ability to exercise sound business judgment and having the commitment to rigorously represent the long-term interests of Nanometrics' stockholders. However, the Nominating and Governance Committee retains the right to modify these qualifications from time to time.

The Nominating and Governance Committee also recommends to the Board of Directors certain guidelines regarding corporate governance and standards regarding the independence of outside directors applicable to Nanometrics and reviews such guidelines and standards and the provisions of the Nominating and Governance Committee charter on a regular basis to confirm that such guidelines, standards and charter remain consistent with sound corporate governance practices and with any legal or regulatory requirements of NASDAQ and the Securities and Exchange Commission. The Nominating and Governance Committee also monitors the Board of Directors, and Nanometrics' compliance with any commitments made to our regulators and changes in corporate governance practices.

The Nominating and Governance Committee does not have a stated policy with regard to diversity of the Board of Directors. However, the Committee believes that Board members should represent a balance of diverse backgrounds and skills, including marketing, finance, manufacturing, engineering, science, and international experience.

During the 2014 fiscal year, the Nominating and Governance Committee consisted of Bruce C. Rhine (Chairman), Stephen G. Newberry, Edward J. Brown Jr. and until the 2014 annual meeting, Dr. William G. Oldham. The Board of Directors has determined that each of the directors serving on our Nominating and Governance Committee is "independent" within the meaning of the Listing Rules of NASDAQ.

The Nominating and Governance Committee met four times in the 2014 fiscal year.

The Board of Directors has adopted a written Nominating and Governance Committee Charter, which is available on our website at http://investor.nanometrics.com/governance.cfm.

Voting For Directors – Majority Vote Policy

If a nominee for director in an uncontested election receives a greater number of "Withhold" votes for election than "For" votes ("Majority Withheld Vote"), that director must promptly tender to the Board his or her offer of resignation. If a director receives a Majority Withheld Vote, our Nominating and Governance Committee (or such other committee as the Board may appoint) shall make a recommendation to the Board, which will decide whether to accept or reject the resignation previously tendered by such director.

The Board must act on the tendered resignation, taking into account the recommendation of such committee, within 90 days from the date of the certification of the election results. The director whose resignation is under consideration is not permitted to participate in the recommendation of the committee or deliberations of the Board with respect to his or her resignation. However, if the only directors who did not receive a Majority Withheld Vote in the same election constitute less than a majority of directors, all directors may participate in the action regarding whether to accept the resignation offers. If a director's resignation is not accepted by the Board, the director will continue to serve until the next annual meeting of shareholders or until his or her successor is duly elected and qualified, or his or her earlier resignation or removal. If a director's resignation is accepted by the Board, then the Board, in its sole discretion, must fill any resulting vacancy or decrease the size of the Board.

Stockholder Communication Policy

We have established a formal process for stockholders to send communications to the Board of Directors or to individual directors. The names of all directors are available to stockholders in this Proxy Statement. Stockholder communications may be submitted in writing to Nanometrics Incorporated, 1550 Buckeye Drive, Milpitas, California 95035, Attention: Office of the Secretary. If we receive any stockholder communication intended for the full Board of Directors or any individual director, we will forward the communication to the full Board of Directors or the individual director, unless the communication is clearly of a marketing nature or is unduly hostile, threatening, illegal or similarly inappropriate.

Code of Ethics

We have adopted a Code of Business Conduct and Ethics that applies to all directors, executive officers and employees. We post our Code of Business Conduct and Ethics on our website at: http://investor.nanometrics.com/governance.cfm.

Related Person Transaction Policy

Nanometrics has a written policy regarding related party transactions that requires that the Audit Committee review any transaction or series of transactions in excess of $50,000 in any year between Nanometrics, on the one hand, and an officer, director or 5% or greater stockholder, on the other. Nanometrics' Chief Financial Officer has the responsibility for bringing the facts concerning a proposed related party transaction to the Audit Committee. The policy permits approval only in the event of a finding that the transaction is on terms no less favorable than would have been obtained in an ordinary arms-length transaction with an independent third party.

Report of the Audit Committee of the Board of Directors*

The Audit Committee reviews Nanometrics' financial reporting process on behalf of the Board of Directors. Management has the primary responsibility for establishing and maintaining adequate internal control over financial reporting, for preparing the financial statements and for the reporting process. The Audit Committee members do not serve as professional accountants or auditors, and their functions are not intended to duplicate or to certify the activities of management and the independent registered public accounting firm. Nanometrics' independent auditors are engaged to audit and report on the conformity of our financial statements to accounting principles generally accepted in the United States and the effectiveness of our internal control over financial reporting.

In this context, the Audit Committee reviewed and discussed with management the audited financial statements of Nanometrics for the year ended December 27, 2014. The Audit Committee has discussed with the independent registered public accounting firm the matters required to be discussed by Auditing Standard No. 16, *Communications with Audit Committees*, as adopted by the Public Company Accounting Oversight Board ("PCAOB"). In addition, the Audit Committee has received the written disclosures and the letter from the independent registered public accounting firm required by applicable requirements of the PCAOB regarding the independent registered public accounting firm's communications with the Audit Committee concerning independence, and has discussed with the independent registered public accounting firm its independence.

Based on the foregoing, the Audit Committee recommended to the Board of Directors that our audited financial statements as of and for the year ended December 27, 2014, be included in our Annual Report on Form 10-K for the fiscal year ended December 27, 2014, for filing with the United States Securities and Exchange Commission.

The Audit Committee
Christine A. Tsingos, Chair
J. Thomas Bentley
Bruce C. Rhine

* The material in this report is not "soliciting material," is not deemed "filed" with the Securities and Exchange Commission and is not to be incorporated by reference in any filing of Nanometrics under the Securities Act or the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth beneficial ownership of Nanometrics common stock as of February 20, 2015, by each director, by each of the named executive officers, by all directors and executive officers as a group, and by all persons known to Nanometrics to be the beneficial owners of more than 5% of Nanometrics stock. Unless otherwise indicated, all persons and entities have sole voting and investment power over the shares reported. As of the close of business on February 20, 2015, there were 23,872,557 shares of common stock outstanding.

	Amount and Nature of Beneficial Ownership(1) Shares	
Name Of Beneficial Owner – Principal Stockholders	**Number of Shares Beneficially Owned**	**Percent of Shares Beneficially Owned**
Franklin Resources, Inc. (2)	3,058,759	12.8%
Waddell & Reed Financial, Inc. (3)	2,679,650	11.2%
Royce & Associates, LLC (4)	2,640,935	11.1%
BlackRock, Inc. (5)	2,276,268	9.5%
Wellington Management Group, LLP (6)	1,884,051	7.9%
Artisan Partners Limited Partnership, and related entities (7)	1,639,196	6.9%
Name Of Beneficial Owner – Directors And Officers	**Number of Shares Beneficially Owned**	**Percent of Shares Beneficially Owned**
Bruce C. Rhine (8)	910,941	3.8%
J. Thomas Bentley (9)	43,142	*
Edward Brown Jr.	6,930	*
Stephen G. Newberry (10)	19,027	*
Christine A. Tsingos	—	—
Timothy J. Stultz, Ph.D. (11)	374,764	1.6%
Jeffrey Andreson	—	—
All executive officers and directors as a group (7 persons) (12)	1,354,804	5.6%

* less than 1 percent

(1) As determined in accordance with Rule 13d-3 under the Securities and Exchange Act of 1934. Information with respect to principal stockholders is obtained from Schedules 13G and 13G/A and except as indicated in the footnotes below, is as of December 31, 2014, and does not reflect changes, if any, since that date.

(2) According to a Schedule 13G/A filed with the SEC on February 9, 2015, each of Franklin Resources, Inc. ("FRI"), Charles B. Johnson and Rupert H. Johnson has no voting or investment power over any of these shares but may be deemed to be the beneficial owner of these shares of common stock. Franklin Advisers, Inc. has sole voting power over 2,727,320 of these shares and sole investment power over 2,834,720 of these shares. The address of FRI, Mr. Johnson, Mr. Johnson and Franklin Advisers, Inc. is One Franklin Parkway, San Mateo, CA 94403. Each of these entities disclaim beneficial ownership of these shares.

(3) According to a Schedule 13G/A filed with the SEC on February 13, 2015, Waddell & Reed Financial, Inc. has sole voting and investment power over all of these shares, Ivy Investment Management Company has sole voting and investment power over 1,467,958 of these shares and each of Waddell & Reed Investment Management Company, Waddell & Reed Financial Services, Inc. and Waddell & Reed, Inc. has sole voting and investment power over 1,211,692 of these shares. The address of each of these entities is 6300 Lamar Avenue, Overland Park, KS 66202.

(4) According to a Schedule 13G/A filed with the SEC on January 15, 2015, Royce & Associates, LLC has sole voting and investment power over all of these shares. The address of Royce & Associates, LLC is 745 Fifth Avenue, New York, NY 10151.

(5) According to a Schedule 13G/A filed with the SEC on January 15, 2015, BlackRock, Inc. has sole voting power with respect to 2,226,645 of these shares and sole investment power over all of these shares. The address of BlackRock, Inc. is 55 East 52nd Street, New York, NY 10022.

(6) According to a Schedule 13G/A filed with the SEC on February 12, 2015, Wellington Management Group, LLP has shared investment power over all of these shares and has shared voting power over 976,673 of these shares. The address of Wellington Management Group is c/o Wellington Management Company, LLP, 280 Congress Street, Boston, MA 02210.

(7) According to a Schedule 13G/A filed with the SEC on January 30, 2015, Artisan Partners Limited Partnership, Artisan Investments GP LLC, Artisan Partners Holding LP and Artisan Partners Asset Management Inc., each has shared voting power over 1,593,738 of these shares and shared investment power over all of these shares and Artisan Partners Funds, Inc. has shared voting and investment power over 865,935 of these shares. The address of each of these entities is 875 East Wisconsin Avenue, Suite 800, Milwaukee, WI 53202.

(8) Includes 113,688 shares that may be acquired by exercise of stock options within 60 days of February, 20, 2015. Mr. Rhine has beneficial ownership over 1,428 shares owned by his spouse and indirect voting power over 2,337 shares owned by an immediate family member.

(9) Includes 14,066 shares that may be acquired by exercise of stock options within 60 days of February, 20, 2015.

(10) Includes 7,604 shares that may be acquired by exercise of stock options within 60 days of February 20, 2015.

(11) Includes 301,389 shares that may be acquired by exercise of stock options or vesting of restricted stock units within 60 days of February 20, 2015.

(12) Includes 436,747 shares that may be acquired by exercise of stock options or vesting of restricted stock units within 60 days of February 20, 2015.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act requires our executive officers and directors, and persons who own more than 10% of a registered class of our equity securities, to file reports of ownership and changes in ownership with the Securities and Exchange Commission. Executive officers, directors and greater than 10% stockholders are required by Securities and Exchange Commission regulations to furnish Nanometrics with copies of all Section 16(a) forms that they file. Based solely on our review of the copies of such forms received by us or written representations from certain reporting persons, we believe that our executive officers, directors and greater than 10% stockholders have complied with all applicable filing requirements except for the Form 4 specified below. Nanometrics assists our executive officers and directors in the preparation and filing of Forms 4, and generally files the Forms 4 on behalf of our directors and executive officers using the powers of attorney given to certain executive officers of Nanometrics by our executive officers and directors delegating the authority to make the filings. A grant of restricted stock units that occurred on November 9, 2014, to Jeffrey Andreson was reported on a Form 5 filed on February 17, 2015.

EXECUTIVE COMPENSATION

2014 Compensation Discussion and Analysis

Philosophy and Objectives

Nanometrics' named executive officer compensation program is intended to enable us to attract, retain and motivate key executives and to align their interests with those of the stockholders by tying executive compensation to our short-term and long-term performance. The Compensation Committee acts on behalf of the Board of Directors and, by extension, on behalf of our stockholders, to establish, implement and continually monitor adherence to our compensation philosophy. The Compensation Committee's philosophy is to design a compensation package that balances the need for alignment between the interests of executive officers and stockholders in terms of producing short-term and long-term enhanced stockholder value, while achieving retention and motivation through appropriate incentives, taking into account both internal equity and external market information relative to our industry and size. The Compensation Committee designs the executive compensation program with the goal of providing total compensation to our named executive officers that is competitive and consistent with our compensation philosophy.

The Compensation Committee's principal objectives are to: (a) develop, recommend and approve compensation packages that are consistent with our philosophy; (b) link executive compensation to the achievement of financial, management or other performance goals and; (c) support our culture and core values by promoting equity among the executive team and maintaining the competitiveness of our overall compensation when compared with external opportunities.

Philosophy and Objectives Applied

The Compensation Committee relied on an independent outside compensation consulting firm, Compensia, our human resources department, and our Chief Executive Officer to provide information and recommendations to establish specific compensation packages for our named executive officers for the 2014 fiscal year that ended December 27, 2014.

Our executive compensation packages for the 2014 fiscal year included three primary components – base salaries, cash bonus award opportunities and long-term equity incentive awards. Other elements of compensation include limited perquisites, other benefits (including retirement, health, and welfare benefits), and severance arrangements. The Compensation Committee considered the three primary components individually and in the aggregate to assess their competitiveness and effectiveness in retaining our executives and motivating them to create short-term and long-term enhanced stockholder value.

In the Compensation Committee's review of our named executive compensation for the 2014 fiscal year, the Compensation Committee considered publicly available market data for companies that typically include similarly-sized semiconductor and semiconductor capital equipment or similar firms for each executive in a like or similar role. For the 2014 fiscal year, Compensia recommended that the Compensation Committee approve modifications to the group of peer companies for conducting compensation analysis from proxies to better reflect our size and business. The Compensation Committee considered the following factors:

- primary focus on semiconductor and semiconductor equipment companies, and secondary focus on hardware companies;
- revenues;
- market capitalization; and
- several other factors including profitability, growth and revenues relative to market capitalization.

A number of companies were removed from the peer group companies used in our 2013 fiscal year analysis (Advanced Energy Industries, Inc., ATMI, Inc., Brooks Automation, Inc., Cabot Microelectronics Corporation, FSI, Photonics, and Ultratech, Inc.) because they no longer fit within our criteria. A number of companies (Ambarella, Inc., Intermolecular, Inc., and PLX Technology, Inc.) were added to our 2014 fiscal year analysis because these companies better reflect the criteria described above. Our peer group companies considered for the 2014 fiscal year are listed below.

2014 Fiscal Year Peer Group Companies	
Ambarella, Inc.	Maxwell Technologies, Inc.
Cohu, Inc.	PLX Technology, Inc.
Electro Scientific Industries, Inc.	Rudolph Technologies, Inc.
FARO Technologies, Inc.	Silicon Image
Form Factor, Inc.	Xcerra Corporation (formerly LTX Credence Corporation)
Intermolecular, Inc.	Zygo Corporation
Lattice Semiconductor Corp.	

The companies above were selected because they operate in our industry or similar industries, are comparable to Nanometrics based on both survey data and proxy data, revenues ($50 million to $300 million), and/or market capitalization ($100 million to $1 billion). Compensia gathered data with respect to base salary, target bonus awards and all equity awards, including stock options and restricted stock units ("RSUs"). We generally do not gather data regarding employee benefits such as 401(k) or health care coverage normally available to broad groups of employees. Compensia is charged with gathering the market data and assisting in informing the Compensation Committee using their marketplace expertise and the market data gathered.

While the market data may identify a certain percentile of the market in which we operate with regard to base salary, bonus or long-term incentives, the Compensation Committee did not target any specific percentile but instead looked at each element as compared to the total targeted cash package and the various components, in light of the desired results, internal equity and the information provided, and then decided if a change to compensation was warranted or not. The Compensation Committee also consulted with our Chief Executive Officer with respect to the appropriate compensation for the executives who reported to him: Mr. Crawford, our former Chief Operating Officer; Mr. Kisling, our former Chief Financial Officer; Mr. Andreson, our current Chief Financial Officer; and Ms. Egan, our former Chief Legal Officer. The Chief Executive Officer reviewed the experience and qualifications, and performance of our executives using the elements and framework described under "2014 Executive Compensation Components" below, and made recommendations to the Compensation Committee about the structure of the overall compensation program and individual compensation arrangements. This framework provided a guide for the Compensation Committee's deliberations and recommendations regarding proposals for base salary, bonus opportunities and long-term equity incentive awards for each executive position. The Compensation Committee considered those factors that are controllable by management such as expenses and cash, account penetration and long-term stockholder value delivery and others that are less within management control such as revenue, which is subject to the short-term industry cycles and the timing of customer capital spending cycles. The Compensation Committee did not apply formulas or assign specific mathematical weights to the peer group data or any of the factors or elements of compensation discussed above, but rather exercised its business judgment and discretion to make a subjective determination of both the amounts of compensation as well as the distribution of compensation among the various components, after considering all of these measures collectively. The Compensation Committee then came to a conclusion based on the framework outlined above to approve an appropriate compensation package for each executive.

2014 Executive Compensation Components

For the 2014 fiscal year, the principal components of compensation for our named executive officers, Dr. Stultz, Messrs. Crawford, Kisling and Andreson, and Ms. Egan, were:

- Base salary;
- Bonus;
- RSU grants; and
- Retirement and other benefits.

The Compensation Committee has chosen these components because it believes that each supports achievement of one or more of our compensation objectives, and that together they will be effective in this regard. The use of each compensation component is based on a determination by the Compensation Committee of the importance of each compensation objective in supporting our business and talent strategies. These components are commonly used for executives at companies within our peer group and, therefore, the Compensation Committee finds these to be appropriate in our talent retention strategy. The Compensation Committee's determination varies for each executive officer depending on a number of factors, including but not limited to, scope of his or her responsibilities, leadership skills and values, individual performance and length of service with Nanometrics. The Compensation Committee did not apply formulas or assign specific mathematical weights to any of these factors, but rather exercised its business judgment and discretion to make a subjective determination after considering all of these measures collectively.

Base Salary

Base salaries serve as the foundation of Nanometrics' compensation program. Other executive compensation elements, including annual short-term cash incentives and long-term equity incentives, are derived by weighing them against base salary. Nanometrics provides named executive officers with base salaries to compensate them for services rendered during the fiscal year and sets base salaries at levels which the Compensation Committee believes will effectively attract and retain top talent. The Compensation Committee determines base salaries for each named executive officer based on his or her experience, position and responsibility, as well as the contribution that he or she brings to Nanometrics through performance. During its annual review of base salaries for executives, the Compensation Committee primarily considers:

- the salaries of executive officers in similar positions at our peer group companies as discussed in the above section titled "Philosophy and Objectives Applied";
- our financial performance over the past year based upon the ability to achieve Board-approved financial metrics including revenue targets, operating income targets and other operating results metrics; and
- the individual performance of each named executive officer, his or her duties and areas of responsibility on a subjective basis, which may include, among other things: span of control; ability to influence, manage and produce results that increase the profitability of Nanometrics; and ability to streamline and create efficiencies in the organization.

The Compensation Committee considers salary levels annually as part of our performance review process as well as upon a promotion or other change in job responsibility. The Compensation Committee reviews and determines salaries after reviewing salary data supplied by Compensia, which uses peer comparison groups, as well as consideration of the compensation for our executives on a company-wide basis, based on their relative duties and responsibilities and the recommendations of our Chief Executive Officer as it relates to the executives who report to him. Stock price performance has not been a direct factor in determining annual base salary compensation because the price of our common stock is subject to a variety of factors outside of our control. The Compensation Committee also considered comparisons of peer group compensation to peer group performance provided by Compensia. The Compensation Committee did not apply formulas or assign specific mathematical weights to any of these factors, but rather exercised its business judgment and discretion to make a subjective determination regarding each executive's base salary after considering all of these measures collectively.

For fiscal year 2014, based on all of the data considered, the Compensation Committee exercised its business judgment and discretion to make a subjective determination regarding each named executive officer's 2014 base salary as set forth in the table below. These reflected annual increases from 2013 for the continuing executives with the exception of Mr. Crawford whose salary remained unchanged.

Named Executive Officer		Annual Base Salary Approved for Fiscal Year 2014	Year-Over-Year Percentage Increase Represented by Fiscal Year 2014 Base Salary
Dr. Timothy J. Stultz President, Chief Executive Officer and Director	$	479,000	3.0%
Jeffrey Andreson[(1)] Chief Financial Officer	$	330,000	n/a
Ronald Kisling[(2)] Former Chief Financial Officer	$	325,000	3.2%
Bruce A. Crawford[(2)] Former Chief Operating Officer	$	346,500	—
Nancy E. Egan[(2)] Former Chief Legal Officer	$	241,000	4.8%

(1) Mr. Jeffrey Andreson became our Chief Financial Officer on September 22, 2014.

(2) Mr. Kisling terminated his position effective August 29, 2014, and both Mr. Bruce Crawford and Ms. Nancy Egan terminated their respective positions effective December 26, 2014.

Bonus

The Compensation Committee views cash bonuses as part of its performance-based compensation program designed to align the recipient's interests with our annual goals and objectives and our stockholders' interests. At our 2012 annual meeting of stockholders, the stockholders approved the Executive Performance Bonus Plan (the "Plan"). Within the parameters of the Plan, the Compensation Committee established the 2014 Executive Performance Bonus Program (the "2014 Bonus Program"). The 2014 Bonus Program is intended to motivate senior executives to achieve short-term and long-term corporate objectives relating to the performance of Nanometrics or one of its business units as established by the Compensation Committee of the Board of Directors and to reward them when those objectives are achieved, thereby tying performance to stockholder value. Bonuses would be triggered upon our achievement of target metrics determined by the Compensation Committee.

As part of the 2014 Bonus Program, the Compensation Committee established the following target bonus opportunities:

Named Executive Officer [(1)]	Target Bonus Opportunity (as a % of annual base salary)
Dr. Timothy J. Stultz	100%
Bruce A. Crawford	70%
Ronald W. Kisling	55%
Nancy E. Egan	40%

(1) Mr. Andreson joined Nanometrics in September 2014, and so was not part of the 2014 Bonus Program but rather was entitled to receive a cash bonus of up to $75,000 subject to meeting certain personal objectives approved by the Compensation Committee.

Target bonus opportunities for each executive officer are reviewed and determined by the Compensation Committee after considering bonus award data supplied by Compensia, which uses peer comparison groups, as described under the section titled "Philosophy and Objectives Applied" above, as well as consideration of the compensation for our executives based on their relative duties and responsibilities. The Compensation Committee did not apply formulas or assign specific mathematical weights to any of these factors, but rather exercised its business judgment and discretion to make a subjective determination regarding each executive's target bonus opportunity after considering all of these measures collectively.

The target bonus opportunity was based upon overall company financial performance objectives determined by the CEO.

The maximum award that an executive could receive under the 2014 Bonus Program was two times the target bonus opportunity. Payment of annual awards under the 2014 Bonus Program was determined based on annual Operating Income. The 2014 Bonus Program provided that Operating Income of greater than 0% of revenues resulted in funding at 100% of Total Target Bonus, and Operating Income of 8% of revenues resulted in funding at 200% of Total Target Bonus, with actual funding levels interpolated between those points; provided that in the event that Wafer Fab Equipment ("WFE") expenditures declined in calendar year 2014 as compared to calendar year 2013, the 2014 Bonus Program will be funded at the greater of (1) 50% of the Total Target Bonus or (2) the funding amount determined based on annual Operating Income. For the 2014 Bonus Program, Operating Income was defined as Operating Income/(Loss) as reported in accordance with generally accepted accounting principles in the United States, plus Stock Compensation, Depreciation, Amortization, including amortization of intangible assets, and any unusual charges, such as restructurings, litigation or acquisition charges.

For fiscal year 2014, based on achieved Operating Income (as defined) of greater than 0% of revenues and positive growth in WFE, the Compensation Committee approved the following bonus amounts for the named executive officers in the table below. As a result, Dr. Stultz was entitled to, and received, the cash bonus of 124% of the Target Bonus Opportunity shown below under the 2014 Bonus Program. No payment was made to Messrs. Crawford and Kisling and Ms. Egan due to their separation from Nanometrics prior to the end of the bonus plan period, which required continued employment until the bonus payment is approved. Consistent with his employment agreement, Mr. Andreson received a cash bonus of $75,000 based on achievement of personal objectives approved by the Compensation Committee.

Named Executive Officer	**Approved Bonus under 2014 Bonus Program**	
Dr. Timothy J. Stultz	$	593,960
Jeffrey Andreson	$	75,000
Ronald W. Kisling	$	—
Bruce A. Crawford	$	—
Nancy E. Egan	$	—

Long-Term Incentive Compensation

The Compensation Committee believes that equity compensation plans are an essential tool to link the long-term interests of Nanometrics' stockholders and our employees, particularly our executive officers, and serve to motivate executives to make decisions that will, in the long run, optimize returns to our stockholders. Equity compensation plans also enable us to provide an opportunity for increased equity ownership by executives, thereby increasing the link between the incentives of our executives and the interests of our stockholders, and maintain competitive levels of total compensation. Each year the Compensation Committee considers incentive and retention needs, market competitiveness and industry and business conditions to make its subjective determination of the appropriate balance of stock options, which provide potential reward in the event of exceptional company performance, and RSUs, which provide a more predictable value. The Compensation Committee considered both the broader market environment and the individual equity profile of each executive in awarding 100% RSUs for 2014.

Restricted Stock Unit Grants. All of the executives received RSU awards during the 2014 fiscal year. The Compensation Committee believes that RSUs, which increase in value as the market price of our common stock increases, both encourage our executives to work toward the longer term goal of creating stockholder value and provide retention value. RSUs align the interests of our executives to the interests of our stockholders because an executive that holds RSUs is exposed to the same market risks to which our stockholders are exposed. RSU award levels for 2014 were determined based on an analysis of peer group data related to the size of equity awards as described under our section "Philosophy and Objectives Applied" above, including relevant factors such as peer group competitive data. The Compensation Committee did not benchmark to a specific target percentile, but instead considered proposed RSU awards in the context of each executive's cash and total compensation package. In addition, the Compensation Committee considered other factors when determining each executive's RSU award, including: the level of resulting alignment with the interests of our stockholders; such executive's position within the organization and the appropriate level of equity compensation for such position relative to others in the organization's hierarchy; such executive's contributions to our financial, operational and general performance; our stock price; and the Black-Scholes value of such awards. The Compensation Committee did not apply formulas or assign specific mathematical weights to any of these factors, but rather exercised its business judgment and discretion to make a subjective determination regarding whether to grant, and the size of grants of RSUs to each executive.

Our Compensation Committee grants equity awards under our 2005 Equity Incentive Plan to the Named Executives and other employees as incentive compensation. The Compensation Committee meeting schedule is determined several months in advance, and, therefore, proximity of any award date to a material news announcement or a change in our stock price, if any, is coincidental. We do not backdate equity awards or make equity awards retroactively. In addition, we do not coordinate our equity grants to precede announcements of favorable information or follow announcements of unfavorable information. Equity awards are priced using the closing market price of the common stock on the date of grant.

Other Elements of Compensation

All Nanometrics employees in the United States, including our named executive officers, are eligible to participate in our 401(k) plan, medical, dental and vision insurance, employee stock purchase plan, as well as our life and disability insurance policy. Nanometrics' 401(k) Plan and other generally available benefits programs allow us to remain competitive for employee talent, and we believe that the availability of these benefits programs generally enhances employee productivity and loyalty to Nanometrics. The main objectives of Nanometrics' benefits programs are to give employees access to quality healthcare, financial protection from unforeseen events, assistance in achieving retirement financial goals, and enhanced health and productivity, all in full compliance with applicable legal requirements. These generally available benefits typically do not specifically factor into decisions regarding an individual named executive officer's total compensation or equity award package

Perquisites

Nanometrics provides certain named executive officers with a limited number of perquisites that the Compensation Committee believes are reasonable and consistent with our overall compensation program. Although the Compensation Committee seeks the advice of the human resources department on general market competitiveness for these benefits, it does not use a formal benchmarking process. The aggregate incremental costs to Nanometrics of these perquisites are included in the Summary Compensation Table in the "All Other Compensation" column. Dr. Stultz receives a car allowance. All Named Executives are eligible to participate in an Executive Healthcare Reimbursement plan that provides for reimbursement of usual and customary costs that may not be covered under the medical, dental and eye care plans available to all other Nanometrics employees; actual amounts reimbursed are included in the Summary Compensation Table as "All Other Compensation."

Severance Benefits

The Compensation Committee considers maintaining a stable and effective management team to be essential to protecting and enhancing the best interests of Nanometrics and its stockholders. Accordingly, the Compensation Committee has taken steps to encourage the continued attention, dedication and continuity of members of our management to their assigned duties without the distraction that may arise from the potential termination of employment. Specifically, we have entered into agreements with our five named executive officers providing for severance payments and benefits, consisting of cash severance, accelerated vesting of equity awards and continued health care benefits, upon a termination of employment without cause or resignation for good reason in connection with a "change in control" of Nanometrics, as described in greater detail below in the section titled "Employment Contracts and Termination of Employment and Change-in-Control Arrangements." Nanometrics entered into these agreements with Dr. Stultz and Mr. Crawford in 2010; with each of Mr. Kisling and Ms. Egan at the time each was hired in 2011; and with Mr. Andreson in 2014 when he was hired. In addition, the agreements with our Chief Executive Officer, Dr. Stultz, and our Chief Operating Officer, Mr. Crawford, provide for severance payments and benefits, consisting of cash severance and continued health care benefits and, in the case of Mr. Crawford, accelerated vesting of equity awards, upon a termination of employment without cause or resignation for good reason outside of a change of control situation, also described in greater detail in the section titled "Employment Contracts and Termination of Employment and Change-in-Control Arrangements." The agreement with Mr. Andreson provides a severance payment of one year's base salary if he is terminated without cause on or before the one year anniversary of his date of hire, also described in greater detail in the section titled "Employment Contracts and Termination of Employment and Change-in-Control Arrangements." This agreement between Nanometrics and Mr. Andreson was an inducement to attract Mr. Andreson from his then-existing chief financial officer role at another company. In all cases, in exchange for receiving severance benefits and payments, the executive officer will be subject to non-compete, non-solicitation, and non-disparagement restrictions, and is required to execute a full release and waiver of any claims against Nanometrics.

When entering into these agreements, the Compensation Committee analyzes data and suggestions from Compensia as well as our human resources department, which information includes comparing such amounts against our peer group. However, the Compensation Committee did not benchmark to any specific percentile, but rather exercised its business judgment and discretion to make a subjective determination after considering this information. The peer group used in this analysis is the same peer group that we consider in connection with our analysis and determination of the total compensation packages for our executives, at the time Nanometrics entered into the agreement with the individual executive officer.

After considering industry practices and reviewing the policies and practices of the companies in our peer group, the Compensation Committee determined that our severance and benefits agreements are necessary and appropriate in substance and scope to provide competitive compensation to the types of individuals that Nanometrics desires to attract, hire and retain. The Compensation Committee also believes that these agreements are consistent with our overall compensation philosophy. The Compensation Committee periodically monitors industry practice in this area to ensure that these agreements remain consistent with industry practice and our overall compensation philosophy of offering competitive compensation to preserve our ability to attract and retain key executives.

Tax and Accounting Implications

As part of its role, the Compensation Committee reviews and considers both tax and accounting related implications as they apply and as they evolve.

As part of its role, the Compensation Committee reviews and considers the deductibility of executive compensation under Section 162(m) of the Internal Revenue Code, which provides that we may not deduct compensation of more than $1,000,000 that is paid to certain executive officers, unless certain exemption requirements are met. Exemptions to this deductibility limit may be made for various forms of "performance-based" compensation, including compensation that will be payable in the future under our Executive Performance Bonus Plan which was approved by stockholders in 2012. We believe that compensation paid under the management long-term equity incentive plans is generally fully deductible for federal income tax purposes. However, in certain situations, the Compensation Committee may approve compensation that will not meet these requirements to ensure competitive levels of total compensation for our executive officers**.**

Section 4999 and Section 280G of the Internal Revenue Code provide that executives could be subject to additional taxes if they receive payments or benefits that exceed certain limits in connection with a change in control of Nanometrics and that Nanometrics could lose an income tax deduction for such payments. We have not provided any executive with a tax "gross up" or other reimbursement for tax amounts the executive might be required to pay under Section 4999 or Section 280G of the Internal Revenue Code as the Compensation Committee determined that this was not consistent with best practices.

Section 409A of the Internal Revenue Code imposes additional taxes and interest on underpayments in the event that an executive defers compensation under a compensation plan that does not meet the requirements of Section 409A. We believe that we are operating in good faith compliance with Section 409A and have structured our compensation and benefits programs and individual arrangements in a manner intended to comply with the requirements thereof.

Risks Associated With Compensation Plans

In 2014, the Compensation Committee determined that our compensation policies and practices for our employees are not reasonably likely to cause employees to take risks that would have a material adverse effect on the company.

Results of 2014 Shareholder Advisory Vote to Approve Executive Compensation

At our 2013 and 2014 annual meetings of stockholders, we requested our stockholders to approve, on an advisory (non-binding) basis, the compensation paid to our executive officers as reported in the proxy statements for those annual meetings. Our stockholders expressed substantial support for our executive compensation, with approximately 97.8% and 96.1%, respectively, of the shares present and entitled to vote voting for approval of the "say-on-pay" advisory vote approving our executive compensation. Because of the high level of support expressed by our stockholders for the 2013 and 2014 fiscal year executive compensation, the Compensation Committee has continued to apply a similar approach for executive compensation decisions and policies.

Clawback Policy

Effective with our fiscal year ending December 26, 2015, we have established a clawback policy. This policy provides that in the event of a material restatement of our consolidated financial statements resulting from fraud or intentional misconduct by any Section 16 officer who has either erroneously been awarded or paid a greater amount of incentive compensation than he or she would have received had the financial statements been fairly stated, the Board or its designated committee has the discretion to direct that the company either recoup or cancel payment, though not forced, of all or a portion of the excess of performance-based cash or equity compensation to the Section 16 officer(s). This clawback policy is effective for compensation awarded or paid after implementation of the policy and applies to current Section 16 officers as well as those who terminate after the clawback program has been approved by the Board. The covered period is the three-year period preceding the effective date for which it is determined that a restatement is required.

2015 Equity Grants Philosophy

In March 2015, after consultation with Compensia and some of our major investors, the Compensation Committee modified its practices by granting to our Chief Executive Officer 50% of his annual equity incentives in the form of performance stock units ("PSUs"), in addition to the 50% previously granted in the form of equity awards that will vest based on the passage of time only (RSUs). The PSUs will vest over one, two and three years based on the relative performance of our stock price during those periods, compared to the top 30 companies in the Philadelphia Stock Exchange Semiconductor Sector Index at the beginning of the performance periods. Going forward, the Committee expects to consider granting a substantial portion of the equity incentives awarded annually to our executive officers in the form of PSUs, in addition to RSUs and other forms of equity-based compensation.

2014 Summary Compensation

The following table sets forth the compensation for the past three fiscal years for (i) our Chief Executive Officer, (ii) each person who served as our Chief Financial Officer in fiscal 2014, and (iii) each of our other executive officers during fiscal 2014, all of whom are collectively referred to as the "named executive officers." Mr. Jeffrey Andreson became our Chief Financial Officer on September 22, 2014. Mr. Kisling terminated his position as Chief Financial Officer effective August 29, 2014, and both Mr. Bruce Crawford and Ms. Nancy Egan terminated their respective positions effective December 26, 2014.

Summary Compensation Table

Fiscal Year 2014

	Year	Salary ($)	Bonus ($)	Stock Awards[1],[2]	Option Awards[1]	Non-Equity Incentive Plan Compensation[3]	All Other Compensation[4]	Total ($)
Dr. Timothy J. Stultz President, Chief Executive Officer and Director	2014	$ 479,000	$ —	$ 1,596,300	$ —	$ 593,960	$ 27,767	$ 2,697,027
	2013	$ 465,000	$ —	$ 951,000	$ 542,106	$ 76,725	$ 23,677	$ 2,058,508
	2012	$ 465,000	$ 139,500	$ 380,600	$ 575,815	$ —	$ 22,170	$ 1,583,085
Jeffrey Andreson Chief Financial Officer	2014	$ 86,308	$ —	$ 578,000	$ —	$ 75,000	$ —	$ 739,308
Bruce A. Crawford Former Chief Operating Officer	2014	$ 363,508 (5)	$ —	$ 563,400	$ —	$ —	$ 11,307	$ 938,215
	2013	$ 346,500	$ —	$ 317,000	$ 180,702	$ 40,021	$ 6,823	$ 891,046
	2012	$ 346,500	$ 72,765	$ 190,300	$ 287,908	$ —	$ 21,956	$ 919,429
Ronald Kisling Former Chief Financial Officer	2014	$ 228,368	$ —	$ 375,600	$ —	$ —	$ 6,755	$ 610,723
	2013	$ 315,000	$ —	$ 206,050	$ 117,456	$ 28,586	$ 6,609	$ 673,701
	2012	$ 315,000	$ 51,975	$ 95,150	$ 143,954	$ —	$ 6,186	$ 612,265
Nancy E. Egan Former Chief Legal Officer	2014	$ 240,519	$ —	$ 281,700	$ —	$ —	$ 3,971	$ 526,190
	2013	$ 230,000	$ —	$ 158,500	$ 90,351	$ 15,180	$ 5,559	$ 499,590
	2012	$ 227,346	$ 27,600	$ —	$ —	$ —	$ 3,452	$ 258,398

(1) Amounts shown do not reflect compensation actually received by the named executive officer. Instead, the amounts shown are the aggregate grant date fair value of equity awards granted for financial statement reporting purposes in accordance with Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 718. The assumptions used to calculate the value of the options and/or restricted stock units (RSUs) are set forth under Note 13 of the Notes to Consolidated Financial Statements included in Nanometrics' Annual Report on Form 10-K for the fiscal year ended December 27, 2014 filed with the SEC on February 25, 2015.

(2) For fiscal year 2014, the Board of Directors awarded Messrs. Stultz, Crawford and Kisling, and Ms. Egan RSUs in the amount of 85,000, 30,000, 20,000 and 15,000, respectively at the grant date fair value of $18.78 per share on March 6, 2014. Mr. Andreson received an award of 40,000 RSUs at the grant date value of $14.45 per share on November 9, 2014. All such RSUs vest annually over 3 years from the grant date.

(3) Amounts reflected for each fiscal year are those earned, but not paid until the following fiscal year 2015, under our executive performance bonus programs.

(4) Fiscal 2014 amounts represent fiscal year 2014 additional compensation for the named executive officers as follows: Dr. Stultz received reimbursements under our Executive Health Care Plan in the amount of $8,767, an employer 401(k) match in the amount of $4,600 and a car allowance in the amount of $14,400. Mr. Crawford received $2,916 through our Executive Health Care Plan, an employer 401(k) match of $4,534 and $3,857 in housing allowance. Mr. Kisling received reimbursements under our Executive Health Care Plan in the amount of $3,123 and an employer 401(k) match of $3,632. Ms. Egan received $471 under our Executive Health Care Plan and an employer 401(k) match of $3,500.

(5) In addition to his base salary, this amount includes the payout of approximately $17,008 of Mr. Crawford's accrued personal time off.

2014 Grants of Plan-Based Awards

The following table sets forth information with respect to grants of plan-based awards during the 2014 fiscal year that ended December 27, 2014, to each of the named executive officers.

Grants of Plan-Based Awards for Fiscal Year 2014

		Estimated Future Payouts Under Non-Equity Incentive Plan Awards (1)			All Other Stock Awards:	
Name	**Grant Date**	**Threshold ($)**	**Target ($)**	**Maximum ($)**	**Number of Shares of Stock or Units (#)(2)**	**Grant Date Fair Value of Stock and Options Awards ($)(3)**
Dr. Timothy J. Stultz		$ —	$ 479,000	$ 958,000		
	3/6/2014				85,000	$ 1,596,300
Jeffrey Andreson		$ —	$ —	$ —		
	11/9/2014				40,000	$ 578,000
Bruce A. Crawford		$ —	$ 242,550	$ 485,100		
	3/6/2014				30,000	$ 563,400
Nancy E. Egan		$ —	$ 96,400	$ 192,800		
	3/6/2014				15,000	$ 281,700
Ronald Kisling		$ —	$ 178,750	$ 357,500		
	3/6/2014				20,000	$ 375,600

(1) Reflects awards under our 2014 Executive Performance Bonus Plan as described under "Compensation Discussion and Analysis".

(2) All referenced restricted stock units vest in equal annual installments over a three-year period.

(3) Amounts shown do not reflect compensation actually received by the named executive officer. Instead, the amounts shown are the aggregate grant date fair value of equity awards granted for financial statement reporting purposes, as determined pursuant to ASC Topic 718. The assumptions used to calculate the value of the RSUs are set forth under Note 13 of the Notes to Consolidated Financial Statements included in Nanometrics' Annual Report on Form 10-K for the fiscal year ended December 27, 2014, filed with the SEC on February 25, 2015.

Narrative Disclosure to Summary Compensation Table and Grants of Plan-Based Awards Table

Our 401(k) savings plan allows employees to contribute up to 100% of their annual compensation to the plan on a pre-tax or after-tax basis, limited to a maximum annual amount as set periodically by the Internal Revenue Service. The plan provides a 20% match by Nanometrics of all employee contributions.

In the 2014 fiscal year, all corporate officers and non-employee directors were eligible to participate in a Nanometrics self-funded Executive Reimbursement Plan (currently administered by Benefit and Risk Management Services). This plan is intended to supplement our basic health plan by reimbursing expenses that are not covered by our health plan. Dr. Stultz is also entitled to a car allowance. Attributed costs of the perquisites described above for the named executive officers for the fiscal year ended December 27, 2014, are included in the “Summary Compensation Table.” All such perquisites are taxable to the executive and included as a portion of such executive’s wages.

Outstanding Equity Awards at Fiscal 2014 Year End

The following table sets forth the number of shares covered by both stock options and stock awards held by each of the named executive officers at the end of the fiscal year which ended December 27, 2014. Mr. Kisling held no options or awards at year end, and so does not appear in the table.

		Option Awards				Stock Awards	
		Number of Securities Underlying Unexercised Options (#)					
Name	Grant Date	Exercisable	Unexercisable	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock that Have Not Vested (#)	Market Value of Shares or Units of Stock that Have Not Vested ($)(1)
Dr. Timothy J. Stultz	3/6/2014 (2)					85,000	$1,410,150
	3/12/2013 (2)					40,000	$663,600
	2/17/2012 (2)					6,666	$110,589
	3/12/2013 (3)	26,250	33,750	$15.85	3/12/2020		
	2/17/2012 (3)	35,416	14,584	$19.03	02/17/2019		
	11/16/2010 (3)	114,166	—	$11.37	11/16/2017		
	11/17/2009 (5)	45,834	—	$13.08	11/17/2016		
	11/19/2008 (5)	33,334	—	$0.98	11/19/2015		
Jeffrey Andreson	11/9/2014(6)					40,000	$663,600
Bruce. A. Crawford	3/6/2014 (2)					30,000	$497,700
	3/12/2013 (2)					13,333	$221,194
	2/17/2012 (2)					3,333	$55,294
	3/12/2013 (3)	3,750	11,250	$15.85	3/12/2020		
	2/17/2012 (3)	17,708	7,292	$19.03	2/17/2019		
	11/16/2010 (3)	10,834	—	$11.37	11/16/2017		
Nancy E. Egan	3/12/2013 (3)	4,375	—	$15.85	3/12/2020		
	11/14/2011 (4)	15,416	—	$17.23	11/14/2018		

(1) The closing market price of Nanometrics common stock on December 26, 2014, the last trading day of our 2014 fiscal year, was $16.59 per share.

(2) Restricted stock units vest annually over three years on each anniversary of the grant date.

(3) Options vest in equal monthly installments over a total of four years and have a term of seven years.

(4) Ms. Egan received an award of stock options in connection with her hiring, one-fourth of which vested and became exercisable on the first anniversary of hire date, and the remainder in equal monthly installments over the remaining three years.

(5) Options vested in equal monthly installments over a total of three years and have a term of seven years.

(6) Restricted stock units vest annually over three years on each anniversary of Mr. Andreson's hire date.

Option Exercises and Stock Vested

The following table shows all stock options exercised and value realized upon exercise, and all stock awards vested and value realized upon vesting, by the named executive officers during the 2014 fiscal year that ended December 27, 2014.

Option Exercises and Stock Vested For Fiscal 2014

	Option Awards		Stock Awards	
Name	**Number of Shares Acquired On Exercise (#)**	**Value Realized on Exercise ($)**	**Number of Shares Acquired On Vesting (#)**	**Value Realized on Vesting ($)**
Dr. Timothy J. Stultz	58,166(1)	$598,183	26,667(3)(4)	$501,873
Bruce Crawford	29,381(2)	$186,481	10,000(3)(4)	$188,067
Ronald Kisling	—	—	8,501(3)(4)(5)	$158,787
Nancy Egan	—	—	5,000(4)(6)	$85,437

(1) Represents the following option exercises by Dr. Stultz:

Exercise Date	Number of Shares	Exercise Price	Sale Price	Value Realized on Sale
7/1/2014	7,166	$7.35	$18.60	$80,618
6/2/2014	8,500	$7.35	$16.82	$80,495
5/1/2014	8,500	$7.35	$16.04	$73,865
4/1/2014	8,500	$7.35	$18.38	$93,755
3/3/2014	8,500	$7.35	$18.03	$90,780
2/5/2014	8,500	$7.35	$17.55	$86,700
1/2/2014	8,500	$7.35	$18.17	$91,970
	58,166			$598,183

(2) Represents the following option exercises by Mr. Crawford:

Exercise Date	Number of Shares	Exercise Price	Sale Price	Value Realized on Sale
5/23/2014	1,667	$15.85	$17.24	$2,317
5/23/2014	5,416	$11.37	$17.24	$31,792
2/19/2014	560	$11.37	$18.29	$3,875
2/19/2014	3,333	$15.85	$18.29	$8,133
2/18/2014	795	$11.37	$18.51	$5,676
2/18/2014	3,443	$7.50	$18.51	$37,907
2/18/2014	1,667	$1.17	$18.51	$28,906
2/18/2014	12,500	$13.08	$18.51	$67,875
	29,381			$186,481

(3) Includes 6,667, 3,333 and 1,667 RSUs released on February 17, 2014 for Dr. Stultz and Messrs. Crawford and Kisling, respectively. The fair market value was $18.70 per share on that date.

(4) Includes 20,000, 6,667, 4,334 and 3,334 RSUs released on March 12, 2014 for Dr. Stultz, Messrs. Crawford and Kisling, and Ms. Egan, respectively. The fair market value was $18.86 per share on that date.

(5) Includes 2,500 RSUs released on March 14, 2014. The fair market value was $18.35 per share on that date.

(6) Includes 1,666 RSUs released on October 31, 2014. The fair market value was $13.54 per share on that date.

Employment Contracts and Termination of Employment and Change-in-Control Arrangements

In February 2010, Nanometrics entered into amended executive severance agreements with each of Dr. Stultz and Mr. Crawford. In March 2011 and October 2011, Nanometrics entered into executive severance agreements with Mr. Kisling and Ms. Egan, respectively. The agreements each provide that, in the event of the officer's termination without cause or resignation for good reason within 12 months of a change of control, he or she will receive (i) a payment equal to his or her then-current annual base salary, (ii) a payment equal to the most recent bonus he or she actually received, (iii) subject to his or her satisfaction of certain eligibility requirements, reimbursement of COBRA premiums for a period of one year, and (iv) acceleration of all of his or her outstanding unvested shares; provided that the maximum amount that he or she is entitled to receive under (i) above (base salary severance) and (ii) above (bonus severance, not including equity vesting acceleration) may not exceed two times his or her then-current base salary, calculated on a pre-tax basis.

In addition, the agreement with Dr. Stultz further provides that, in the event of his termination without cause not in connection with a change in control, Dr. Stultz will receive (i) his then-current base salary and any accrued or earned bonus, paid on normal paydays for a period of six months, and (ii) subject to his satisfaction of certain eligibility requirements, reimbursement of COBRA premiums for a period of six months. The agreement with Mr. Crawford further provides that, in the event of his termination without cause or resignation for good reason not in connection with a change in control, Mr. Crawford will receive (i) his then-current annual base salary on normal paydays for a period of six months, (ii) subject to his satisfaction of certain eligibility requirements, reimbursement of COBRA premiums for a period of one year, and (iii) acceleration of the portion of his unvested equity compensation awards that would have vested if his termination had occurred on the first anniversary of such termination date. In all cases, in exchange for receiving benefits, the executive officer will be subject to non-compete, non-solicitation, and non-disparagement restrictions, and is required to execute a full release and waiver of any claims against Nanometrics.

In October 2014, Mr. Crawford and Nanometrics entered into a separation agreement. In connection with the separation agreement, Mr. Crawford received a severance bonus payment in the amount of $156,000 within 30 days of his separation date and will be eligible to receive a transition bonus payment of $100,000 as determined by the Compensation Committee, based on performance objectives. Pursuant to the separation agreement and prior to his separation date, Mr. Crawford entered into a consulting agreement pursuant to which he provided consulting services to Nanometrics on a per hour basis and continue to vest in stock options and restricted stock units granted during his term of employment from his separation date through March 31, 2015. The payment of the transition bonus and the severance bonus payment was conditioned upon Mr. Crawford signing a general release in favor of Nanometrics.

In September 2014, Nanometrics entered into an employment agreement with Mr. Jeffrey Andreson which provided for a base salary of $330,000, an annual incentive target bonus of 55% of base salary, a 2014 target bonus of $75,000, the grant of an RSU to acquire 40,000 shares of our common stock, and stipulated that in the event that Mr. Andreson’s employment is terminated by Nanometrics without cause and not in connection with a change of control on or before the one-year anniversary of his hire date (September 22, 2014), he would be entitled to an amount equivalent to one year’s base salary in a one-time lump sum payment. In the event of Mr. Andreson’s termination without cause or resignation for good reason within 12 months of a change of control, he would be entitled to the benefits described in the first paragraph of this section.

In addition, under the terms of our 2005 Equity Incentive Plan, in the event of a merger or change in control in which outstanding stock options or restricted stock units held by the named executive officers are not assumed or substituted with stock options or restricted stock units of the surviving company, such awards will vest and become fully exercisable or payable.

Termination of Employment and Change-in-Control Potential Payouts

The table below estimates amounts payable upon a separation as if the individuals were separated on December 27, 2014, which was the last day of our 2014 fiscal year. Mr Kisling is not included in the table as he voluntarily terminated his employment with us before the end of fiscal 2014 and therefore would not have been entitled to any severance payments.

		Not in connection with Change in Control	In Connection with Change in Control	
		Termination Without Cause/Good Reason ($)	Termination Without Cause For Good Reason Or Due to Disability or Death ($)	
Timothy J. Stultz	Severance pay	$ 239,500	$ 479,000	
	Equity vesting acceleration[1]	—	2,209,314	
	Bonus	296,980	479,000	
	Health care benefits continuation	9,444	18,888	
		$ 545,924	$ 3,186,202	(2)
Jeffrey Andreson	Severance pay[2]	$ 330,000	$ 330,000	
	Equity vesting acceleration[1]	—	663,600	
	Bonus	—	75,000	
	Health care benefits continuation	—	18,888	
		$ 330,000	$ 1,087,488	(2)
Bruce A. Crawford	Severance pay	$ 173,250	$ 346,500	
	Equity vesting acceleration[1]	340,117	782,514	
	Bonus	0	180,702	
	Health care benefits continuation	27,636	27,636	
		$ 541,003	$ 1,337,352	(2)
Nancy E. Egan	Severance pay	$ —	$ 241,000	
	Equity vesting acceleration[1]	—	363,601	
	Bonus	—	15,180	
	Health care benefits continuation	—	10,404	
		$ —	$ 630,185	(2)

(1) Represents the estimated potential incremental value of additional stock options and restricted stock units that would have vested for our named executive officers as of December 27, 2014. For stock options, the value is based on the difference between the aggregate exercise price of all accelerated options and the aggregate market value of the underlying shares as of December 26, 2014, calculated based on the closing market price of our stock on December 26, 2014, the last trading day of our fiscal year ($16.59 per share). Accelerated restricted stock unit award value is calculated by multiplying the number of accelerated shares by the closing price of our stock on December 26, 2014 ($16.59 per share).

(2) The change of control agreements provide that payments to the executive representing base pay and bonus upon change of control may not exceed two times the executive's annual base salary.

COMPENSATION COMMITTEE REPORT[1]

The Compensation Committee has reviewed and discussed with management the "Compensation Discussion and Analysis" section of this Proxy Statement and, based on such review and discussion, recommended to the Board of Directors that the Compensation Discussion and Analysis section be included in this Proxy Statement and incorporated into Nanometrics' Annual Report on Form 10-K for the fiscal year ended December 27, 2014.

The Compensation Committee

Stephen G. Newberry, Chairman
J. Thomas Bentley
Edward J. Brown Jr.

[1] The material in this report is not "soliciting material," is furnished to, but not deemed "filed" with, the Securities and Exchange Commission and is not deemed to be incorporated by reference in any filing of the company under the Securities Act or the Exchange Act, other than the company's Annual Report on Form 10 K, where it shall be deemed to be "furnished," whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

COMPENSATION OF DIRECTORS

During the 2014 fiscal year, non-employee directors received an annual retainer fee of $50,000. In addition, the Chairman of the Board, Audit Committee Chairman, Compensation Committee Chairman and Nominating and Governance Committee Chairman received an incremental $30,000, $20,000, $20,000 and $10,000 annual retainer, respectively, for serving in such capacities. Committee members, other than the chairpersons, received an incremental $10,000 annual retainer for service on the Audit or Compensation Committee and an incremental $7,500 annual retainer for service on the Nominating and Governance Committee. All retainer fees are paid annually, as of the date of our annual stockholders meeting, and in advance of the provision of services to which the retainer relates.

Non-employee directors are also eligible to participate in our 2005 Equity Incentive Plan, and in fiscal year 2014, each such director received equity incentives, issued in restricted stock units, valued at $100,000. We calculated the value of such equity incentives using the closing market price of our stock on the NASDAQ Stock Market as of the date of our annual stockholders meeting. These awards vest on the earlier of the first anniversary date of the grant or the date of the next annual meeting of stockholders.

Any new non-employee director will be eligible to receive equity incentives valued at $100,000 issued in restricted stock units and pro-rated to reflect the amount of time served before the next annual meeting of stockholders.

If a director ceases to serve as a member of Nanometrics' Board, a portion of the fees shall be refunded and equity awards shall be forfeited on a pro-rated basis.

Non-employee directors are eligible to participate in Nanometrics' self-funded Executive Reimbursement Plan, which is intended to supplement our basic health plan by reimbursing expenses that are not covered by our health plan. All such reimbursements are considered taxable income to our non-employee directors.

2014 Director Compensation

The following table sets forth information regarding the compensation for each of our non-employee directors for the 2014 fiscal year that ended December 27, 2014. Nanometrics' non-employee director compensation program for the 2014 fiscal year comprised: (a) cash compensation, consisting of annual retainer fees, additional fees for chairing Board committees, additional fees for serving as a committee member and (b) equity compensation, consisting of restricted stock units. Each of these components is detailed below.

Director Compensation Table For Fiscal Year 2014

	Fees Earned or Paid in Cash ($)	Stock Awards ($)(1),(2)	All Other Compensation ($)(3)	Total ($)
Bruce C. Rhine (4)	$ 100,000	$ 99,996	$ 4,213	$ 204,209
J. Thomas Bentley (5)	$ 70,000	$ 99,996	$ 6,027	$ 176,023
Edward Brown Jr. (6)	$ 67,500	$ 99,996	$ —	$ 167,496
Mr. Stephen Newberry (7)	$ 77,500	$ 99,996	$ —	$ 177,496
Ms. Christine Tsingos (8)	$ 40,833	$ 99,996	$ —	$ 140,829
Howard A. Bain III (9)	$ 32,292	$ —	$ 22,511	$ 54,803
William G. Oldham, Ph.D. (10)	$ 23,958	$ —	$ —	$ 23,958

(1) Amounts shown do not reflect compensation actually received by the named director. Instead, the amounts shown are the aggregate grant date fair value calculated for financial statement reporting purposes, as determined pursuant to Accounting Standards Codification ("ASC") Topic 718, but excluding the effect of any estimated forfeitures. The assumptions used to calculate the value of awards are set forth under Note 16 of the Notes to Consolidated Financial Statements included in Nanometrics' Annual Report on Form 10-K for fiscal 2014 filed with the SEC on February 25, 2015.

(2) On May 20, 2014, each non-employee director received a restricted stock unit award in the amount of 6,165 shares of common stock. All RSUs vest one year from the first anniversary date of said award. The fair market value for these RSUs was $16.22 per share on the date of grant.

(3) Representing health care reimbursements extended to Directors.

(4) At December 27, 2014, Mr. Rhine had 116,188 outstanding options to purchase shares of common stock and 6,165 unvested restricted stock units.

(5) At December 27, 2014, Mr. Bentley had 14,066 outstanding options to purchase shares of common stock and 6,165 unvested restricted stock units.

(6) At December 27, 2014, Mr. Brown had 6,165 unvested restricted stock units.

(7) At December 27, 2014, Mr. Newberry had 7,604 outstanding options to purchase shares of common stock and 6,165 unvested restricted stock units.

(8) At December 27, 2014, Ms. Tsingos had 6,165 unvested restricted stock units.

(9) Mr. Bain terminated his service as a director on May 20, 2014. As such, at December 27, 2014, Mr. Bain had no outstanding options to purchase shares of common stock and no unvested restricted stock units.

(10) Dr. Oldham terminated his service as a director on May 20, 2014. As such, at December 27, 2014, Dr. Oldham had no outstanding options to purchase shares of common stock and no unvested restricted stock units.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

During the 2014 fiscal year, the Compensation Committee consisted of Stephen G. Newberry (Chairman), J. Thomas Bentley, and Edward J. Brown Jr. None of Nanometrics' executive officers serves as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of Nanometrics' Board or Compensation Committee.

PROPOSAL 2:
ADVISORY (NON-BINDING) VOTE ON EXECUTIVE COMPENSATION

At the 2011 Annual Meeting of Stockholders, the stockholders indicated their preference that Nanometrics solicit a non-binding advisory vote on the compensation of the named executive officers, commonly referred to as a "say-on-pay" vote, every year. The Board of Directors has adopted a policy that is consistent with that preference. In accordance with this policy, this year we are again requesting our stockholders to approve an advisory resolution on Nanometrics' executive compensation as reported in this Proxy Statement, and as required by Section 14A(a)(1) of the Exchange Act. This vote is not intended to address any specific item of compensation, but the overall compensation of our named executive officers and the philosophy, policies and practices described in this Proxy Statement.

As described more fully in the Compensation Discussion and Analysis section and other compensation-related disclosures in the proxy statement, consistent with its compensation philosophy and pay-for-performance principles, Nanometrics' executive compensation program has been designed to provide competitive compensation packages that enable Nanometrics to attract and retain talented executives, motivate executive officers to achieve Nanometrics' short- and long-term business strategies and objectives, and align the interests of executives with those of stockholders, and are consistent with current market practices and good corporate governance principles.

We encourage you to read the Compensation Discussion and Analysis, compensation tables and related narrative discussion in this Proxy Statement.

The Compensation Committee and the Board of Directors believe that the policies and procedures articulated in the "Compensation Discussion and Analysis" are effective in achieving our goals and that the compensation of our named executive officers reported in this Proxy Statement has contributed to our recent and long-term success.

In accordance with Section 14A of the Exchange Act, as a matter of good corporate governance, and in accordance with the policy adopted by the Board of Directors to provide an annual "say-on-pay" advisory vote, we are asking stockholders to approve the following advisory resolution at the annual meeting:

RESOLVED, that the stockholders of Nanometrics Incorporated (the "Company") approve, on an advisory basis, the compensation of Nanometrics' named executive officers disclosed in the Compensation Discussion and Analysis, the Summary Compensation Table and the related compensation tables, notes and narratives in the Proxy Statement for Nanometrics' 2015 Annual Meeting of Stockholders.

This advisory, "say-on-pay" resolution is non-binding on Nanometrics, the Compensation Committee and the Board of Directors. Although this resolution is non-binding, the Compensation Committee and the Board of Directors value the opinions that stockholders express in their votes and in any additional dialogue, and will review and consider the outcome of the vote and those opinions when making future compensation decisions.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT STOCKHOLDERS VOTE "FOR" THE ADVISORY RESOLUTION APPROVING THE COMPANY'S EXECUTIVE COMPENSATION.

PROPOSAL 3:
RATIFICATION OF APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Audit Committee of the Board of Directors has appointed PricewaterhouseCoopers LLP as our independent registered public accounting firm to audit the consolidated financial statements of Nanometrics for the fiscal year ending December 26, 2015.

Approval by the stockholders of the selection of the independent registered public accounting firm is not required, but the Audit Committee believes it is desirable as a matter of good corporate governance to submit this matter to the stockholders. If the holders of a majority of the shares present in person or by proxy at the meeting and entitled to vote on the matter at the annual meeting do not ratify the appointment of PricewaterhouseCoopers LLP as Nanometrics' independent registered public accounting firm for the fiscal year ending December 26, 2015, the Audit Committee will consider whether it should select another independent registered public accounting firm. Representatives of PricewaterhouseCoopers LLP are expected to attend the annual meeting and will have an opportunity to make a statement and respond to appropriate questions from stockholders.

Audit Fees

The following table summarizes the aggregate fees that we paid or expect to pay our independent registered public accounting firm, PricewaterhouseCoopers LLP, for the 2014 and 2013 fiscal years.

	Fiscal 2014	Fiscal 2013
Audit Fees (1)	$ 1,142,756	$ 1,043,581
Tax Fees (2)	19,885	11,472
All Other Fees (3)	1,800	1,800
Total	$ 1,164,441	$ 1,056,853

(1) Fees to PricewaterhouseCoopers LLP in 2014 and 2013 for audit services consist of:
- Audit of our annual financial statements including management's assessment of internal controls over financial reporting;
- Reviews of our quarterly financial statements; and
- Statutory and regulatory audits, consents and other services.

(2) These fees comprised tax services for UK tax filings.

(3) Paid to PricewaterhouseCoopers LLP for accounting research and database tool.

In considering the nature of the services provided by the independent registered public accounting firm, the Audit Committee determined that such services are compatible with the provision of independent audit services. The Audit Committee discussed these services with the independent registered public accountants and our management to determine that they are permitted under the rules and regulations concerning auditors' independence promulgated by the Securities and Exchange Commission to implement the Sarbanes-Oxley Act of 2002, as well as the American Institute of Certified Public Accountants.

Audit Committee Pre-Approval Policy

Pursuant to our Audit Committee charter, our Audit Committee must pre-approve all audit and permissible non-audit services, and the related fees, provided to us by our independent registered public accounting firm, or subsequently approve permissible non-audit services in those circumstances where a subsequent approval is necessary and permissible under the Exchange Act or the rules of the Securities and Exchange Commission. The policy generally pre-approves specified services in the defined categories of audit services, audit-related services and tax services up to specified amounts. Pre-approval may also be given as part of the Audit Committee's approval of the scope of the engagement of the independent auditor or on an individual, explicit, case-by-case basis before the independent auditor is engaged to provide each service. The pre-approval of services may be delegated to one or more of the Audit Committee's members. Accordingly, the Audit Committee pre-approved all services and fees provided by PricewaterhouseCoopers LLP, during the year ended December 27, 2014, and has concluded that the provision of these services is compatible with the accountants' independence.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT STOCKHOLDERS VOTE "FOR" THE RATIFICATION OF THE APPOINTMENT OF PRICEWATERHOUSECOOPERS LLP, AS NANOMETRICS' INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 26, 2015.

HOUSEHOLDING OF PROXY MATERIALS

The SEC has adopted rules that permit companies and intermediaries (e.g., brokers) to satisfy the delivery requirements for Notices of Internet Availability of Proxy Materials or other Annual Meeting materials with respect to two or more stockholders sharing the same address by delivering a single Notice of Internet Availability of Proxy Materials or other Annual Meeting materials addressed to those stockholders. This process, which is commonly referred to as “householding,” potentially means extra convenience for stockholders and cost savings for companies.

This year, a number of brokers with account holders who are Nanometrics stockholders will be “householding” Nanometrics’ proxy materials. A single Notice of Internet Availability of Proxy Materials will be delivered to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders. Once you have received notice from your broker that they will be “householding” communications to your address, “householding” will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in “householding” and would prefer to receive a separate Notice of Internet Availability of Proxy Materials, please notify your broker or Nanometrics. Direct your written request to Investor Relations Department, Nanometrics Incorporated, 1550 Buckeye Drive, Milpitas, California 95035 or contact Investor Relations at 408-545-6000. Stockholders who currently receive multiple copies of the Notice of Internet Availability of Proxy Materials at their addresses and would like to request “householding” of their communications should contact their brokers.

OTHER MATTERS

The Board of Directors knows of no other matters that will be presented for consideration at the Annual Meeting. If any other matters are properly brought before the meeting, it is the intention of the persons named in the accompanying proxy to vote on such matters in accordance with their best judgment.

BY ORDER OF THE BOARD OF DIRECTORS

/s/ Bruce C. Rhine
Bruce C. Rhine
Chairman of the Board of Directors

Milpitas, California
March 30, 2015

A copy of Nanometrics' Annual Report to the Securities and Exchange Commission on Form 10-K for the fiscal year ended December 27 2014, is available without charge upon written request to: Investor Relations Department, Nanometrics, Incorporated, 1550 Buckeye Drive, Milpitas, California 95035.

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FORM 10-K

FOR THE FISCAL YEAR ENDED DECEMBER 27, 2014

NANOMETRICS INCORPORATED

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 27, 2014

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ______ to

Commission file number: 0-13470

NANOMETRICS INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware	**94-2276314**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**
1550 Buckeye Drive, Milpitas, California	**95035**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (408) 545-6000

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, $0.001 par value per share	**The NASDAQ Stock Market LLC (NASDAQ Global Select Market)**

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the Registrant is a well-known seasoned issuer as defined in Rule 405 of the Securities Act. Yes ☐ No ☒.

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒.

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐.

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐.

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer", "accelerated filer", and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	☐	Accelerated filer	☒
Non-accelerated filer	☐	Smaller reporting company	☐

Indicate by check mark whether the Registrant is a shell company (as defined by Rule 12b-2 of the Act) Yes ☐ No ☒.

As of June 28, 2014, the last business day of the Registrant's most recently completed second fiscal quarter, the aggregate market value of the common stock of Registrant held by non-affiliates, based upon the closing sales price for the Registrant's common stock for such date, as quoted on the NASDAQ Global Select Market, was approximately $441.4 million. Shares of common stock held by each officer and director and by each person who owned 5% or more of the outstanding common stock have been excluded because such persons may be deemed to be "affiliates" as that term is defined under the rules and regulations of the Exchange Act. This determination of affiliate status is not necessarily a conclusive determination for any other purpose.

The number of shares of the Registrant's common stock outstanding as of February 18, 2015 was 23,853,009.

DOCUMENTS INCORPORATED BY REFERENCE

The Registrant has incorporated by reference into Part III of this Annual Report on Form 10-K portions of its Proxy Statement for its 2015 Annual Meeting of Stockholders to be filed pursuant to Regulation 14A. The Proxy Statement will be filed within 120 days of Registrant's fiscal year ended December 27, 2014.

NANOMETRICS INCORPORATED

FORM 10-K

FOR THE FISCAL YEAR ENDED DECEMBER 27, 2014

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CAUTIONARY INFORMATION REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K for the year ended December 27, 2014, or "Form 10-K," contains forward-looking statements concerning our business, operations, and financial performance and condition as well as our plans, objectives, and expectations for business operations and financial performance and condition. Any statements contained herein that are not of historical facts may be deemed to be forward-looking statements. You can identify these statements by words such as "anticipate," "assume," "believe," "could," "estimate," "expect," "intend," "may," "plan," "should," "will," "would," and other similar expressions that are predictions of or indicate future events and future trends. These forward-looking statements are based on current expectations, estimates, forecasts, and projections about our business and the industry in which we operate and management's beliefs and assumptions and are not guarantees of future performance or development and involve known and unknown risks, uncertainties, and other factors that are in some cases beyond our control. As a result, any or all of our forward-looking statements in this Form 10-K may turn out to be inaccurate. Factors that could materially affect our business operations and financial performance and condition include, but are not limited to, those risks and uncertainties described herein under "Item 1A - Risk Factors." You are urged to consider these factors carefully in evaluating the forward-looking statements and are cautioned not to place undue reliance on the forward-looking statements. The forward-looking statements are based on information available to us as of the filing date of this Form 10-K. Unless required by law, we do not intend to publicly update or revise any forward-looking statements to reflect new information or future events or otherwise. You should, however, review the factors and risks we describe in the reports we will file from time to time with the Securities and Exchange Commission, or SEC, after the date of this Form 10-K.

PART I

ITEM 1. BUSINESS

Overview

Nanometrics Incorporated and its subsidiaries (“Nanometrics”, the “Company”, or “we”) is a leading provider of advanced, high-performance process control metrology and inspection systems used primarily in the fabrication of integrated circuits, high-brightness LEDs (“HB-LED”), discrete components and data storage devices. Our automated and integrated systems address numerous process control applications, including critical dimension and film thickness measurement, device topography, defect inspection, and analysis of various other film properties such as optical, electrical and material characteristics. Our process control solutions are deployed throughout the fabrication process, from front-end-of-line substrate manufacturing, to high-volume production of semiconductors and other devices, to advanced wafer-scale packaging applications. Our systems enable device manufacturers to improve yields, increase productivity and lower their manufacturing costs.

We were incorporated in California in 1975, and reincorporated in Delaware in 2006. We have been publicly traded since 1984 (NASDAQ: NANO). We have been a pioneer and innovator in the field of optical metrology and have an installed base of approximately 6,500 systems in over 150 production factories worldwide. Our major customers and original equipment manufacturer (“OEM”) partners include Samsung Electronics Co. Ltd., Intel Corporation, SK Hynix Semiconductor, Inc., Micron, Inc., Taiwan Semiconductor Manufacturing Company Limited, GLOBALFOUNDRIES and Toshiba Corporation.

Additional information about us is available on our website at http://www.nanometrics.com. The information that can be accessed through our website, however, is not part of this Annual Report. Our investor relations web page is located at http://www.nanometrics.com/investor.html. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to those reports are available on our web page as soon as reasonably practicable after we electronically file or furnish such materials to the United States Securities and Exchange Commission (“SEC”). In addition, the reports and materials that we file with the SEC are available at the SEC's website (http://www.sec.gov) and at the SEC's Public Reference Room at 100 F Street, NE, Washington DC 20549. Interested parties may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

Industry Background

We participate in the sale, design, manufacture, marketing and support of process control systems for optical critical dimension metrology, thin film metrology, advanced 3-D packaging process control, and wafer defect inspection used for semiconductor manufacturing. Semiconductors are primarily packaged as integrated circuits within electronic devices, including consumer electronics, server and enterprise systems, mobile computing devices (including smart phones and tablets), data storage devices, embedded automotive and control systems, LEDs, and a multitude of other electronic products being proliferated worldwide. Integrated circuits are made up of semiconductor material layers integrating millions or billions of transistors and other electronic components, connected through a complex wiring scheme of small copper or aluminum wires, ultimately packaged into thin form factors to be mounted on circuit boards or other substrates. Our core focus is the measurement and control of the structure, composition, and geometry of the devices from the transistor layer through advanced wafer-scale packaging to improve device performance and manufacturing yields. Our end customers manufacture many types of integrated circuits for a multitude of applications, each having unique manufacturing challenges. This includes integrated circuits to enable information processing and management (logic integrated circuits), memory storage (NAND, 3D-NAND, NOR, and DRAM), analog devices (e.g., Wi-Fi and 4G radio integrated circuits, accelerometers and MEMS sensor devices), thin film head components for hard disk drives and alternative energy devices such as LEDs, power inverters and solar cells.

Demand for our products continues to be driven by our customers' desire for higher overall chip performance, and improvements in power efficiency, logic processing capability, data storage volume and manufacturing yield. To achieve these goals, our customers have increased their use of more complex materials and processing methods in their manufacturing flow. The majority of our chip customers manufacture devices in production runs defined by the smallest printed feature and the associated circuit manufacturing methods, known as a technology node, which are measured in nanometers ("nm"), or one-billionth of a meter. Current volume production is running at the 28nm-20nm nodes across foundry, logic, and memory, with customers migrating toward the 16nm/14nm node and below. In some cases our customers are implementing new materials and methods in high volume manufacturing, including materials and device architectures to reduce power consumption including high dielectric constant (or high-k) materials, FinFET or tri-gate transistors, stacked memory devices, and additional system on chip solutions. To shrink features, new methods including multiple patterning lithography have been deployed. The use of these new materials and methods requires additional process control and we believe has increased demand for our products. Next-generation devices with features smaller than 16nm are in early production, which in turn likely will require new advancements in metrology and inspection capabilities. DRAM memory makers have shifted to 2y node production with development for sub 20nm node devices currently underway (where x, y and z represent successively smaller geometries). Non-volatile memory makers of NAND and NOR devices have ramped 1x node devices into high volume manufacturing with work extending into early 1y node production and 1z node development as well as simultaneously developing stacked or 3D non-volatile memory structures. Current 3D NAND devices are built around a stack of 24-32 layer pairs, and are expected to migrate to 48-64 layer pairs in the next generation of devices. Foundry and logic manufacturers are ramping production of both 28nm and 22nm node devices and beginning pilot production of 16nm/14nm node devices and development of 1y devices. Thin film head components for hard disk drives are also being driven to smaller sizes to support next generation hard disk drives with ever increasing storage capacity requiring continued improvements in read and write head component scaling. We also enable clean energy device manufacturers, such as for LEDs and solar Photo-Voltaics ("PVs"), to achieve higher yields and lower manufacturing costs.

Our Business

We offer a diverse line of process control and inspection products and technologies to address the manufacturing requirements of the semiconductor (and other solid state device) manufacturing industry. Our metrology systems measure and characterize the physical dimensions, material composition, optical and electrical characteristics and other critical parameters of solid state devices, from initial wafer substrate manufacturing through final packaging. For the photolithographic process, thin-film metrology, critical-dimension systems provide control of device dimensions and layer alignment. Advanced packaging techniques require metrology systems to control wafer scale features for through-silicon-via ("TSV"), copper pillar and micro-bump technologies. Our materials characterization systems monitor the physical, optical, and electrical characteristics of materials including those on compound semiconductors, discrete devices, LEDs, solar PVs and unpatterned silicon wafers. Our defect inspection systems locate large area and microscopic defects on patterned and unpatterned wafers throughout the semiconductor production flow.

We are continually working to strengthen our competitive position by developing new technologies and products in our market segment. We have expanded our product offerings to address growing applications within the semiconductor manufacturing and adjacent industries. In continuance of our goals, we have:

- Introduced new products, applications, and upgrades in every core product line and primary market served;
- Diversified our product line and served markets through acquisitions, such as: the 2006 acquisition of Accent Optical Technologies, Inc., a supplier of overlay and thin film metrology and process control systems; the 2008 acquisition of Tevet Process Control Technologies ("Tevet"), an integrated metrology supplier; the 2009 acquisition of the UniFire™ product line from Zygo Corporation; and the 2011 acquisition of Nanda Technologies GmbH, a supplier of high sensitivity, high throughput defect inspection systems;
- Continued development of new measurement and inspection technologies for advanced fabrication processes; and
- Researched and developed innovative applications of existing technology to new market opportunities within the solar PV, HB-LED, discrete device, and data storage industries.

Nanometrics Products

We offer a diverse line of systems to address the broad range of process control requirements of the semiconductor manufacturing industry. In addition, we believe that our engineering expertise, strategic acquisitions, supplier alliances and short-cycle production strategies enable us to develop and offer advanced process control solutions that, in the future, should address industry advancement and trends.

Automated Systems

Our automated systems primarily consist of fully automated metrology systems that are employed in high-volume semiconductor production environments, as well as in research and development ("R&D") and pilot production. The *Atlas® II, Atlas II+, Atlas XP/Atlas XP+* and *Atlas-M* represent our line of high-performance metrology systems providing optical critical dimension ("OCD"®), thin film metrology and wafer stress for transistor and interconnect metrology applications. The OCD technology is supported by our *NanoCD®* suite of solutions including our *NanoDiffract®* software and *NanoGen™* scalable computing engine that enables visualization, modeling, and analysis of complex structures. The *UniFire™* system enables users to measure multiple parameters at any given process step in the advanced packaging process flow for critical dimension, overlay, and topography applications. Our *SPARK™* defect inspection system, offers ultra-fast inspection of patterned and unpatterned semiconductor wafers.

Integrated Systems

Our integrated metrology ("IM") systems are installed directly onto wafer processing equipment to provide near real-time measurements for improved process control and maximum throughput. Our *IM* systems are sold directly to end customers and through OEM channels. The *IMPULSE*® system is our latest metrology platform for OCD, and thin film metrology, and has been successfully qualified on numerous OEM platforms. Our *90x0* system is qualified for OEM and direct sales supporting thin film and OCD applications. Our *NanoCD suite of solutions* is sold in conjunction with our *IMPULSE*® and legacy *90x0* systems. Our *Trajectory*® system provides in-line measurement of layers in thin film thickness and composition in semiconductor applications.

System Platform

The *Lynx*® platform enables cluster metrology factory automation for improved cost of ownership to our customers by combining our *Atlas*® *II+* and *IMPULSE*®, *UniFire* metrology and *SPARK* inspection systems in configurations to provide high throughput, reduced footprint systems for leading 300mm wafer metrology applications including OCD and thin film process control.

Materials Characterization

Our materials characterization products include systems that are used to monitor the physical, optical, electrical and material characteristics of discrete electronic industry, HB-LED, solar PV, compound semiconductor, strained silicon and silicon-on-insulator ("SOI") devices, including composition, crystal structure, layer thickness, dopant concentration, contamination and electron mobility.

Our *Imperia*™ is a photoluminescence ("PL") full wafer imaging and mapping system designed for high-volume compound semiconductor metrology applications including power control and photonics applications adding significant inspection and substrate metrology capability to the established PL fleet. The *RPMBlue*™ is our latest PL mapping system designed specifically for the HB-LED market, and is complemented by the RPMBlue-FS, enabling a breadth of research and development configurability. We sell Fourier-Transform Infrared ("FTIR") automated and manual systems in the *QS2200/3300* and *QS1200* respectively. The *FTIR* systems are spectrometers designed for non-destructive wafer analysis for various applications. The *NanoSpec*® line, including the *NanoSpec II,* supports thin film measurement across all applications in both low volume production and research applications.

Our process control systems can be categorized as follows:

System	Market	Applications
Automated Systems		
Atlas II/Atlas II+/Atlas XP/ Atlas XP+/Atlas-M	Semiconductor	Film Thickness, Film Stress, CD
SPARK	Semiconductor	Defect Inspection and Advanced Packaging Applications
UniFire	Semiconductor	Film Thickness, Overlay, CD, and Advanced Packaging Applications
Integrated Systems		
IMPULSE	Semiconductor	Film Thickness, CD
9010 Series	Semiconductor	Film Thickness, CD
9000 Series	Semiconductor	Film Thickness
Trajectory	Semiconductor, Solar PV	Film Thickness, Composition
System Platform		
Lynx	Semiconductor	Platform
OCD Analysis		
NanoDiffract	Semiconductor	OCD
NanoGen	Semiconductor	OCD

System	Market	Applications
Materials Characterization Systems		
ECVPro	Compound Semiconductor, Solar PV, HB-LED	Electrical Properties
HL5500	Compound Semiconductor, Solar PV, HB-LED	Electrical Properties
QS1200	Substrate Semiconductor, Solar PV	Substrate Properties, Film Composition and Thickness
QS2200/3300	Substrate Semiconductor	Substrate Properties, Film Composition
NanoSpec® II	Semiconductor	Film Thickness (Tabletop)
RPMBlue™	HB-LED	Epitaxial Layer Properties
Stratus	Semiconductor	Substrate Properties, Film Composition and Thickness (Tabletop)
Imperia	Compound Semiconductor, Solar PV, HB-LED	Epitaxial Layer Properties, Defectivity, Bow/Wrap

See Note 16 of our consolidated financial statements in Item 8, "Financial Statements and Supplementary Data," for sales by product type.

Customers

We sell our metrology and inspection systems worldwide to semiconductor manufacturers and equipment suppliers, and producers of HB-LEDs, data storage devices, silicon wafers, solar PVs, and photomasks. The majority of our systems are sold to customers located in Asia and the United States.

The following customers accounted for 10% or more of our total net revenues:

	2014	2013	2012
Samsung Electronics Co. Ltd.	27%	14%	28%
Intel Corporation	13%	30%	22%
SK Hynix	12%	18%	17%
Micron	10%	***	***

*** The customer accounted for less than 10% of total net revenues during the period.

Sales and Marketing

We believe that the capability for direct sales and support is beneficial for developing and maintaining close customer relationships and for rapidly responding to changing customer requirements. We provide local direct sales, service and application support through our worldwide offices located in the United States, South Korea, Japan, Taiwan, China, Singapore, Israel, the United Kingdom, France and Germany, and work with selected dealers and sales representatives in Asia and in the United States and other countries. Our employees include our technical applications team, which comprises technically experienced sales engineers who are knowledgeable in the use of metrology systems generally and the unique features and advantages of our specific products. Supported by our technical applications team, our sales and support teams work closely with our customers to offer cost-effective solutions to complex measurement and process problems.

Direct exports of our metrology systems to our foreign customers and shipments to our foreign subsidiaries international offices require general export licenses.

Net revenues from customers located in the United States and in foreign countries, as a percentage of total net revenues were as follows:

	2014	2013	2012
United States	22%	33%	25%
South Korea	25%	24%	44%
China	17%	9%	3%
Taiwan	12%	7%	9%
All other countries	24%	27%	19%

See Note 16 of our consolidated financial statements in Item 8, "Financial Statements and Supplementary Data," for segment and geographical financial information.

Customer Service and Support

We believe that customer service and technical support for our systems are important factors that distinguish us from our competitors and are essential to building and maintaining close, long-term relationships with our customers. We provide a standard one-year warranty on parts and labor for most of our products. We provide system support to our customers through factory technical support and globally deployed field service personnel. The factory technical support operations provide both OEM and end-user customers with telephonic technical support access, direct training programs, operating manuals and other technical support information to enable effective use of our metrology and measurement instruments and systems. We coordinate warranty and post-warranty field service and spare parts support from our corporate headquarters in Milpitas, California. We also have field service operations based in various locations throughout the United States, the United Kingdom, Israel, France, Italy and Germany. In Asia, service is provided by direct offices in Japan, South Korea, Taiwan, China and Singapore.

Service revenues, including sales of replacement parts, represented 20%, 26%, and 21% of total net revenues in 2014, 2013 and 2012, respectively.

Backlog

As of December 27, 2014 and December 28, 2013, our backlog was $41.5 million and $38.0 million, respectively. Backlog includes orders, both shipped and not yet recognized in revenue, and not shipped, for products, services and upgrades where written customer requests have been received and we expect to ship and/or recognize revenue within 12 months. During 2014, we determined that our backlog metric should also include orders for which product has shipped but the associated revenue has not yet been recognized. As such, we have updated the backlog amount as of December 28, 2013 to be comparable with backlog as of December 27, 2014. Orders are subject to cancellation or delay by the customer subject to possible penalties. However, historically, order cancellations have not been significant. Because orders presently in backlog could be cancelled or rescheduled and some orders can be received and shipped within the same quarter, we do not believe that current backlog is an accurate indication of our future revenues or financial performance.

Competition

We offer different products for various semiconductor manufacturing process steps, and several of our products extend across the same process flow. However, for process control of each of these process steps, we have multiple competitors. In every market in which we participate, the global semiconductor equipment industry is intensely competitive, and driven by rapid technological adoption cycles. Our ability to effectively compete depends upon our ability to continually improve our products, applications and services, and our ability to develop new products, applications and services that meet constantly evolving customer requirements.

We believe that our competitive position in each of our markets is based on the ability of our products and services to address customer requirements related to numerous competitive factors. Competitive selections are based on many factors involving technological innovation, productivity, total cost of ownership of the system, including impact on end of line yield, price, product performance and throughput capability, quality, reliability and customer support.

In automated metrology for the semiconductor industry, our principal competitors are KLA-Tencor Corporation (“KLA-Tencor”) and Nova Measuring Instruments Ltd. ("Nova") for thin film and critical dimension metrology. Our primary competitor in integrated metrology is Nova. The HB-LED, discrete device, bare silicon and solar PV markets are served by numerous competitors and no single competitor or group of competitors has established a majority position.

Manufacturing

Our manufacturing operations are in Milpitas, California and at various contract manufacturers around the world. It is our strategy to outsource all assemblies that do not contain elements that we believe lead to a direct competitive advantage. The majority of our automated and integrated products are currently manufactured at our Milpitas facility. We also use contract manufacturers in China, Israel, Japan and other locations in the United States. During the manufacturing process, we combine proprietary measurement technology produced in our facilities with components and sub-assemblies obtained from outside suppliers. We currently do not expect our manufacturing operations to require additional major investments in capital equipment.

We produce key parts and components and make reasonable efforts to ensure that any externally purchased parts or raw materials are available from multiple suppliers, but this is not always possible. Certain components, sub-assemblies and services necessary for the manufacture of our systems are obtained either from a sole supplier or limited group of suppliers. In June 2009, we signed a supply agreement with Zygo Corporation to supply OEM interferometer sensors for incorporation into the UniFire™ line of products as well as our family of automated metrology systems. We also have an established long-term supply agreement for supply of our spectroscopic ellipsometers for use in our Atlas family of products. Although we seek to reduce our dependence on sole and limited source suppliers, partial or complete loss of these sources could disrupt production, delay scheduled deliveries to customers and have a material adverse effect on our revenues and results of operations.

Our production processes require raw materials that meet specific standards, including some that are customized for, or are unique to, us. We generally have multiple sources and sufficient availability of supply but only a limited number of suppliers are capable of providing certain raw materials that meet our standards. If our supply of raw materials is interrupted, production and results of operations or financial condition could be adversely affected.

Research and Development

We continue to invest in R&D to provide our customers with products that add value to their manufacturing processes and that provide a better and differentiated solution than our competitors, so that our products stay in the forefront of current and future market demands. Whether it is for an advancement of current technology yield and manufacturing improvement, enabling new end device technology, or the development of a new application in our core or emerging markets, we are committed to product excellence and longevity. We have several facilities located worldwide to support these objectives.

Our R&D efforts resulted in the successful product launch of the *Atlas II+* product in the marketplace, our flagship product for OCD. In 2014, our R&D investments were focused on new platforms and product upgrade programs, to improve both capability, and cost of ownership. The *Atlas II+* product provides enhanced OCD capability with a significantly lower cost of ownership model. In our integrated markets, the *IMPULSE IM* system has been further developed for inline lithography track configuration to extend our tool of record position for lithography OCD. The UniFire system development continued with new system configurations and applications development targeted at advanced packaging applications, including further extensions for advanced packaging applications. After the acquisition of Nanda Technology GmbH, which was our macro defect inspection initiative, R&D investment continued on our inspection technology for multiple use cases including enhancements for advanced lithography cluster monitoring, CMP and end of line quality, and advanced packaging applications.

Our R&D spending is focused on appropriate products and technologies. The new products and capabilities that we introduced to the market in 2014 were adopted by customers in key applications. Our R&D expenditures for each of the last three fiscal years were as follows:

	2014	2013	2012
Research and Development			
R&D Expenditures (in millions)	$ 34	$ 33	$ 30
R&D Expenditures (as percentage of net revenues)	20%	23%	16%

Patents and Intellectual Property

Our success depends in large part on the technical innovation of our products and protecting such innovations through a variety of methods. We actively pursue a program of filing patent applications to seek protection of technologically sensitive features of our metrology and inspection systems. As at December 27, 2014, we had 204 patents, including foreign patents, with expiration dates ranging from 2015 to 2033. We believe that our success will depend to a great degree upon innovation, technological expertise and our ability to adapt our products to new technology. While we attempt to establish our intellectual property rights through patents and trademarks and protect intellectual property rights through non-disclosure agreements, we may not be able to fully protect our technology, and competitors may be able to develop similar technology independently. Others may obtain patents and assert them against us. In addition, the laws of certain foreign countries may not protect our intellectual property to the same extent as do the laws of the United States. From time to time we receive communications from third parties asserting that our metrology systems may contain design features that the third parties claim may infringe upon their proprietary rights.

Employees

At December 27, 2014, we employed 525 persons worldwide with sales, applications and service support in key geographic areas aligned with our customer locations. None of our employees are represented by a union and we have never experienced a work stoppage as a result of union actions. Many of our employees have specialized skills that are of value to us. Our future success will depend in large part upon our ability to attract and retain highly skilled scientific, technical and managerial personnel, who are in great demand in our industry. We consider our employee relations to be good.

Environmental Matters

Our operations are subject to various federal, state and local environmental protection regulations governing the use, storage, handling and disposal of hazardous materials, chemicals, and certain waste products. We believe that compliance with federal, state and local environmental protection regulations will not have a material adverse effect on our capital expenditures, earnings and competitive and financial position.

In the event that we fail to comply with such laws and regulations, we could be liable for damages, penalties and fines. We further discuss the impact of environmental regulation under "Risk Factors- *We are subject to various environmental laws and regulations that could impose substantial costs upon us and may harm our business, operating results and financial condition.*" in Item 1A.

Executive Officers of the Registrant

The names of our executive officers and their ages, titles and biographies as of February 18, 2015, are set forth below:

Name	Age	Position
Timothy J. Stultz, Ph.D.	67	President, Chief Executive Officer and Director
Jeffrey Andreson	53	Chief Financial Officer

Dr. Timothy J. Stultz has served as President, Chief Executive Officer and director of Nanometrics Incorporated since August 2007. Dr. Stultz has more than 30 years of executive management experience. Prior to joining Nanometrics, Dr. Stultz was President and Chief Executive Officer of Imago Scientific Instruments Corporation, a supplier of proprietary 3-D atom probe microscopes to the research, materials and microelectronics industries; President and Chief Executive Officer for ThauMDx, a developer of diagnostic systems for the healthcare industry; and Vice President and General Manager of Veeco Instruments' Metrology and Instrumentation Business. Dr. Stultz also serves on the Board of Directors of Tessera Technologies, Inc. Dr. Stultz received his B.S., M.S. and Ph.D. in Materials Science and Engineering from Stanford University.

Jeffrey Andreson joined Nanometrics as Chief Financial Officer in September 2014. Prior to Nanometrics, Mr. Andreson served at Intevac Corporation from August 2007 to September 2014 most recently as Executive Vice President, Finance and Administration, Chief Financial Officer, Treasurer and Secretary from August 2007 and in this role was responsible for finance, information services and legal. From June to August 2007, Mr. Andreson served as Executive Vice President, Finance at Intevac. Prior to joining Intevac, Mr. Andreson served 12 years with Applied Materials in various controllership positions within the company most recently as Managing Director and Controller of the $2 billion Applied Materials' Global Services product group. Mr. Andreson joined Applied Materials in 1995 and held a number of senior financial positions, including: Managing Director, Global Financial Planning and Analysis; Controller, Metron Subsidiary; Controller, North American Sales and Service; and Controller, Volume Manufacturing. From 1989 through 1995, Mr. Andreson held various roles at Measurex Corporation. Mr. Andreson holds an MBA from Santa Clara University and a B.S. degree in finance from San Jose State University.

ITEM 1A. RISK FACTORS

In addition to the other information contained in this Annual Report on Form 10-K, we have identified the following risks and uncertainties that may have a material adverse effect on our business, financial condition or results of operations. Investors should carefully consider the risks described below before making an investment decision. The risks described below are not the only ones we face. Additional risks not currently known to us or that we currently believe are immaterial may also impair our business operations. Our business could be harmed by any of these risks. The trading price of our common stock could decline due to any of these risks and investors may lose all or part of their investment. This section should be read in conjunction with the Consolidated Financial Statements and Notes thereto, and Management's Discussion and Analysis of Financial Condition and Results of Operations contained in this Annual Report on Form 10-K.

The Global economic conditions and the cyclical nature of the semiconductor industry have reduced demand for our products which in turn caused us to operate unprofitably in the past and caused reductions in available cash, and may, in the future, negatively impact our financial performance.

Global economic conditions, the gradual recovery of the global economy and the cyclical nature of the semiconductor industry have impacted and could impact future customer demand for our products and our financial performance. The degree of this impact will depend on a number of factors, including the timing and extent of recovery of the U.S. and global economy from the recession. Demand for our products is largely dependent on our customers' capital spending on semiconductor equipment, which depends, in large part, on consumer spending, required manufacturing capacity, and customer access to capital. Economic uncertainty, unemployment, higher interest rates, higher tax rates, fluctuations in foreign currency exchange rates, and other economic factors may lead to a decrease in consumer spending and may cause certain customers to cancel existing orders or delay placing orders. If we are unable to timely and appropriately adapt to changes resulting from difficult economic conditions, it may cause volatility in our operating results, business, and financial condition, and results of operations may be adversely affected.

In addition, demand for our products is highly inelastic which means we have little ability to control product revenues created by customer demand for more capacity. The market for our products is characterized by constant and rapid technological change, price erosion, product obsolescence, evolving standards, short product life cycles and significant volatility in supply and demand. Due to the inelastic nature of demand in the semiconductor industry, we may need to take actions to reduce costs in the future, which could reduce our ability to significantly invest in research and development at levels we believe are necessary. If we are unable to effectively align our cost structure with prevailing market conditions, our business, financial condition and results of operations may be materially and adversely affected.

We may also experience supplier or customer issues as a result of adverse macroeconomic conditions. If our customers have difficulties in obtaining capital or financing, this could result in lower sales. Customers with liquidity issues could also result in an increase in bad debt expense. These conditions could also affect our key suppliers, which could affect their ability to supply parts and result in delays of our customer shipments.

Our largest customers account for a substantial portion of our net revenues, and our net revenues would materially decline if one or more of these customers were to purchase significantly fewer of our systems.

Historically, a significant portion of our net revenues in each quarter and each year has been derived from sales to relatively few customers, and we expect this trend to continue. In fiscal year 2014, four customers represented 27%, 13%, 12% and 10%, respectively, or collectively 62%, of our total net revenues. There are only a limited number of large companies operating in the semiconductor manufacturing industry and our market is characterized by continued consolidation in the customer base. Accordingly, we expect that we will continue to depend on a small number of large customers for a significant portion of our net revenues for the foreseeable future. If our current relationships with our large customers are impaired, or if we are unable to develop similar collaborative relationships with important customers in the future, our net revenues could decline significantly. In addition, because there are a limited number of customers, customers may seek concessions related to price, terms and conditions and intellectual property. Any of these changes could negatively impact our financial performance and results of operations.

We rely on a limited number of outside suppliers and subcontractors to manufacture certain components and subassemblies, and on single or a limited group of outside suppliers for certain materials for our products, which could result in a potential inability to obtain an adequate supply of required components due to the suppliers' failure or inability to provide such components in a timely manner, or at all, and reduced control over pricing and timely delivery of components and materials, any of which could adversely affect our results of operations.

Our manufacturing activities consist of assembling and testing components and subassemblies, which are then integrated into finished systems. We rely on a limited number of outside suppliers and subcontractors to manufacture certain components and subassemblies. We order one of the most critical components of our technology, the spectroscopic ellipsometer component incorporated into our advanced measurement systems, from external suppliers.

We procure some of our other critical systems' components, subassemblies and services from single outside suppliers or a limited group of outside suppliers in order to ensure overall quality and timeliness of delivery. Many of these components and subassemblies have significant production lead times. To date, we have been able to obtain adequate services and supplies of components and subassemblies for our systems in a timely manner. However, disruption or termination of certain of these sources could have a significant adverse impact on our ability to manufacture our systems. In addition, our failure to timely use components in our manufacturing processes due to delays or cancellation of orders may lead to write-downs of inventory. A disruption in supply or inventory window would, in turn, have a material adverse effect on our business, financial condition and results of operations. Our reliance on a sole supplier or a limited group of suppliers and our reliance on subcontractors involve several risks, including:

- a potential inability to obtain an adequate supply of required components due to the suppliers' failure or inability to provide such components in a timely manner, or at all; and
- reduced control over pricing and timely delivery of components.

Although the timeliness, yield and quality of deliveries to date from our subcontractors have been acceptable, manufacture of certain of these components and subassemblies is an extremely complex process, and long lead times are required. Any inability to obtain adequate deliveries or any other circumstance that would require us to seek alternative sources of supply or to manufacture such components internally could delay our ability to ship our products, which could damage relationships with current and prospective customers and have a material adverse effect on our business, financial condition and results of operations.

Some of our current and potential competitors have significantly greater resources than we do, and increased competition could impair sales of our products.

We operate in the highly competitive semiconductor industry and face competition from a number of companies, many of which have greater financial, engineering, manufacturing, research and development, marketing and customer support resources than we do. As a result, our competitors may be able to respond more quickly to new or emerging technologies or market developments by devoting greater resources to the development, promotion and sale of products, which could impair sales of our products. Moreover, there has been merger and acquisition activity among our competitors and potential competitors. These transactions by our competitors and potential competitors may provide them with a competitive advantage over us by enabling them to rapidly expand their product offerings and service capabilities to meet a broader range of customer needs. Many of our customers and potential customers in the semiconductor industry are large companies that require global support and service for their metrology systems. Some of our larger or more geographically diverse competitors might be better equipped to provide this global support and service.

Because of the high cost of switching equipment vendors in our markets, it may be difficult for us to attract customers from our competitors even if our metrology systems are superior to theirs.

We believe that once a semiconductor customer has selected one vendor's metrology system, the customer generally relies upon that system and, to the extent possible, subsequent generations of the same vendor's system, for the life of the application. Once a vendor's metrology system has been installed, a customer must often make substantial technical modifications and may experience downtime to switch to another vendor's metrology system. Accordingly, unless our systems offer performance or cost advantages that outweigh a customer's expense of switching to our systems; it will be difficult for us to achieve significant sales from that customer once it has selected another vendor's system for an application.

We depend on Original Equipment Manufacturers ("OEMs") for sales of our integrated metrology systems, and the loss of our OEMs as customers could harm our business.

We believe that sales of integrated metrology systems will continue to be an important source of our net revenues. Sales of our integrated metrology systems depend upon the ability of OEMs to sell semiconductor manufacturing equipment products that include or are compatible with our metrology systems as components. If our OEM customers are unable to sell such products, or if they choose to focus their attention on products that do not integrate our systems, our business could suffer. If we were to lose our OEM customers for any reason, our ability to realize sales from integrated metrology systems would be diminished, which would harm our business.

We are subject to order and shipment uncertainties. Our profitability will decline if we fail to accurately forecast customer demand when managing inventory.

We generally sell our products on the basis of purchase orders rather than long-term purchase commitments from our customers. Our customers can typically cancel purchase orders or defer product shipments for some period without incurring liabilities to us. We typically plan production and inventory levels based on internal forecasts of customer demand, which can be highly unpredictable and can fluctuate substantially, which could lead to excess inventory write-downs and resulting negative impacts on gross margin and net income. We have limited visibility into our customers' inventories, future customer demand and the product mix that our customers will require, which could adversely affect our production forecasts and operating margins. In addition, innovation in our industry could render significant portions of our inventory obsolete. If we overestimate our customers' requirements, we may have excess inventory, which could lead to obsolete inventory and unexpected costs. Conversely, if we underestimate our customers' requirements, we may have inadequate inventory, which could lead to foregone revenue opportunities, loss of potential market share and damage to customer relationships as product deliveries may not be made on a timely basis, disrupting our customers' production schedules. In response to anticipated long lead times to obtain inventory and materials from outside suppliers and foundries, we periodically order materials in advance of customer demand. This advance ordering has in the past and may in the future result in excess inventory levels or unanticipated inventory write-downs if expected orders fail to materialize, or other factors make our products less saleable. In addition, any significant future cancellation or deferral of product orders could adversely affect our revenue and margins, increase inventory write-downs due to obsolete inventory, and adversely affect our operating results and stock price.

If we do not manage our supply chain effectively, our operating results may be adversely affected.

We need to continually evaluate our global supply chains and assess opportunities to reduce costs. We must also enhance quality, speed and flexibility to meet changing demand for our products and product mix and uncertain market conditions. Our success also depends in part on refining our cost structure and supply chains so that we have flexibility and are able to protect and improve profitability. To improve our margins on a product, we will need to establish high volume supply agreements with our vendors. We cannot be certain that we will be able to timely negotiate vendor supply agreements on improved terms and conditions, or at all. Failure to achieve the desired level of cost reductions could adversely affect our financial results. Despite our efforts to control costs and increase efficiency in our facilities, changes in demand could still cause us to realize lower operating margins and profitability.

If we choose to acquire new and complementary businesses, or products or technologies instead of developing them ourselves, we may be unable to complete these acquisitions or may not be able to successfully integrate an acquired business in a cost-effective and non-disruptive manner.

Our success depends on our ability to continually enhance and broaden our product offerings in response to changing technologies, customer demands and competitive pressures. To achieve this, from time to time we have acquired complementary businesses, products, or technologies instead of developing them ourselves and may choose to do so in the future. For example, in November 2011, we acquired Nanda Technologies GmbH, a supplier of high-throughput, high-sensitivity defect inspection technology for semiconductor manufacturing. In June 2009, we entered into a strategic partnership with Zygo under an exclusive OEM supply agreement to provide interferometer sensors to us for incorporation into our UniFire line of products as well as our family of automated metrology systems. However, we may not be able to identify suitable transactions in the future, or if we do identify such transactions, we may not be able to complete them on commercially acceptable terms, or at all. We also face intense competition for acquisitions from other acquirers in our industry. These competing acquirers may have significantly greater financial and other resources than us, which may prevent us from successfully pursuing a transaction.

Potential risks associated with acquisitions could include, among other things:

- our inability to realize the benefits or cost savings that we expect to realize as a result of the acquisition;
- diversion of management's attention;
- our inability to successfully integrate our businesses with the business of the acquired company;
- motivating, recruiting and retaining executives and key employees; conforming standards, controls, procedures and policies, business cultures and compensation structures among our company and the acquired company;
- consolidating and streamlining sales, marketing and corporate operations;
- potential exposure to unknown liabilities of acquired companies;
- loss of key employees and customers of the acquired business; and
- managing tax costs or inefficiencies associated with integrating our operations following completion of the acquisitions.

If an acquisition is not successfully completed or integrated into our existing operations, our business, financial condition and results of operations could be adversely impacted.

In addition, to finance any acquisitions we may be required to raise additional funds through public or private equity or debt financings, however:

- to obtain such financing we may be forced to obtain financing on terms that are not favorable to us and, in the case of equity or convertible debt financing, the financing may result in dilution to our stockholders; or
- such financing may not be available to us at all, which could prevent us from entering into or completing the acquisition.

Our success depends on the performance of key personnel, including our senior management and on our ability to identify, hire and retain key management personnel.

We believe our continued ability to recruit, hire, retain and motivate highly-skilled engineering, operations, sales, administrative and managerial personnel is key to our future success. Competition for these employees is intense, particularly with respect to attracting and retaining qualified technical and senior management personnel. We have experienced turnover in our senior management team. Our business may be harmed if we are unable to recruit, retain and effectively integrate our senior management into our business operations.

We do not have employment agreements with key members of our technical staff and our senior management team, and these individuals or other key employees may leave us. We do not have key person life insurance on any of our executives. In addition, to support our future growth, we will need to attract and retain additional qualified employees. If we fail to attract, motivate and retain qualified senior management personnel, our business could be harmed and our ability to implement our strategy could be compromised**.**

If we deliver systems with defects, our credibility will be harmed, revenue from, and market acceptance of, our systems will decrease and we could expend significant capital and resources as a result of such defects.

Our products are complex and frequently operate in high-performance, challenging environments. Notwithstanding our internal quality specifications, our systems have sometimes contained errors, defects and bugs when introduced. If we deliver systems with errors, defects or bugs, our credibility and the market acceptance and sales of our systems would be harmed. Further, if our systems contain errors, defects or bugs, we may be required to expend significant capital and resources to alleviate such problems and incur significant costs for product recalls and inventory write-offs. Defects could also lead to product liability lawsuits against us or against our customers. We have agreed to indemnify our customers in some circumstances against liability arising from defects in our systems. In the event of a successful product liability claim, we could be obligated to pay damages significantly in excess of our product liability insurance limits.

If we experience significant delays in shipping our products to our customers, our business and reputation may suffer.

Our products are complex and require technical expertise to design and manufacture properly. Various problems occasionally arise during the manufacturing process that may cause delays and/or impair product quality. Any significant delays stemming from the failure of our products to meet or exceed our internal quality specifications, or for any other reasons, would delay our shipments. Shipment delays could harm our business and reputation in the industry.

Net average selling prices of our products may decrease over time, which could have a material adverse effect on our revenues.

It is common in our industry for the average selling price of a given product to decrease over time as production volumes increase, competing products are developed or new technologies featuring higher performance or lower cost emerge. To combat the negative effects that erosion of average selling prices have had in the past and may in the future have on our net revenues, we attempt to actively manage the prices of our existing products and regularly introduce new process technologies and products in the market that exhibit higher performance, that are in demand, or that lower manufacturing cost. Failure to maintain our current prices or to successfully execute on our new product development strategy will cause our net revenues and gross margin to decline, which adversely affect our operating results and stock price.

Third party infringement claims could be costly to defend, and successful infringement claims by third parties could result in substantial damages, lost product sales and the loss of important intellectual property rights by us.

The semiconductor industry is generally subject to frequent litigation regarding patents and other intellectual property rights. Our commercial success depends, in part, on our ability to avoid infringing or misappropriating patents or other proprietary rights owned by third parties. From time to time we may receive communications from third parties asserting that our metrology systems may contain design features which are claimed to infringe on their proprietary rights. Our new or current products may infringe valid intellectual property rights, but even if our products do not infringe, we may be required to expend significant sums of money to defend against infringement claims, or to actively protect our intellectual property rights through litigation. In the event that a claim is made and there is an adverse result of any intellectual property rights litigation, we could be required to pay substantial damages for infringement, expend significant resources to develop non-infringing technology, incur material liability for royalty payments or fees to obtain licenses to the technology covered by the litigation, or be subjected to an injunction, which could prevent us from selling our products and materially and adversely affect our net revenues and results of operations. We cannot be sure that we will be successful in any such non-infringing development or that any such license would be available on commercially reasonable terms, if at all. Any claims relating to the infringement of third-party proprietary rights, even if not meritorious, could result in costly litigation, lost sales or damaged customer relationships, and diversion of management's attention and resources.

Our intellectual property may be infringed by third parties despite our efforts to protect it, which could threaten our future success and competitive position and harm our operating results.

Our future success and competitive position depend in part upon our ability to obtain and maintain proprietary technology for our principal product families, and we rely, in part, on patent, trade secret and trademark law to protect that technology. If we fail to adequately protect our intellectual property, it will be easier for our competitors to sell competing products. We own or may license patents relating to our systems, and have filed applications for additional patents. Any of our pending patent applications may be rejected, and we may not in the future be able to develop additional proprietary technology that is patentable. In addition, the patents we own, have been issued or licensed, may not provide us with competitive advantages and may be challenged by third parties. Third parties may also design around these patents.

In addition to patent protection, we rely upon trade secret protection for our confidential and proprietary information and technology. We routinely enter into confidentiality agreements with our employees. However, in the event that these agreements may be breached, we may not have adequate remedies. Our confidential and proprietary information and technology might also be independently developed by or become otherwise known to third parties.

We may be required to initiate litigation to enforce patents issued to or licensed by us, or to determine the scope or validity of a third party's patent or to enforce trade secret, confidentiality or other proprietary rights. Any such litigation, regardless of outcome, could be expensive and time consuming, and could subject us to significant liabilities or require us to re-engineer our product or obtain expensive licenses from third parties, any of which would adversely affect our business and operating results.

Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy or otherwise obtain or use our products or technology. Our ability to enforce our patents and other intellectual property is limited by our financial resources and is subject to general litigation risks. If we seek to enforce our rights, we may be subject to claims that the intellectual property rights are invalid, are otherwise not enforceable or are licensed to the party against whom we assert a claim. In addition, our assertion of intellectual property rights could result in the other party seeking to assert alleged intellectual property rights of its own against us, which is a frequent occurrence in such litigation.

Our efforts to protect our intellectual property may be less effective in some foreign countries where intellectual property rights are not as well protected as in the United States.

In 2014, 2013, and 2012, 78%, 67% and 76%, respectively, of our total net revenues were derived from sales to customers in foreign countries, including certain countries in Asia, such as Japan, South Korea, China, Singapore and Taiwan. The laws of some foreign countries do not protect our proprietary rights to as great an extent as do the laws of the United States, and many U.S. companies have encountered substantial problems in protecting their proprietary rights against infringement in these countries. If we fail to adequately protect our intellectual property in these countries, it would be easier for our competitors to sell competing products and our business would suffer.

Variations in the amount of time it takes for us to sell our systems may cause volatility in our operating results, which could cause our stock price to decline.

Variations in the length of our sales and product acceptance cycles could cause our revenues to fluctuate widely from period to period. Our customers generally take long periods of time to evaluate our metrology systems. We expend significant resources educating and providing information to our prospective customers regarding the uses and benefits of our systems. The length of time that it takes for us to complete a sale depends upon many factors, including:

- the efforts of our sales force and our independent sales representatives;
- the complexity of the customer’s metrology needs;
- the internal technical capabilities and sophistication of the customer;
- the customer’s budgetary constraints; and
- the quality and sophistication of the customer’s current processing equipment.

Because of the number of factors influencing the sales process, the period between our initial contact with a customer and the time at which we recognize revenue from that customer, if at all, varies widely. Our sales cycles, including the time it takes for us to build a product to customer specifications after receiving an order, typically range from three to nine months. Occasionally our sales cycles can be much longer, particularly with customers in Asia who may require longer evaluation and acceptance periods. During the sales cycles, we commit substantial resources to our sales efforts in advance of receiving any revenue, and we may never receive any revenue from a customer despite our sales efforts.

If we do complete a sale, customers often purchase only one of our systems and then evaluate its performance for a lengthy period of time before purchasing additional systems. The purchases are generally made through purchase orders rather than through long-term contracts. The number of additional products that a customer purchases, if any, depends on many factors, including a customer’s capacity requirements, and/or shifting to more and advanced manufacturing processes that require more or different products to control. If they change their rate of capacity or have technological change, we cannot compensate for this fluctuation in demand by adjusting the price of our products. The period between a customer’s initial purchase and any subsequent purchases and acceptance is unpredictable and can vary from three months to a year or longer. Variations in the length of this period could cause fluctuations in our operating results, which could adversely affect our stock price.

Relatively small fluctuations in our system sales volume may cause our operating results to vary significantly each quarter.

During any quarter, a significant portion of our revenue is derived from the sale of a relatively small number of systems. Our automated metrology systems can be priced up to, or above, $2,100,000 per system, and our integrated metrology systems can be priced up to, or above, $500,000 per system. Accordingly, a small change in the number or mix of systems that we sell could cause significant changes in our operating results.

Lack of market acceptance for our products may affect our ability to generate revenue and may harm our business.

In 2014 we introduced our *NanoSpec II* automated metrology system, our Imperia photoluminescence imaging system and our *Atlas II* +OCD system, a next-generation tool for high performance process control metrology. In 2012 we introduced our SPARK inspection solution. In 2010, the capability of our *NanoCD* suite was extended with launches of our new modeling and analysis software, *NanoDiffract*, and migration to the latest generation of cluster computers for fabrication wide analysis (*NanoGen*). In 2009, we introduced the *Atlas XP+* system as the follow-on to our Atlas metrology system. We have invested substantial time and resources into the development of these products. However, we cannot accurately predict the future level of acceptance of our products by our customers. As a result, we may not be able to generate anticipated revenue from sales of these products or future new products or improvements.

We depend on new products and processes for our success. Consequently, we are subject to risks associated with rapid technological change.

Rapid technological changes in semiconductor manufacturing processes subject us to increased pressure to develop technological advances enabling such processes. We believe that our future success depends in part upon our ability to develop and offer new products with improved capabilities and to continue to enhance our existing products. We cannot make assurances if or when the products and solutions where we have focused our research and development expenditures will become commercially successful. If new products have reliability or quality problems, our performance could be impacted by reduced orders, higher manufacturing costs, and delays in acceptance or payment for new products, and additional service and warranty expenses. We might not be able to develop and manufacture new products successfully, or new products that we introduce may fail in the marketplace. Our failure to complete commercialization of these new products in a timely manner could result in unanticipated costs and inventory obsolescence, which would adversely affect our financial results. Any significant delay in releasing new systems could adversely affect our reputation, give a competitor a first-to-market advantage or allow a competitor to achieve greater market share.

To develop new products and processes, we expect to continue to make significant investments in research and development and to pursue joint development relationships with customers, suppliers or other members of the industry. We must manage product transitions and joint development relationships successfully, as introduction of new products could adversely affect our sale of existing products.

We are subject to risks associated with our competitors' strategic relationships and their introduction of new products, and we may lack the financial resources or technological capabilities of certain of our competitors needed to capture increased market share.

We expect to face significant competition from multiple current and future competitors. We believe that other companies are developing systems and products that are competitive to our products and are planning to introduce new products, which may affect our ability to sell our existing or future products. We face a greater risk if our competitors enter into strategic relationships with leading semiconductor manufacturers covering products similar to those we sell or may develop, as this could adversely affect our ability to sell products to those manufacturers.

Some of our competitors have substantially greater financial resources and more extensive engineering, manufacturing, marketing and customer service and support resources than we do and therefore have the potential to increasingly dominate the semiconductor equipment industry. These competitors may deeply discount products similar to those that we sell, challenging or even exceeding our ability to make similar accommodations and threatening our ability to sell those products. As a result, we may fail to continue to compete successfully worldwide.

In addition, our competitors may provide innovative technology that may have performance advantages over systems we currently offer or may offer in the future. They may be able to develop products comparable or superior to those that we offer or may adapt more quickly to new technologies or evolving customer requirements. In particular, while we currently are developing additional product enhancements that we believe will address future customer requirements, we may fail in a timely manner to complete the development or introduction of these additional product enhancements successfully, or these product enhancements may not achieve market acceptance or be competitive. Accordingly, we may be unable to continue to compete in our markets and competition may intensify, or future competition, operating results, financial condition, and/or cash flows could suffer.

If we are unable to adjust the scale of our business in response to rapid changes in demand in the semiconductor equipment industry, our operating results and our ability to compete successfully may be impaired.

The business cycle in the semiconductor equipment industry has historically been characterized by frequent periods of rapid change in demand that challenge our management to adjust spending and resources allocated to operating activities. During periods of growth or decline in demand for our products and services, we face significant challenges in maintaining adequate financial and business controls, management processes, information systems and procedures and in training, managing, and appropriately sizing our supply chain, our work force, and other components of our business on a timely basis. Our success will depend, to a significant extent, on the ability of our executive officers and other members of our senior management to identify and respond to these challenges, our gross margins and earnings may be impaired during periods of demand decline, and we may lack the infrastructure and resources to scale up our business to meet customer expectations and compete successfully during periods of demand growth.

We manufacture all of our systems at a limited number of facilities, and any prolonged disruption in the operations of those facilities could reduce our revenues.

We produce all of our systems in our manufacturing facilities located in Milpitas, California. We use contract manufacturers in China, Israel, Japan and the United States. Our manufacturing processes are highly complex and require sophisticated, costly equipment and specially designed facilities. As a result, any prolonged disruption in the operations of our manufacturing facilities, such as those resulting from acts of war, terrorism, political instability, health epidemics, fire, earthquake, flooding or other natural disaster could seriously harm our ability to satisfy our customer order deadlines.

Our results of operations could vary as a result of the methods, estimates and judgments we use in applying our accounting policies.

The methods, estimates and judgments we use in applying our accounting policies have a significant impact on our results of operations. See “Note 1. Nature of Business, Basis of Presentation and Significant Accounting Policies” in Part II, Item 8, Note 1 of our consolidated financial statements. These methods, estimates and judgments are, by their nature, subject to substantial risks, uncertainties and assumptions, and factors may arise over time that leads us to change our methods, estimates and judgments. Changes in these methods, estimates and judgments could significantly affect our results of operations. In particular, our operating results have been affected by our recording of a valuation allowance against our U.S. deferred tax assets, the calculation of share-based compensation expense and by the testing and potential impairment of long-lived assets such as goodwill and other intangible assets. For example, during the year ended December 27, 2014, we recorded a $21.1 million valuation allowance against our U.S. deferred tax assets as we determined, based on the weight of available evidence, it was more-likely-than-not that some or all of our deferred tax assets would not be realized. The valuation allowance had a significant impact to our operating results. The process of evaluating potential impairments is highly subjective and requires significant judgment, and our results of operations could vary significantly from estimates. To the extent that we believe it is more-likely-than-not that we will realize our U.S. deferred tax assets, our financial statements will reflect another significant change to our tax provision and operating results.

Our operating results have varied in the past and probably will continue to vary significantly in the future, which will cause volatility in our stock price.

Our quarterly and annual operating results have varied significantly in the past and are likely to vary in the future, which volatility could cause our stock price to decline. Some of the factors that may influence our operating results and subject our stock to extreme price and volume fluctuations include:

- general economic growth or decline in the U.S. or foreign markets;
- changes in customer demand for our systems;
- the gain or loss of a key customer or significant changes in the financial condition or one or more key customers;
- economic conditions in the semiconductor industries;
- the timing, cancellation or delay of customer orders and shipments;
- market acceptance of our products and our customers' products;
- our ability to recover the higher costs associated with meeting our customers' increasing service demands;
- competitive pressures on product prices and changes in pricing by our customers or suppliers;
- the timing of new product announcements and product releases by us or our competitors and our ability to design, introduce and manufacture new products on a timely and cost-effective basis;
- fluctuations in foreign currency exchange rates, particularly the Japanese yen, the Korean won and the British pound sterling;
- the occurrence of tax valuation allowances;
- the occurrence of potential impairments of long-lived assets;
- the timing of acquisitions of businesses, products or technologies;
- the effects of war, natural disasters, acts of terrorism or political unrest;
- the loss of key personnel; and
- the levels of our fixed expenses, relative to our revenue level.

The foregoing factors are difficult to forecast, and these, as well as other factors, could materially and adversely affect our quarterly and annual operating results. If our operating results in any period fall below the expectations of securities analysts and investors, the market price of our common stock would likely decline.

We are highly dependent on international sales and operations, which exposes us to foreign political and economic risks.

A majority of our sales and operations are outside of the United States. As a result, we are subject to regulatory, geopolitical and other risks associated with doing business in foreign countries. We anticipate that international sales will continue to account for a significant portion of our revenues. International sales and operations carry inherent risks such as:

- regulatory limitations imposed by foreign governments;
- obstacles to the protection of our intellectual property, political, military and terrorism risks;

- foreign currency controls and currency exchange rate fluctuations;
- periodic local or international economic downturns;
- political instability, natural disasters, acts of war or terrorism in regions where we have operations;
- repatriation of cash earned in foreign countries;
- longer payment cycles and difficulties in collecting accounts receivable outside of the U.S.;
- disruptions or delays in shipments caused by customs brokers or other government agencies;
- uncertainty regarding liability under foreign laws;
- unexpected changes in regulatory requirements (including import and export requirements), tariffs, customs, duties and other trade barriers;
- difficulties in staffing and managing foreign operations;
- potentially adverse tax consequences resulting from changes in tax laws; and
- other challenges caused by distance, language and cultural differences.

If any of these risks materialize and we are unable to manage them, our international sales and operations would suffer.

Changes in our effective income tax rate could affect our results of operations.

Fluctuations in our effective tax rate may affect operating results. Our effective tax rate is subject to fluctuation based on a variety of factors, such as:

- the jurisdictions in which our profits are determined to be earned and taxed;
- changes to tax laws, regulations and interpretations;
- our ability to obtain approval and the timing of receipt of approval from the Internal Revenue Service of tax elections;
- changes in the valuation of our deferred tax assets and liabilities;
- increases in expenses not deductible for tax purposes, including write-offs of acquired in-process research and development and impairment of goodwill in connection with acquisitions and
- changes in available tax credits.

Any material increase in our effective tax rate would adversely affect our operating results.

We are exposed to fluctuations in the foreign currency exchange rates.

As a global concern, we face exposure to adverse movements in foreign currency exchange rates. Our exposure to foreign currency exchange rate fluctuations arise in part from current intercompany accounts in which costs are charged between our U.S. headquarters and foreign subsidiaries. These exposures may change over time as business practices evolve and could have a material adverse impact on our financial results and cash flow.

Anti-takeover provisions in our charter documents and Delaware law could discourage, delay or prevent a change in control of our company and may affect the trading price of our common stock.

The anti-takeover provisions of the Delaware General Corporation Law may discourage, delay or prevent a change in control of our company by limiting our ability to engage in a business combination with an interested stockholder, even if a change of control would be beneficial to our existing stockholders. In addition, our certificate of incorporation and bylaws may discourage, delay or prevent a change in our management or control over us that stockholders may consider favorable. Our certificate of incorporation and bylaws:

- authorize the issuance of "blank check" preferred stock that could be issued by our board of directors to thwart a takeover attempt;
- limit who may call special meetings of stockholders; and
- prohibit stockholder action by written consent, requiring all actions to be taken at a meeting of the stockholders.

We may experience periodic or prolonged disruption of our IT infrastructure, which may adversely affect our operations.

In 2014, we replaced our Enterprise Resource Planning ("ERP") system used to manage our business and accurately and timely report key data with respect to our results of operations, financial position and cash flows. We may experience periodic or prolonged disruption of our IT infrastructure arising out of the conversion to a new ERP system, general use of such systems, periodic upgrades and updates, or external factors that are outside of our control. Any such disruption could adversely affect our ability to complete essential business processes, including our evaluation of our internal control over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act of 2002. If we encounter unforeseen problems with regard to our ERP system or other IT systems, our business, operations and financial condition could be adversely affected.

Our cash and cash equivalents and short-term investments are managed through various banks around the world and volatility in the capital and credit market conditions could cause financial institutions to fail which could have an adverse effect on our ability to timely access funds.

World capital and credit markets have been and may continue to experience volatility and disruption. Financial institutions, including banks, have failed or otherwise been largely taken over by governments. We maintain our cash, cash equivalents and short-term investments with a number of financial institutions around the world. Should some or all of these financial institutions fail, we would likely have a limited ability to timely access our cash deposited with such institutions, or, in extreme circumstances, the failure of such institutions could cause us to be unable to access cash for the foreseeable future. If we are unable to quickly access our funds when we need them, we may need to increase the use of our existing credit lines or access more expensive credit, if available, which could have a negative impact on our operations, including our reported net income.

If our network security measures are breached and unauthorized access is obtained to a customer's data, to our data, or to our information technology systems, we may incur significant legal and financial exposure and liabilities.

As part of our business, we store our data and certain data about our customers in our information technology system. While our system is designed with access security, if a third party gain unauthorized access to our data, including any data regarding our customers, the security breach could expose us to a risk of loss of this information, loss of business, litigation and possible liability. These security measures may be breached as a result of third-party action, including intentional misconduct by computer hackers, employee error, malfeasance or otherwise. Additionally, third parties may attempt to fraudulently induce employees or customers into disclosing sensitive information such as user names, passwords or other information to gain access to our customers' data or our data, including our intellectual property and other confidential business information, or our information technology systems. Because the techniques used to obtain unauthorized access, or to sabotage systems, change frequently and generally are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures. Any security breach could result in a loss of confidence by our customers, damage our reputation, disrupt our business, lead to legal liability and negatively impact our future sales.

We are subject to various environmental laws and regulations that could impose substantial costs upon us and may harm our business, operating results and financial condition.

Some of our operations use substances regulated under various federal, state, local, and international laws governing the environment, including those relating to the storage, use, discharge, disposal, labeling, and human exposure to hazardous and toxic materials. We could incur costs, fines and civil or criminal sanctions, third-party property damage or personal injury claims, or could be required to incur substantial investigation or remediation costs, if we were to violate or become liable under environmental laws. Liability under environmental laws can be joint and several and without regard to comparative fault. Compliance with current or future environmental laws and regulations could restrict our ability to expand our facilities or require us to acquire additional expensive equipment, modify our manufacturing processes, or incur other significant expenses. We may unintentionally violate environmental laws or regulations in the future as a result of human error, equipment failure or other causes.

Compliance with federal securities laws, rules and regulations, as well as NASDAQ requirements, is becoming increasingly complex, and the significant attention and expense we must devote to those areas may have an adverse impact on our business.

Federal securities laws, rules and regulations, as well as NASDAQ rules and regulations, require companies to maintain extensive corporate governance measures, impose comprehensive reporting and disclosure requirements, set strict independence and financial expertise standards for audit and other committee members and impose civil and criminal penalties for companies and their chief executive officers, chief financial officers and directors for securities law violations. These laws, rules and regulations have increased, and in the future are expected to continue to increase, the scope, complexity and cost of our corporate governance, reporting and disclosure practices, which could harm our results of operations and divert management's attention from business operations.

We may be exposed to liabilities under the FCPA and other anti-corruption laws, and any determination that we violated these laws could have a material adverse effect on our business.

We are subject to the Foreign Corrupt Practice Act of 1977 ("FCPA"), and other laws that prohibit improper payments or offers of payments to foreign governments and their officials and political parties by U.S. persons and issuers as defined by the statute, for the purpose of obtaining or retaining business. Also, similar worldwide anti-bribery laws, such as the U.K. Bribery Act and Chinese anti-corruption laws, generally prohibit companies and their intermediaries from making improper payments to non-U.S. officials for the purpose of obtaining or retaining business. Some of our distribution partners are located in parts of the world that have experienced governmental corruption to some degree and, in certain circumstances, strict compliance with anti-bribery laws may conflict with local customs and practices. Although we have implemented policies and procedures to discourage these practices by our employees, our existing safeguards and any future improvements may prove to be less than effective, and our employees, consultants, sales agents or distributors may engage in conduct for which we might be held responsible. Violations of the FCPA or international anti-corruption laws may result in severe criminal or civil sanctions, and we may be subject to other liabilities, which could negatively affect our business, operating results and financial condition. In addition, the U.S. government may seek to hold us liable for successor liability FCPA violations committed by companies in which we invest or that we acquire. We cannot assure you that our internal control policies and procedures will protect us from reckless or negligent acts committed by our employees, distributors, partners, consultants or agents.

Recent regulations related to conflict minerals could adversely impact our business.

The Dodd-Frank Wall Street Reform and Consumer Protection Act contains provisions to improve transparency and accountability concerning the supply of tin, tantalum, tungsten and gold, known as conflict minerals, originating from the Democratic Republic of Congo, or DRC, and adjoining countries. As a result, in August 2012 the United States Securities and Exchange Commission, or SEC, adopted annual disclosure and reporting requirements for public companies that use conflict minerals mined from the DRC and adjoining countries in their products. We have determined that we use at least one of these conflict minerals in the manufacture of our products, although we have not yet determined the source of the minerals that we use. These new disclosure requirements require us to use diligent efforts to determine which conflict minerals we use and the source of those conflict minerals, and disclose the results of our findings. There have been and will continue to be costs associated with complying with these disclosure requirements, including those costs incurred in conducting diligent efforts to determine which conflict minerals we use and the sources of conflict minerals used in our products. Further, the implementation of these rules could adversely affect the sourcing, supply and pricing of materials used in our products. As there may be only a limited number of suppliers offering conflict free minerals, we cannot be sure that we will be able to obtain necessary conflict free conflict minerals in sufficient quantities or at competitive prices. In addition, we may face reputational challenges if we determine that our products contain minerals not determined to be conflict free or if we are unable to sufficiently verify the origins for all conflict minerals used in our products through the procedures we implement. If we determine it is necessary to redesign our products to not use conflict minerals, we would incur costs associated with doing so.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

At December 27, 2014, our owned or leased facilities included those described below:

Type	Location	Square Footage	Use
Owned	Milpitas, California	135,692	Corporate headquarters, manufacturing and corporate housing
Leased	United Kingdom	20,338	Sales and service
Leased	South Korea	21,341	Sales, service and corporate housing
Leased	Japan	12,286	Sales, service, application, logistics, corporate housing and administrations
Leased	United States	19,551	Engineering, sales and service
Leased	Taiwan	17,965	Sales and service
Leased	China	11,379	Sales and service
Leased	Singapore	4,529	Sales and service
Leased	France	828	Sales and service
Leased	Switzerland	387	Sales and service

We believe that our existing facilities are suitable and adequate for our current needs and anticipated growth.

ITEM 3. LEGAL PROCEEDINGS

Not Applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information for Common Stock

Our common stock is quoted on the NASDAQ Global Select Market under the symbol "NANO." The following table sets forth, for the fiscal periods indicated, the high and low closing sales prices per share of our common stock on a quarterly basis as reported on the NASDAQ Global Select Market.

Fiscal Year 2014	High	Low
First quarter	$ 19.05	$ 16.18
Second quarter	$ 18.42	$ 15.55
Third quarter	$ 18.60	$ 15.15
Fourth quarter	$ 16.59	$ 13.07

Fiscal Year 2013	High	Low
First quarter	$ 16.10	$ 14.20
Second quarter	$ 15.73	$ 13.49
Third quarter	$ 16.25	$ 13.41
Fourth quarter	$ 18.88	$ 16.10

Stockholders

On February 18, 2015, there were approximately 192 holders of record of our common stock. Because brokers and the institutions on behalf of stockholders hold many of our shares of common stock, we are unable to estimate the total number of stockholders represented by these record holders.

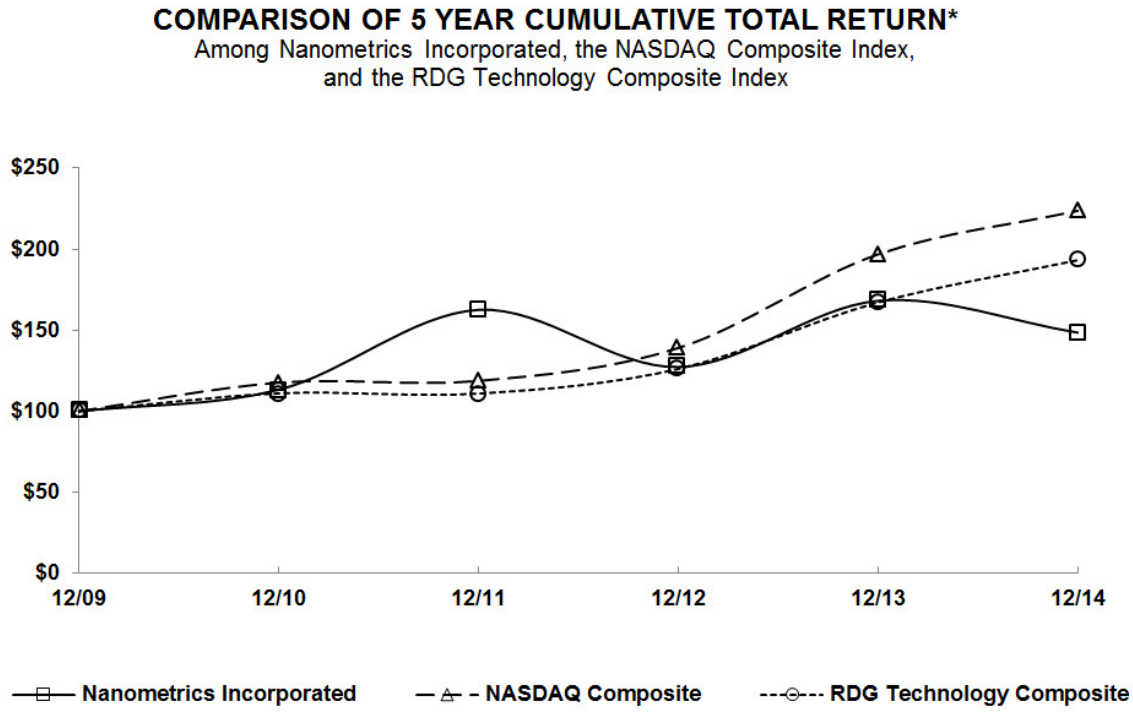
Dividend Policy

We have never declared or paid any cash dividends on our capital stock. We currently expect to retain future earnings, if any, for use in the operation, expansion of our business and repurchase of shares and do not anticipate paying any cash dividends in the foreseeable future. Under our loan and security agreement with Comerica Bank, we are not permitted to pay dividends without the consent of Comerica Bank.

Stock Performance Graph

The following graph presentation compares cumulative five-year stockholder returns on an indexed basis, assuming a $100 initial investment and reinvestment of dividends, of (a) Nanometrics Incorporated, (b) a broad-based equity market index and (c) an industry-specific index. The broad-based equity market index used is the NASDAQ Composite Index and the industry-specific index used is the RDG Technology Composite Index.

This performance graph shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any of our filings under the Securities Act of 1933, as amended or the Exchange Act.



*$100 invested on 12/31/09 in stock or index, including reinvestment of dividends.
Fiscal year ending December 31.

	12/09	12/10	12/11	12/12	12/13	12/14
Nanometrics Incorporated	100.00	113.24	162.58	127.27	168.14	148.46
NASDAQ Composite	100.00	117.61	118.70	139.00	196.83	223.74
RDG Technology Composite	100.00	111.01	110.85	126.07	167.16	193.22

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

Pursuant to repurchase programs approved by the Board of Directors and described below, we repurchased shares of our common stock in the fourth quarter of fiscal 2014 as follows (in thousands, except shares and per share data):

Plan	Period(a)	Number of shares repurchased	Average Price paid per share	Total shares repurchased under the plan	Amount remaining for repurchase
May 2012	Sep. 28, 2014 - Oct. 25, 2014	—	$ —	—	$ 11,461
May 2012	Oct. 26, 2014 - Nov. 22, 2014	154,372	$ 14.16	154,372	$ 9,276
May 2012	Nov. 23, 2014 - Dec. 27, 2014	208,261	$ 15.17	208,261	$ 6,118

On May 29, 2012, our Board of Directors approved a program to repurchase up to $20.0 million of our common stock, referred to as the 2012 program. Stock repurchases under this program may be made through open market and privately negotiated transactions, at times and in such amounts as management deems appropriate. The timing and actual number of shares repurchased is dependent on a variety of factors including price, corporate and regulatory requirements and other market conditions. During fiscal year 2014, we repurchased and retired 362,633 shares of our common stock under this approved plan at the weighted average price of $14.74 per share.

ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated financial data set forth below should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K. Over the last five fiscal years, we acquired Nanda Technologies GmbH and that purchase was in fiscal year 2011. Our fiscal years 2014, 2013, 2012, 2011 and 2010, as referred to below, refer to our fiscal years ended December 27, 2014, December 28, 2013, December 29, 2012, December 31, 2011 and January 1, 2011, respectively. The results of this acquisition have been included in our consolidated financial statements since the date of the acquisition.

	Fiscal Year				
	2014[1]	2013	2012	2011	2010
	(in thousands, except per share data)				
Consolidated Statement of Operations Data:					
Total net revenues	$ 166,443	$ 144,307	$ 182,881	$ 230,061	$ 188,065
Gross profit	$ 75,822	$ 62,676	$ 83,928	$ 122,101	$ 101,392
Income (loss) from operations	$ (11,653)	$ (21,709)	$ 5,478	$ 45,766	$ 41,324
Net income (loss)	$ (31,118)	$ (14,146)	$ 4,465	$ 28,685	$ 55,948
Basic net income (loss) per share	$ (1.30)	$ (0.61)	$ 0.19	$ 1.26	$ 2.56
Diluted net income (loss) per share	$ (1.30)	$ (0.61)	$ 0.19	$ 1.22	$ 2.43

(1) Our net loss included a non-cash valuation allowance of $21.1 million on certain U.S. deferred tax assets.

	Fiscal Year Ended				
	2014	2013	2012	2011	2010
	(in thousands)				
Consolidated Balance Sheet Data:					
Cash, cash equivalents and marketable securities	$ 83,962	$ 92,862	$ 109,908	97,699	$ 66,460
Working capital	$ 119,644	$ 141,797	$ 158,587	$ 160,629	$ 135,770
Total assets	$ 223,236	$ 262,834	$ 259,454	$ 267,221	$ 220,025
Long-term liabilities including current portion of debt obligation	$ 5,497	$ 6,504	$ 13,884	$ 17,213	$ 17,142
Total stockholders’ equity	$ 179,537	$ 207,373	$ 215,771	$ 209,992	$ 170,849

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

You should read the following discussion and analysis of our financial condition and results of operations together with "Selected Financial Data" and our consolidated financial statements and related notes appearing elsewhere in this Annual Report on Form 10-K. This discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. The actual results may differ materially from those anticipated in these forward-looking statements as a result of certain factors, including, but not limited to, those presented under "Risk Factors" in Item 1A and elsewhere in this Annual Report on Form 10-K. Please see "Cautionary Information Regarding Forward-Looking Statements" at the beginning of this Form 10-K for additional information you should consider regarding forward-looking statements.

We are an innovator in the field of metrology and inspection systems for semiconductor manufacturing and other industries. Our systems are designed to precisely monitor film thickness and optical critical dimensions that are necessary to control the manufacturing process and to identify defects that can affect production yields and performance.

Principal factors that impact our revenue growth include capital expenditures by manufacturers of semiconductors to increase capacity and to enable their development of new technologies, and our ability to improve market share. The increasing complexity of the manufacturing processes for semiconductors is an important factor in the demand for our innovative metrology systems, as are the adoption of optical critical dimension ("OCD") metrology across fabrication processes, immersion lithography and multiple patterning, new types of thin film materials, advanced packaging strategies and wafer backside inspection, and the need for improved process control to drive process efficiencies. Our strategy is to continue to innovate organically as well as to evaluate strategic acquisitions to address business challenges and opportunities.

Our revenues are primarily derived from product sales but are also derived from customer service and system upgrades for the installed base of our products. In 2014, we derived 80% of our total net revenues from product sales and 20% of our total net revenues from services.

Important Themes and Significant Trends

The semiconductor equipment industry is characterized by cyclical growth. Changing trends in the semiconductor industry continue to drive the need for metrology as a major component of device manufacturing. These trends include:

- **Proliferation of Optical Critical Dimension Metrology across Fabrication Processes.** Our customers use photolithographic processes to create patterns on wafers. Critical dimensions must be carefully controlled during this process. In advanced node device definition, additional monitoring of thickness and profile dimensions on these patterned structures at CMP, Etch, and Thin Film processing is driving broader OCD adoption. Our proprietary OCD systems can provide the critical process control of these circuit dimensions that is necessary for successful manufacturing of these state-of-the-art devices. Nanometrics OCD technology is broadly adopted across NAND, DRAM, and logic semiconductor manufacturing processes.
- **Development of 3D Transistor Architectures.** Our end customers continue to improve device density and performance by scaling front-end-of-line transistor architectures. Many of these designs, including FinFET transistors and 3D-NAND, have buried features and high aspect ratio stacked features that enable improved performance and density. The advanced designs require additional process control to manage the complex shapes and materials properties, driving additional applications for both OCD and our UniFire systems.
- **Adoption of Advanced Packaging Processes.** Our customers use photolithography, etching, metallization and wafer thinning to enable next generation advanced packaging solutions for semiconductor devices. These new packaging techniques lead to increased functionality in smaller, less expensive form factors. Advanced packages can be broken down into high density flip chip or bump packages that increase pin density allowing for more complex I/O on advanced CPU parts. Similar or different devices can be stacked at the wafer level using a Through Silicon Via ("TSV") process. The TSV process enables high density small form factor parts, being primarily driven by mobile consumer products (e.g. cellular telephones with integrated CMOS camera sensors). Increasingly advanced packaging technologies are being adopted by our end customers.
- **Adoption of New Types of Thin Film Materials.** The need for ever increasing device circuit speed coupled with lower power consumption has pushed semiconductor device manufacturers to begin the replacement of traditional aluminum etch back interconnect flows, as well as conventional gate dielectric materials, with new materials and processes that are driving broader adoption of thin film and OCD metrology systems. To achieve greater semiconductor device speed, manufacturers have adopted copper in Logic/IDM and it is now proliferating in next generation DRAM and Flash nodes. Additionally, to achieve improved transistor performance in logic devices and higher cell densities in memory devices, new materials including high dielectric constant (or high-k) gate materials are increasingly being substituted for

traditional silicon-oxide gate dielectric materials. High-k materials comprise complex thin films including layers of hafnium oxide and a bi-layer of thin film metals. Our advanced metrology and inspection solutions are required for control of process steps, which are critical to enable the device performance improvements that these new materials allow.

- **Need for Improved Process Control to Drive Process Efficiencies.** Competitive forces influencing semiconductor device manufacturers, such as price-cutting and shorter product life cycles, place pressure on manufacturers to rapidly achieve production efficiency. Device manufacturers are using our integrated and automated systems throughout the fabrication process to ensure that manufacturing processes scale rapidly, are accurate and can be repeated on a consistent basis.
- **Increased Customer Concentration.** Our market is characterized by continued consolidation in the customer base. The largest customer accounted for 18% of our total revenue in the fiscal year 2001, and the largest customer accounted for 27% and 30% of our total revenue in the fiscal year 2014 and 2013, respectively.

Critical Accounting Policies

The preparation of our financial statements conforms to accounting principles generally accepted in the United States of America, which requires management to make estimates and judgments in applying our accounting policies that have an important impact on our reported amounts of assets, liabilities, revenue, expenses and related disclosures at the date of our financial statements. On an ongoing basis, management evaluates its estimates including those related to bad debts, inventory valuations, warranty obligations, impairment and income taxes. Management bases its estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from management’s estimates. We believe that the application of the following accounting policies requires significant judgments and estimates on the part of management. For a summary of all of our accounting policies, including those discussed below, see Note 1 to our consolidated financial statements.

Revenue Recognition - We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the seller's price is fixed or determinable, and collectability is reasonably assured. We derive revenue from the sale of process control metrology and inspection systems (“product revenue”) as well as spare part sales, billable services, service contracts, and upgrades (together “service revenue”). Upgrades are a group of parts and/or software that change the existing configuration of a product and are included in service revenue. They are distinguished from product revenue, which consists of complete, advanced process control metrology and inspection systems (the “system(s)”). Nanometrics' systems consist of hardware and software components that function together to deliver the essential functionality of the system. Arrangements for sales of systems often include defined customer-specified acceptance criteria.

For product sales to existing customers, revenue recognition occurs at the time title and risk of loss transfer to the customer, which usually occurs upon shipment from our manufacturing location, if it can be reliably demonstrated that the product has successfully met the defined customer specified acceptance criteria and all other recognition criteria have been met. For initial sales where we have not previously met the defined customer specified acceptance criteria, product revenues are recognized upon the earlier of receipt of written customer acceptance or expiration of the contractual acceptance period. In Japan, where contractual terms with the customer specify risk of loss and title transfers upon customer acceptance, revenue is recognized upon receipt of written customer acceptance, provided that all other recognition criteria have been met.

We warrant our products against defects in manufacturing. Upon recognition of product revenue, a liability is recorded for anticipated warranty costs. On occasion, customers request a warranty period longer than our standard warranty. In those instances where extended warranty services are separately quoted to the customer, the associated revenue is deferred and recognized as service revenue ratably over the term of the contract. The portion of service contracts and extended warranty services agreements that are uncompleted at the end of any reporting period are included in deferred revenue.

As part of customer services, we also sell software that is considered to be an upgrade to a customer's existing systems. These standalone software upgrades are not essential to the tangible product's functionality and are accounted for under software revenue recognition rules which require vendor specific objective evidence ("VSOE") of fair value to allocate revenue in a multiple element arrangement. Revenue from upgrades is recognized when the upgrades are delivered to the customer, provided that all other recognition criteria have been met.

Revenue related to spare parts is recognized upon shipment. Revenue related to billable services is recognized as the services are performed. Service contracts may be purchased by the customer during or after the warranty period and revenue is recognized ratably over the service contract period.

Frequently, we deliver products and various services in a single transaction. Our deliverables consist of tools, installation, upgrades, billable services, spare parts, and service contracts. Our typical multi-element arrangements include a sale of one or multiple tools that include installation and standard warranty. Other arrangements may consist of a sale of tools bundled with service elements or delivery of different types of services. Tools, upgrades, and spare parts are generally delivered to customers within a period of up to six months from order date. Installation is usually performed soon after delivery of the tool. The portion of revenue associated with installation is deferred based on estimated fair value and that revenue is recognized upon completion of the installation. Billable services are billed on a time and materials basis and performed as requested by customers. Under service contract arrangements, services are provided as needed over the fixed arrangement term and such terms can be up to 12 months. We do not generally grant customers a general right of return or refund and may impose a penalty on orders cancelled prior to the scheduled shipment date.

We evaluate our revenue arrangements to identify deliverables and to determine whether these deliverables are separable into multiple units of accounting. We allocate the arrangement consideration among the deliverables based on relative selling price. We have established VSOE for some of our products and services when a substantial majority of selling prices falls within a narrow range when sold separately. For deliverables with no established VSOE, we use best estimate of selling price to determine standalone selling price for such deliverable. We do not use third party evidence to determine standalone selling price since this information is not widely available in the market as our products contain a significant element of proprietary technology and the solutions offered differ substantially from our competitors. We have established a process for developing best estimated selling price ("BESP"), which incorporates historical selling prices, the effect of market conditions, gross margin objectives, pricing practices, as well as entity-specific factors. We monitor and evaluate BESP on a regular basis to ensure that changes in circumstances are accounted for in a timely manner.

When certain elements in multiple-element arrangements are not delivered or accepted at the end of a reporting period, the relative selling prices of undelivered elements are deferred until these elements are delivered and/or accepted. If deliverables cannot be accounted for as separate units of accounting, the entire arrangement is accounted for as a single unit of accounting and revenue is deferred until all elements are delivered and all revenue recognition requirements are met.

Allowance for Doubtful Accounts – We maintain allowances for estimated losses resulting from the inability of our customers to make their required payments. Credit limits are established through a process of reviewing the financial history and stability of our customers. Where appropriate and available, we obtain credit rating reports and financial statements of customers when determining or modifying their credit limits. We regularly evaluate the collectability of our trade receivable balances based on a combination of factors such as the length of time the receivables are past due, customary payment practices in the respective geographies and our historical collection experience with customers. We believe that our allowance for doubtful accounts adequately reflects our risk associated with our receivables. If the financial condition of a customer were to deteriorate, resulting in their inability to make payments, we would assess the necessity of recording additional allowances. This would result in additional general and administrative expenses being recorded for the period in which such determination was made.

Inventories – Inventories are stated at the lower of cost, which approximates actual cost on a first-in, first-out basis, or market. We are exposed to a number of economic and industry-specific factors that could result in portions of our inventory becoming either obsolete or in excess of anticipated usage, or saleable only for amounts that are less than their carrying amounts. These factors include, but are not limited to, technological changes in our market, our ability to meet changing customer requirements, competitive pressures in products and prices, and the availability of key components from our suppliers. We have established inventory reserves when conditions exist that suggest that our inventory may be in excess of anticipated demand or is obsolete based upon our assumptions about future demand for our products and market conditions. Once a reserve has been established, it is maintained until the part to which it relates is sold or is otherwise disposed of. Therefore, a sale of reserved inventory has a higher gross profit margin. We regularly evaluate our ability to realize the value of our inventory based on a combination of factors including the following: historical usage rates, forecasted sales of usage, product end-of-life dates, estimated current and future market values and new product introductions. Inventory includes evaluation tools placed at customer sites. For demonstration inventory, we also consider the age of the inventory and potential cost to refurbish the inventory prior to sale. Demonstration inventory is amortized over its useful life and the amortization expense is included in total inventory write down on our statements of cash flows. When recorded, our reserves are intended to reduce the carrying value of our inventory to its net realizable value. If actual demand for our products deteriorates, or market conditions are less favorable than those that we project, additional reserves may be required, which would adversely affect gross margin and net income.

Product Warranties – We sell the majority of our products with a standard twelve month repair or replacement warranty from the date of acceptance or shipment date. We provide an accrual for estimated future warranty costs based upon the historical relationship of warranty costs to the cost of products sold. The estimated future warranty obligations related to product sales are reported in the period in which the related revenue is recognized. The estimated future warranty obligations are affected by the warranty periods, sales volumes, product failure rates, material usage and labor and replacement costs incurred in correcting a product failure. If actual product failure rates, material usage, labor or replacement costs differ from our estimates, revisions to the estimated warranty obligations would be required. For new product introductions where limited or no historical information exists, we may use warranty information from other previous product introductions to guide us in estimating our warranty accrual. The warranty accrual represents the best estimate of the amount necessary to settle future and existing claims on products sold as of the balance sheet date. We periodically assess the adequacy of our recorded warranty reserve and adjust the amounts in accordance with changes in these factors.

Goodwill and Intangible Assets - Intangible assets with finite lives are amortized over their useful lives and are subject to an impairment assessment, as well as an evaluation of the appropriateness of their estimated useful lives, whenever events or changes in circumstances indicate that the carrying amount(s) may not be recoverable. Goodwill and indefinite lived assets are not amortized but tested annually for impairment. The goodwill impairment assessment involves three tests, Step 0, Step 1 and Step 2. The Step 0 test involves performing an initial qualitative assessment to determine whether it is more likely than not that the asset is impaired and thus whether it is necessary to proceed to Step 1 and calculate the fair value of the reporting unit. We may proceed directly to the Step 1 test without performing the Step 0 test. The Step 1 test involves measuring the recoverability of goodwill at the reporting unit level by comparing the reporting unit's carrying amount, including goodwill, to the fair value of the reporting unit.

We perform a Step 0 assessment of the goodwill during the fourth quarter of each fiscal year, or whenever events or circumstances occur which indicate that an impairment may have occurred. As part of this assessment, we consider the trading value of our stock, the industry trends, and our sales forecast and products plans to determine if it is more likely than not that the fair value is higher than the carrying values of our reporting unit. If, after assessing the qualitative factors, we determine that it is not likely that the fair value of a reporting unit is less than its carrying value, then performing the two-step impairment test is unnecessary. However, if we conclude otherwise, then we are required to perform the Step 1 of the two-step goodwill impairment test. The Step 1 test requires a comparison of the fair value of our reporting unit to its net book value. If the fair value of the reporting unit is greater than its net book value, then no impairment is deemed to have occurred. If the fair value is less, then the Step 2 must be performed to determine the amount, if any, of actual impairment.

The process of evaluating the potential impairment of goodwill is highly subjective and requires significant judgment. In estimating the fair value of goodwill at the reporting unit level, we make estimates and judgments about future revenues and cash flows for the reporting unit. To determine the fair value, our review process includes the income method and is based on a discounted future cash flow approach that uses estimates including the following for the reporting unit: estimated revenue, market segment growth rates and market share assumptions; estimated costs; and appropriate discount rates based on the particular reporting unit's weighted average cost of capital. Our estimates of market segment growth, our market segment share and costs are based on historical data, various internal estimates and certain external sources, and are based on assumptions that are consistent with the plans and estimates we are using to manage the underlying businesses. Our business consists of both established and emerging technologies and our forecasts for emerging technologies are based upon internal estimates and external sources rather than historical information. We also consider our market capitalization on the dates of our impairment tests in determining the fair value of the respective businesses. As part of this assessment, we consider the trading value of our stock and our implied value, as compared to our net assets, as well as the valuation of our acquired businesses. If the carrying amount of the reporting unit exceeds its fair value as determined by these assessments, goodwill is considered impaired, and the Step 2 test is performed to measure the amount of impairment loss. As part of the Step 2 test to determine the amount of goodwill impairment, if any, we allocate the fair value of the reporting unit to all of its assets and liabilities as if the reporting unit had been acquired in a business combination and the fair value of the reporting unit was the price paid to acquire the reporting unit. The excess of the fair value of the reporting unit over the amount assigned to its assets and liabilities is the implied fair value of goodwill. When impairment is deemed to have occurred, we will recognize an impairment charge to reduce the carrying amount of our goodwill to its implied fair value.

Income Tax Assets and Liabilities - We account for income taxes such that deferred tax assets and liabilities are recognized using enacted tax rates for the effect of temporary differences between the book and tax accounting for assets and liabilities. Also, deferred tax assets are reduced by a valuation allowance to the extent we cannot conclude that it is more likely than not that a portion of the deferred tax asset will be realized in the future. We evaluate the deferred tax assets on a continuous basis throughout the year to determine whether or not a valuation allowance is appropriate. Factors used in this determination include future expected income and the underlying asset or liability which generated the temporary tax difference. Our income tax provision is primarily impacted by federal statutory rates, state and foreign income taxes and changes in our valuation allowance.

Stock-Based Compensation –We estimate the value of employee stock options on the date of grant using the Black-Scholes model. The determination of fair value of share-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the expected stock price volatility over the term of the awards, and actual and projected employee stock option exercise behaviors. The expected term of options granted is calculated based on the simplified method. The expected volatility is based on the historical volatility of our stock price.

Recent Accounting Pronouncements

See Note 2 of our consolidated financial statements for a description of recent accounting pronouncements, including the respective dates of adoption and effects on our results of operations and financial condition.

Results of Operations

The following table presents our consolidated statements of operations data as a percentage of total net revenues for fiscal years ended December 27, 2014, December 28, 2013 and December 29, 2012, referred to as fiscal years 2014, 2013 and 2012, respectively.

	Fiscal Year		
	2014	2013	2012
Net revenues:			
Products	80.3 %	74.4 %	78.6%
Service	19.7	25.6	21.4
Total net revenues	100.0	100.0	100.0
Costs of net revenues:			
Cost of products	41.3	41.2	41.5
Cost of service	11.5	13.5	11.2
Amortization of intangible assets	1.6	1.8	1.4
Total costs of net revenues	54.4	56.5	54.1
Products gross margin	46.5	44.6	47.2
Service gross margin	41.9	47.2	47.4
Total gross margin	45.6	43.4	45.9
Operating expenses:			
Research and development	20.3	22.7	16.2
Selling	16.2	18.8	14.5
General and administrative	14.4	15.3	11.8
Amortization of intangibles	0.3	0.5	0.4
Restructuring charge	1.4	1.2	—
Total operating expenses	52.6	58.5	42.9
Income (loss) from operations	(7.0)	(15.0)	3.0
Other income (expense):			
Interest income	—	—	0.1
Interest expense	(0.2)	(0.5)	(0.6)
Other, net	0.2	(0.9)	—
Total other expense, net	—	(1.4)	(0.5)
Income (loss) before income taxes	(7.0)	(16.4)	2.5
Provision for (benefit from) income taxes	11.7	(6.5)	0.1
Net income (loss)	(18.7)%	(9.9)%	2.4%

Total net revenues.

Our net revenues comprised the following product lines (in thousands, except percentages):

	Fiscal Year			
	2014	2013	Change	
Automated systems	$ 108,768	$ 82,924	$ 25,844	31.2 %
Integrated systems	15,334	11,412	3,922	34.4 %
Materials characterization systems	9,487	13,066	(3,579)	(27.4)%
Total product revenue	133,589	107,402	26,187	24.4 %
Service	32,854	36,905	(4,051)	(11.0)%
Total net revenues	$ 166,443	$ 144,307	$ 22,136	15.3 %

	Fiscal Year			
	2013	2012	Change	
Automated systems	$ 82,924	$ 119,451	$ (36,527)	(30.6)%
Integrated systems	11,412	12,379	(967)	(7.8)%
Materials characterization systems	13,066	11,997	1,069	8.9 %
Total product revenue	107,402	143,827	(36,425)	(25.3)%
Service	36,905	39,054	(2,149)	(5.5)%
Total net revenues	$ 144,307	$ 182,881	$ (38,574)	(21.1)%

In 2014, total net revenues increased by $22.1 million from 2013, principally due to an industry-wide improvement in memory-related semiconductor capital spending and from an increase in foundry penetration, supported by the adoption of multiple *Atlas*®, *UniFire*™ and *IMPULSE*® systems by several customers during the first half of the year. This increase was partially offset by the decline in process metrology spending that occurred in the third quarter of 2014 due to a significant pause in spending at our two largest customers, and a decline in service revenues. Approximately $26.2 million of the increase in product revenues was attributable to sales of our Automated Systems (principally *Atlas*® followed by *UniFire*™). Integrated Systems accounted for $3.9 million of the increase (principally *IMPULSE*®) and was partially offset by Materials Characterization sales which decreased by $3.6 million. Service revenue decreased by $4.1 million in 2014 principally due to a decrease in upgrade revenue as a result of lower demand for upgrades of installed tools during the first, third and fourth quarters of 2014. Upgrades tend to fluctuate from quarter to quarter based on availability of new functionality from upgrades and customer production cycles, which determine when customers purchase available upgrades.

In 2013, revenue from products decreased by $36.4 million from 2012, principally due to decreased demand from our customers associated with the industry-wide slowdown in memory-related semiconductor capital spending. Approximately $36.5 million of the decrease was attributable to sales of our Automated Systems (principally *Atlas*®). Integrated Systems accounted for $1.0 million of the decrease (principally *IMPULSE*®) while Materials Characterization sales increased by $1.1 million. Service revenue decreased by $2.1 million in 2013 principally due to lower upgrade sales.

With a significant portion of the world's semiconductor manufacturing capacity located in Asia, a substantial portion of our revenues continue to be generated in that region. Although sales to customers within individual countries of that region will vary from time to time, we expect that a substantial portion of our revenues will continue to be generated in Asia.

Gross margin.

Our gross margin breakdown was as follows:

	Fiscal Year		
	2014	2013	2012
Products	46.5%	44.6%	47.2%
Service	41.9%	47.2%	47.4%

The calculation of product gross margin includes both cost of products and amortization of intangibles. The gross margin on product revenue increased to 46.5% in 2014 from 44.6% in 2013, reflecting an increase of 1.9 percentage points from 2013. The increase was due primarily to improved factory overhead absorption and a change in product mix to higher margin products, as well as from the 24.4% increase in product revenue during 2014. The gross margin on our services business decreased to 41.9% in 2014 from 47.2% in 2013, reflecting a decrease of 5.3 percentage points, due principally to a decrease in upgrade revenues, which typically have higher margins than core service revenue.

The gross margin on product revenue decreased to 44.6% in 2013 from 47.2% in 2012. The decrease was due to a change in product mix, and from the 25.3% decrease in revenue during 2013, which resulted in increased fixed costs as a percentage of revenue. The gross margin on service revenue remained relatively flat from 2012 to 2013 with lower sales of the higher gross margin upgrades, partially offset by improved margins for services provided under customer contracts.

Operating expenses.

Our operating expenses comprise the following categories (in thousands, except percentages):

	Fiscal Year		Change	
	2014	2013		
Research and development	$ 33,776	$ 32,714	$ 1,062	3.2 %
Selling	27,033	27,129	(96)	(0.4)%
General and administrative	23,980	22,101	1,879	8.5 %
Amortization of intangible assets	420	701	(281)	(40.1)%
Restructuring charge	2,266	1,740	526	30.2 %
Total operating expenses	$ 87,475	$ 84,385	$ 3,090	3.7 %

	Fiscal Year		Change	
	2013	2012		
Research and development	$ 32,714	$ 29,585	$ 3,129	10.6 %
Selling	27,129	26,457	672	2.5 %
General and administrative	22,101	21,632	469	2.2 %
Amortization of intangible assets	701	776	(75)	(9.7)%
Restructuring charge	1,740	—	1,740	NM*
Total operating expenses	$ 84,385	$ 78,450	$ 5,935	7.6 %

* NM = not meaningful

Research and development.

Research and development costs increased by $1.1 million or 3.2% in 2014 compared to 2013 related primarily to expense incurred in developing product improvements for our OCD and advance packaging system products.

Research and development costs increased by $3.1 million or 10.6% in 2013 compared to 2012 related primarily to investment in new platforms and product upgrade programs to improve capability and lower cost of ownership. This increase consisted primarily of investments in our OCD products.

Investments in research and development personnel and associated projects are part of our strategy to ensure our products remain competitive and meet customer's needs.

Selling.

Selling expenses remained relatively flat in fiscal year 2014 compared to fiscal year 2013.

Selling expenses increased by $0.7 million or 2.5% in fiscal year 2013 compared to fiscal year 2012. The increase in expenses related to customer evaluation tools.

General and administrative.

General and administrative expenses increased by $1.9 million or 8.5% in fiscal year 2014 compared to 2013. The increase was primarily due to the depreciation related to our ERP implementation in 2014 and higher variable compensation expenses.

General and administrative expenses increased by $0.5 million or 2.2% in fiscal year 2013 compared to 2012. The increase was a result of higher labor costs, partially offset by lower telecommunication expenses.

Amortization of intangible assets.

Amortization of intangible assets included in operating expenses in fiscal year 2014 decreased slightly compared to 2013, as a result of the reduction in amortization due to intangible assets that became fully amortized in 2013.

Amortization of intangible assets included in operating expenses in fiscal year 2013 decreased slightly, compared to 2012, as a result of the reduction in amortization due to intangible assets that became fully amortized in 2013.

Restructuring charge.

We recorded a restructuring charge of $2.3 million in 2014 related to our efforts to improve operating efficiencies. This amount includes charges primarily related to employee severance, other expenses (primarily vendor contract termination costs) and early termination costs related to a facility lease due to expire in 2017 in the amounts of $1.0 million, $0.4 million and $0.9 million respectively. We have measured and recognized the exit liability associated with the lease at the cease-use date. We expect to complete this restructuring plan by March 2015. Other related costs are expected to be recognized as incurred.

We recorded a restructuring charge of $1.7 million in 2013 as a result of our decision to consolidate a portion of our European operations. This amount includes charges primarily related to employee severance and acceleration of RSUs in the amount of $0.8 million and $0.9 million, respectively. All cash payments related to the restructuring charge were paid in the fourth quarter of fiscal year 2013. We completed this restructuring plan in 2014.

Other income (expense), net.

Our other income (expense), net, consisted of the following items (in thousands, except percentages):

	Fiscal Year		Change	
	2014	2013		
Interest income	$ 47	$ 62	$ (15)	(24.2)%
Interest expense	(389)	(651)	262	(40.2)%
Other income (expense)	374	(1,267)	1,641	NM*
Total other income (expense), net	$ 32	$ (1,856)	$ 1,888	(101.7)%

	Fiscal Year		Change	
	2013	2012		
Interest income	$ 62	$ 133	$ (71)	(53.4)%
Interest expense	(651)	(1,040)	389	(37.4)%
Other income (expense)	(1,267)	48	(1,315)	NM *
Total other expense, net	$ (1,856)	$ (859)	$ (997)	116.1 %

* NM = not meaningful

Interest income declined minimally in 2014 from 2013 as the average balances of cash, cash equivalents, and marketable securities remained relatively flat. Interest expense was lower in 2014 than in the prior year due to the repayment of the entire outstanding balance of the mortgage on our headquarters during 2013. Other income increased by $1.6 million principally due to fluctuations in foreign exchange rates, and to a lesser extent, from a $0.2 million increase in fair value of contingent consideration liability.

Interest income declined minimally in 2013 from 2012 as the total balances of cash, cash equivalents, and marketable securities remained relatively flat. Interest expense decreased by $0.4 million primarily due to a lower principal balance of the mortgage on our headquarters as a result of monthly payments and a prepayment of $1.4 million in July of 2012. On July 18, 2013, the entire outstanding principal balance of the mortgage and all accrued interest was repaid. Consequently, we expect interest expense to be lower in future periods. Other expense increased by $1.3 million principally due to a $0.4 million increase in foreign exchange loss, and from a $0.8 million increase in fair value of contingent consideration liability as a result of fluctuations in unobservable inputs.

Provision for (benefit from) income taxes.

Our provision (benefit) for income taxes was $19.5 million, $(9.4) million, and $0.2 million in 2014, 2013 and 2012, respectively. The increase in the tax provision for 2014 from 2013 was primarily related to the recording of a valuation allowance against our U.S. deferred tax assets. The decrease in the tax provision for 2013 from 2012 was primarily attributable to our lower pre-tax earnings as well as a one-time benefit associated with the reinstatement of the federal R&D credit for both fiscal years 2012 and 2013.

Our provision for income taxes for 2014 of $19.5 million reflects an effective tax rate of (167.8)%. This rate differs from the Federal statutory rate of 35.0% primarily due to the recording of a valuation allowance against our U.S. deferred tax assets which represented a $23.9 million provision as well as equity compensation expenses for which no current tax deduction is available, offset by foreign income being taxed at lower rates. Our benefit from income taxes for 2013 of $(9.4) million reflects an effective tax rate of 40.0%. This rate differs from the Federal statutory rate of 35.0% primarily due to the reinstatement of the Federal R&D tax credit, which represented a $1.4 million benefit for both 2012 and 2013, as well as the benefit from state income taxes, offset by tax on foreign income, and equity compensation expenses for which no current tax deduction is available. Our provision for income taxes for 2012 of $0.2 million reflects an effective tax rate of 3.3%. This rate differs from the Federal statutory rate of 35.0% primarily due to the benefit associated with the Internal Revenue Service approval of tax elections made in 2012 to treat certain foreign subsidiaries as branches for U.S. income tax purposes, as well as foreign income being taxed at lower rates, offset in part by state income taxes and equity compensation expenses for which no current tax deduction is available.

We maintain valuation allowances when it is likely that all or a portion of a deferred tax asset will not be realized. Changes in valuation allowances from period to period are included in our income tax provision in the period of change. In determining whether a valuation allowance is warranted, we take into account such factors as prior earnings history, expected future earnings, unsettled circumstances that, if unfavorably resolved, would adversely affect utilization of a deferred tax asset, carry-back and carry-forward periods, and tax strategies that could potentially enhance the likelihood of realization of a deferred tax asset. As such, in 2014 we recorded a valuation allowance against our U.S. deferred tax assets of $23.9 million.

Liquidity and Capital Resources

The following table presents selected financial information and statistics as of and for the years ended December 27, 2014, December 28, 2013 and December 29, 2012 (in millions):

	At		
	December 27, 2014	December 28, 2013	December 29, 2012
Cash, cash equivalents and marketable securities	$ 84.0	$ 92.9	$ 109.9
Working capital	$ 119.6	$ 141.8	$ 158.6
Cash provided by (used in operating activities)	$ (0.6)	$ (2.4)	$ 24.0
Cash used in investing activities	$ (8.1)	$ (7.8)	$ (51.8)
Cash used in financing activities	$ (0.7)	$ (7.5)	$ (6.8)

We believe our existing balances of cash, cash equivalents and marketable securities will be sufficient to satisfy our working capital needs, capital asset purchases, outstanding commitments and other liquidity requirements associated with our existing operations over the next twelve months.

During 2014, cash used in operating activities of $0.6 million was a result of $31.1 million of net losses, non-cash adjustments to net income of $37.8 million and a decrease in net change in operating assets and liabilities of $7.3 million. Cash used in investing activities of $8.1 million during 2014 consisted primarily of cash used for purchases of marketable securities, net of maturities, of $2.3 million; and cash used to acquire property, plant and equipment of $5.8 million. Cash used in financing activities of $0.7 million during 2014 consisted primarily of cash used to repurchase common stock of $5.3 million, royalty and other payments to Zygo of $0.6 million, and cash paid for taxes on net issuance of stock awards of $0.7 million, partially offset by $6.0 million in proceeds from issuance of common stock from the employee stock purchase program and the exercise of stock options.

During 2013, cash used in operating activities of $2.4 million was a result of $14.1 million of net losses, non-cash adjustments to net income of $18.7 million and a decrease in net change in operating assets and liabilities of $7.0 million. Cash used in investing activities of $7.8 million during 2013 consisted primarily of cash used for purchases of marketable securities, net of maturities, of $2.1 million; and cash used to acquire property, plant and equipment of $5.7 million. Cash used in financing activities of $7.5 million during 2013 consisted primarily of cash used to repurchase common stock of $5.0 million, mortgage repayments on our corporate headquarters of $5.2 million, royalty and other payments to Zygo of $1.0 million, and cash paid for taxes on net issuance of stock awards of $1.2 million, partially offset by $5.0 million in proceeds from issuance of common stock from the employee stock purchase program and the exercise of stock options.

During 2012, cash generated from operating activities was a result of $24.0 million was a result of $4.5 million of net income, non-cash adjustments to net income of $19.8 million and a decrease in net change in operating assets and liabilities of $0.3 million. Cash used in investing activities of $51.8 million during 2012 consisted primarily of cash used for purchases of marketable securities, net of maturities, of $47.3 million; and cash used to acquire property, plant and equipment of $5.0 million, partially offset by an escrow payment received of $0.5 million related to the acquisition of Nanda Technologies GmbH. Cash used in financing activities of $6.8 million during 2012 consisted primarily of cash used to repurchase common stock of $8.5 million, mortgage repayments on our corporate headquarters of $2.2 million, royalty and other payments to Zygo of $0.3 million, and cash paid for taxes on net issuance of stock awards of $0.6 million, partially offset by $3.9 million in proceeds from issuance of common stock from the employee stock purchase program and the exercise of stock options and a $0.9 million excess tax benefit related to equity awards.

Debt and Repurchases of Common Stock

Line of Credit - On April 23, 2012, we amended our revolving line of credit facility with Comerica Bank to (i) extend the maturity date of such facility by two years to April 30, 2014, (ii) decrease the unused revolving line commitment fee from 0.1875% per annum to 0.10% per annum, and (iii) reduce the minimum interest rate on borrowings from 5.75% to 3.00% per annum. On May 30, 2014, we amended our revolving line of credit facility with Comerica Bank principally (i) to extend the maturity date of such facility by two years to May 30, 2016, and (ii) to increase the minimum amount available to borrow to $12.0 million.

The instrument governing the line of credit facility includes certain financial covenants regarding tangible net worth. The revolving line of credit agreement includes a provision for the issuance of commercial or standby letters of credit by the bank on our behalf. The value of all letters of credit outstanding reduces the total line of credit available. The revolving line of credit is collateralized by a blanket lien on all of our domestic assets excluding intellectual property and real estate. The minimum borrowing interest rate is 3.00% per annum. Borrowing is limited to the lesser of (a) $12.0 million plus the borrowing base, or (b) $20.0 million. The total borrowing available as of December 27, 2014 was $18.8 million. As of December 27, 2014, we were not in breach of any restrictive covenants in connection with this line of credit. There were no borrowings against the line of credit during 2014 or 2013 and there were no outstanding amounts drawn on this facility as of December 27, 2014 and December 28, 2013, respectively. Although we have no current plans to request advances under this credit facility, we may use the proceeds of any future borrowing for general corporate purposes, future acquisitions or expansion of our business.

Mortgage Loan - On July 18, 2013, we repaid $4.8 million of a mortgage loan, secured, in part, by a lien on and security interest in the building and land comprising our principal offices in Milpitas, California and representing the entire outstanding principal balance of the loan and all accrued interest. We did not incur any fees associated with the prepayment of the loan. At December 27, 2014 there was no outstanding balance on the loan.

Repurchases of Common Stock - In November 2010, our Board of Directors approved a stock repurchase program to repurchase up to $10.0 million of our common stock. As of December 27, 2014, our Board of Directors had further authorized additional repurchases resulting in an aggregate repurchase authorization of up to $30.0 million of shares of common stock under the approved programs.

Stock repurchases under the programs may be made through open market and privately negotiated transactions, at times and in such amounts as management deems appropriate. The timing and actual number of shares repurchased is dependent on a variety of factors including price, corporate and regulatory requirements and other market conditions.

Shares repurchased and retired for the indicated periods of the applicable repurchase programs with the associated cost of repurchase and amount available for repurchase at the end of the respective periods are as follows (in thousands, except number of shares and weighted average price per share):

	Fiscal Year 2014	Fiscal Year 2013	Fiscal Year 2012
Number of shares of common stock repurchased	362,633	332,771	587,766
Weighted average price per share	$ 14.74	$ 15.03	$ 14.47
Total cost of repurchase	$ 5,344	$ 5,000	$ 8,504
Amount available for repurchase at end of period	$ 6,118	$ 11,462	$ 16,462

Subsequent to December 27, 2014, we repurchased 111,050 shares at an average purchase price of $15.49 per share for a total of $1.7 million. After these purchases, $4.4 million remained available for the future repurchase of our common stock under the 2012 program.

Business Partnership - On June 17, 2009, we announced a strategic business partnership with Zygo Corporation whereby we have purchased inventory and certain other assets from Zygo Corporation, and the two companies entered into a supply agreement. We will make payments to Zygo Corporation (with an estimated present value of $2.4 million as of December 27, 2014) over a period of time as acquired inventory is sold and other aspects of the supply agreement are executed. We made royalty and sustaining engineering payments of $0.6 million and $1.0 million to Zygo in fiscal years 2014 and 2013, respectively.

We have evaluated and will continue to evaluate the acquisitions of products, technologies or businesses that are complementary to our business. These activities may result in product and business investments, which may affect our cash position and working capital balances. Some of these activities might require significant cash outlays.

Our principal sources of liquidity are cash and cash equivalents, and marketable securities, cash flow generated from our operations, and, to a lesser extent, borrowings from a line of credit. Our liquidity is affected by many factors, including those that relate to our specific operations and those that relate to the uncertainties of global and regional economies and the sectors of the semiconductor industry which we operate in. Although our cash requirements will fluctuate based on the timing and extent of these factors, we believe our existing cash, cash equivalents and marketable securities and borrowing availability, combined with cash currently projected to be generated from our operations, will be sufficient to meet our liquidity needs through at least the next twelve months.

Off-Balance Sheet Arrangements

We had no off-balance sheet arrangements or obligations as of December 27, 2014 and December 28, 2013, respectively.

Contractual Obligations

The following table summarizes our contractual cash obligations as of December 27, 2014, and the effect of such obligations.

		Payments due by period			
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Purchase commitments - inventory (1)	$29,457	$29,457	—	—	—
Fair value of deferred payments to Zygo Corporation related to acquisition (2)	2,905	1,454	851	400	200
Restructuring	997	511	486	—	—
Other long-term liabilities	266	—	—	—	266
Operating lease obligations	3,610	1,468	1,653	489	—
Total	$37,235	$32,890	$2,990	$889	$466

(1) We maintain certain open inventory purchase agreements with our suppliers to ensure a smooth and continuous supply availability for key components. Our liability under these purchase commitments is generally restricted to a forecasted time-horizon as mutually agreed upon between the parties. This forecasted time-horizon can vary among different suppliers. We estimate our open inventory purchase commitment as of December 27, 2014 was approximately $29.5 million. Actual expenditures will vary based upon the volume of the transactions and length of contractual service provided. In addition, the amounts paid under these arrangements may be less in the event that the arrangements are renegotiated or cancelled.

(2) On June 17, 2009, we announced a strategic business partnership with Zygo Corporation whereby we have purchased inventory and certain other assets from Zygo Corporation, and the two companies entered into a supply agreement. We will make payments to Zygo Corporation (with an estimated present value of $2.4 million and an estimated future value of $2.9 million million as of December 27, 2014) over a period of time as acquired inventory is sold and other aspects of the supply agreement are executed.

Excluded from the contractual obligation table above are $0.7 million of future payments related to uncertain tax positions because we cannot reliably estimate the timing of the settlements with the respective tax authorities.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to financial market risks related to foreign currency exchange rates and interest rates. We do not use derivative financial instruments.

Foreign Currency Risk

A substantial part of our business consists of sales made to customers outside the United States: 78%, 67%, and 76% of sales in 2014, 2013, and 2012, respectively, and 16%, 16%, and 14% of net revenues in 2014, 2013, and 2012, respectively, were denominated in currencies other than the U.S. dollar. Additionally, portions of our costs of net revenues and our operating expenses are incurred by our international operations and denominated in local currencies.

Our exposure to foreign currency exchange rate fluctuations arises in part from intercompany balances in which costs are charged between our U.S. headquarters and our foreign subsidiaries. On our consolidated balance sheet these intercompany balances are eliminated and thus no consolidated balances are associated with these intercompany balances; however, since each foreign entity's functional currency is generally its respective local currency, there is exposure to foreign exchange risk on a consolidated basis. Intercompany balances are denominated primarily in U.S. dollars and, to a lesser extent, other local currencies. The net intercompany balance, exposed to foreign currency risk, at December 27, 2014 was approximately $4.1 million. A hypothetical change of 10% in the relative value of the US dollar versus local functional currencies could result in an increase or decrease of approximately $0.4 million in transaction gains or losses which would be included in our statement of operations.

For 2014, 2013 and 2012, foreign currency transactions resulted in a gain of $0.1 million, a loss of $0.7 million and a loss of $0.3 million, respectively.

Interest Rate Risk

Our exposure to market risk resulting from changes in interest rates relates primarily to our investment portfolio. At December 27, 2014, and December 28, 2013, we held $49.3 million and $48.1 million, respectively, in marketable securities. The fair value of our marketable securities could be adversely impacted due to a rise in interest rates, but we do not believe such impact would be material. Securities with longer maturities are subject to a greater interest rate risk than those with shorter maturities and as of December 27, 2014 and December 28, 2013, the average duration of our portfolio was less than nine months. We do not hold securities for trading purposes.

As of December 27, 2014 and December 28, 2013, there were no amounts borrowed against the line of credit and, therefore, there exists no significant interest rate risks.

On July 18, 2013, we repaid $4.8 million representing the outstanding balance of a mortgage loan secured, in part, by a lien on and security interest in the building and land composing our principal offices in Milpitas, California and representing the entire outstanding principal balance of the loan and all accrued interest. As of December 28, 2013, there was no outstanding balance on the loan.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by Item 8 of Form 10-K is presented here in the following order:

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
Nanometrics Incorporated

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and of cash flows present fairly, in all material respects, the financial position of Nanometrics Incorporated and its subsidiaries at December 27, 2014 and December 28, 2013, and the results of their operations and their cash flows for each of the three years in the period ended December 27, 2014, in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the accompanying index appearing under Item 15(a)(2) presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 27, 2014, based on criteria established in *Internal Control - Integrated Framework 2013* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements and financial statement schedule, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on these financial statements and financial statement schedule and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/PricewaterhouseCoopers LLP
San Jose, California
February 24, 2015

NANOMETRICS INCORPORATED

CONSOLIDATED BALANCE SHEETS

(In thousands except share and per share amounts)

	December 27, 2014	December 28, 2013
ASSETS		
Current assets:		
Cash and cash equivalents	$ 34,676	$ 44,765
Marketable securities	49,286	48,097
Accounts receivable, net of allowances of $253 and $293, respectively	26,121	31,436
Inventories	35,105	34,520
Inventories-delivered systems	1,912	6,901
Prepaid expenses and other	9,289	10,519
Deferred income tax assets	1,457	14,516
Total current assets	157,846	190,754
Property, plant and equipment, net	49,633	47,439
Goodwill	10,494	11,743
Intangible assets, net	4,294	7,864
Deferred income tax assets	410	4,338
Other assets	559	696
Total assets	$ 223,236	$ 262,834
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 10,199	$ 10,604
Accrued payroll and related expenses	8,700	7,853
Deferred revenue	10,021	21,749
Other current liabilities	8,265	7,993
Income taxes payable	1,017	758
Total current liabilities	38,202	48,957
Deferred revenue	2,591	3,718
Income taxes payable	701	1,171
Deferred tax liability	926	—
Other long-term liabilities	1,279	1,615
Total liabilities	43,699	55,461
Commitments and contingencies (Note 11)		
Stockholders' equity:		
Preferred stock, $0.001 par value; 3,000,000 shares authorized; no shares issued or outstanding	—	—
Common stock, $0.001 par value, 47,000,000 shares authorized: 23,813,729 and 23,537,275, respectively, issued and outstanding	24	24
Additional paid-in capital	251,396	244,733
Accumulated deficit	(69,114)	(37,996)
Accumulated other comprehensive income	(2,769)	612
Total stockholders' equity	179,537	207,373
Total liabilities and stockholders' equity	$ 223,236	$ 262,834

See Notes to Consolidated Financial Statements

NANOMETRICS INCORPORATED

CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands except per share amounts)

	Years Ended		
	December 27, 2014	December 28, 2013	December 29, 2012
Net revenues:			
Products	$ 133,589	$ 107,402	$ 143,827
Service	32,854	36,905	39,054
Total net revenues	166,443	144,307	182,881
Costs of net revenues:			
Cost of products	68,812	59,509	75,878
Cost of service	19,086	19,489	20,526
Amortization of intangible assets	2,723	2,633	2,549
Total costs of net revenues	90,621	81,631	98,953
Gross profit	75,822	62,676	83,928
Operating expenses:			
Research and development	33,776	32,714	29,585
Selling	27,033	27,129	26,457
General and administrative	23,980	22,101	21,632
Amortization of intangible assets	420	701	776
Restructuring charge	2,266	1,740	—
Total operating expenses	87,475	84,385	78,450
Income (loss) from operations	(11,653)	(21,709)	5,478
Other (income) expense:			
Interest income	47	62	133
Interest expense	(389)	(651)	(1,040)
Other income (expense), net	374	(1,267)	48
Total other income (expense), net	32	(1,856)	(859)
Income (loss) before income taxes	(11,621)	(23,565)	4,619
Provision for (benefit from) income taxes	19,497	(9,419)	154
Net income (loss)	$ (31,118)	$ (14,146)	$ 4,465
Net income (loss) per share:			
Basic	$ (1.30)	$ (0.61)	$ 0.19
Diluted	$ (1.30)	$ (0.61)	$ 0.19
Weighted average shares used in per share calculation:			
Basic	23,958	23,290	23,358
Diluted	23,958	23,290	23,845

See Notes to Consolidated Financial Statements

NANOMETRICS INCORPORATED

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands)
(Unaudited)

	Years Ended		
	December 27, 2014	December 28, 2013	December 29, 2012
Net income (loss)	$ (31,118)	$ (14,146)	$ 4,465
Other comprehensive income (loss):			
Change in foreign currency translation adjustment	(3,239)	(818)	(264)
Employee benefit plan adjustment	(106)	151	(11)
Net change on unrealized gains (losses) on available-for-sale investments	(36)	7	(2)
Other comprehensive loss	(3,381)	(660)	(277)
Comprehensive income (loss)	$ (34,499)	$ (14,806)	$ 4,188

See Notes to Consolidated Financial Statements

NANOMETRICS INCORPORATED

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands, except share amounts)

	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Total Stockholders' Equity
	Shares	Amount				
Balance as of December 31, 2011	23,182,771	$ 23	$ 236,735	$ (28,315)	$ 1,549	$ 209,992
Net income				4,465	—	4,465
Employee benefit plan adjustment				—	(11)	(11)
Foreign currency translation adjustments				—	(264)	(264)
Unrealized loss on investments, net of tax					(2)	(2)
Issuance of common stock under stock-based compensation plans	655,424	—	4,205	—	—	4,205
Stock-based compensation expense	—	—	5,890	—	—	5,890
Repurchases and retirement of common stock	(587,766)	—	(8,504)			(8,504)
Balance as of December 29, 2012	23,250,429	23	238,326	(23,850)	1,272	215,771
Net loss				(14,146)	—	(14,146)
Employee benefit plan adjustment				—	151	151
Foreign currency translation adjustments				—	(818)	(818)
Unrealized gain on investments, net of tax					7	7
Issuance of common stock under stock-based compensation plans	619,617	1	3,733	—	—	3,734
Stock-based compensation expense	—	—	7,674	—	—	7,674
Repurchases and retirement of common stock	(332,771)	—	(5,000)			(5,000)
Balance as of December 28, 2013	23,537,275	24	244,733	(37,996)	612	207,373
Net loss				(31,118)	—	(31,118)
Employee benefit plan adjustment				—	(106)	(106)
Foreign currency translation adjustments				—	(3,239)	(3,239)
Unrealized gain on investments, net of tax					(36)	(36)
Issuance of common stock under stock-based compensation plans	639,087	—	5,255	—	—	5,255
Stock-based compensation expense	—	—	6,752	—	—	6,752
Repurchases and retirement of common stock	(362,633)	—	(5,344)		—	(5,344)
Balance as of December 27, 2014	23,813,729	$ 24	$ 251,396	$ (69,114)	$ (2,769)	$ 179,537

See Notes to Consolidated Financial Statements

NANOMETRICS INCORPORATED

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Years Ended		
	December 27, 2014	December 28, 2013	December 29, 2012
Cash flows from operating activities:			
Net income (loss)	$ (31,118)	$ (14,146)	$ 4,465
Reconciliation of net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	9,767	8,787	8,137
Stock-based compensation	6,752	7,674	5,890
Excess tax benefit from equity awards	—	53	(910)
Loss on disposal of fixed assets	249	177	303
Inventory write-down	2,897	7,579	3,519
Deferred income taxes	17,915	(6,889)	2,752
Changes in fair value of contingent payments to Zygo Corporation	201	1,325	129
Changes in assets and liabilities:			
Accounts receivable	3,861	(10,376)	7,733
Inventories	(7,173)	(7,024)	1,383
Inventories-delivered systems	4,988	(4,627)	(758)
Prepaid expenses and other	2,303	(1,855)	1,114
Accounts payable, accrued and other liabilities	1,790	4,840	(12,567)
Deferred revenue	(12,855)	12,717	2,472
Income taxes payable	(212)	(666)	346
Net cash provided by (used in) operating activities	(635)	(2,431)	24,008
Cash flows from investing activities:			
Escrow payment received related to Nanda acquisition	—	—	508
Sales of marketable securities	—	—	3,000
Maturities of marketable securities	38,839	47,089	8,336
Purchases of marketable securities	(41,100)	(49,182)	(58,647)
Purchases of property, plant and equipment	(5,792)	(5,689)	(4,990)
Net cash used in investing activities	(8,053)	(7,782)	(51,793)
Cash flows from financing activities:			
Payments to Zygo Corporation related to acquisition	(587)	(1,004)	(300)
Repayments of debt obligations	—	(5,224)	(2,210)
Proceeds from sale of shares under employee stock option plans and purchase plan	5,958	4,967	3,913
Excess tax benefit from equity awards	—	(53)	910
Taxes paid on net issuance of stock awards	(702)	(1,181)	(618)
Repurchases of common stock	(5,344)	(5,000)	(8,504)
Net cash used in financing activities	(675)	(7,495)	(6,809)
Effect of exchange rate changes on cash and cash equivalents	(726)	(442)	(190)
Net decrease in cash and cash equivalents	(10,089)	(18,150)	(34,784)
Cash and cash equivalents, beginning of period	44,765	62,915	97,699
Cash and cash equivalents, end of period	$ 34,676	$ 44,765	$ 62,915
Supplemental disclosure of cash flow information:			
Cash paid for interest	$ —	$ 232	$ 522
Cash paid for income taxes, net	$ 861	$ 313	$ 5,113
Supplemental disclosure of non-cash investing activities:			
Transfer of inventory to property, plant and equipment, net	$ 3,275	$ 3,145	$ —

See Notes to Consolidated Financial Statements

NANOMETRICS INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1. Nature of Business, Basis of Presentation and Significant Accounting Policies

Description of Business – Nanometrics Incorporated ("Nanometrics" or the "Company") and its wholly-owned subsidiaries design, manufacture, market, sell and support optical critical dimension ("OCD"), thin film and overlay dimension metrology and inspection systems used primarily in the manufacturing of semiconductors, solar photovoltaics ("solar PV") and high-brightness LEDs ("HB-LED"), as well as by customers in the silicon wafer and data storage industries. Nanometrics' metrology systems precisely measure a wide range of film types deposited on substrates during manufacturing to control manufacturing processes and increase production yields in the fabrication of integrated circuits. The Company's OCD technology is a patented critical dimension measurement technology that is used to precisely determine the dimensions on the semiconductor wafer that directly control the resulting performance of the integrated circuit devices. The thin film metrology systems use a broad spectrum of wavelengths, high-sensitivity optics, proprietary software, and patented technology to measure the thickness and uniformity of films deposited on silicon and other substrates as well as their chemical composition. The overlay metrology systems are used to measure the overlay accuracy of successive layers of semiconductor patterns on wafers in the photolithography process. Nanometrics' inspection systems are used to find defects on patterned and unpatterned wafers at nearly every stage of the semiconductor production flow. The corporate headquarters of Nanometrics is located in Milpitas, California.

Basis of Presentation – The consolidated financial statements include Nanometrics Incorporated and its wholly-owned subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation.

Fiscal Year – On October 17, 2014, the Board of Directors of the Company approved a change in the Company's fiscal year from a fiscal year ending on the Saturday closest to December 31 to a 52/53 week fiscal year ending on the last Saturday of the calendar year. All periods presented consisted of a 52-week year.

Reclassifications – Certain prior year amounts have been reclassified to conform to the current year presentation.

Use of Estimates – The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reported period. Actual results could differ materially from those estimates. Estimates are used for, but not limited to, revenue recognition, the provision for doubtful accounts, the provision for excess, obsolete, or slow moving inventories, valuation of intangible and long-lived assets, warranty accruals, income taxes, valuation of stock-based compensation, and contingencies.

Foreign Currency Translation – The assets and liabilities of foreign subsidiaries are translated from their respective local functional currencies at exchange rates in effect at the balance sheet date and income and expense accounts are translated at average exchange rates during the reporting period. Resulting translation adjustments are reflected in "Accumulated other comprehensive income," a component of stockholders' equity. Foreign currency transaction gains and losses are reflected in "Other income (expense)" in the consolidated statements of operations in the period incurred, and consists of a $0.1 million gain, a $0.7 million loss and a $0.3 million loss for the years ended December 27, 2014, December 28, 2013, and December 29, 2012, respectively.

Revenue Recognition – The Company derives revenue from the sale of process control metrology systems ("product revenue") as well as spare part sales, billable service, service contracts, and upgrades (together "service revenue"). Upgrades are a group of parts and/or software that change the existing configuration of a product and are included in service revenue. They are distinguished from product revenue, which consists of complete, advanced process control metrology and inspection systems (the "system(s)"). Nanometrics' systems consist of hardware and software components that function together to deliver the essential functionality of the system. Arrangements for sales of systems often include defined customer-specified acceptance criteria.

In summary, the Company recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the seller's price is fixed or determinable, and collectability is reasonably assured.

For product sales to existing customers, revenue recognition occurs at the time title and risk of loss transfer to the customer, which usually occurs upon shipment from the Company's manufacturing location, if it can be reliably demonstrated that the product has successfully met the defined customer specified acceptance criteria and all other recognition criteria have been met. For initial sales where the product has not previously met the defined customer specified acceptance criteria, product revenues are recognized upon the earlier of receipt of written customer acceptance or expiration of the contractual acceptance period. In Japan, where contractual terms with the customer specify risk of loss and title transfers upon customer acceptance, revenue is recognized upon receipt of written customer acceptance, provided that all other recognition criteria have been met.

The Company warrants its products against defects in manufacturing. Upon recognition of product revenue, a liability is recorded for anticipated warranty costs. On occasion, customers request a warranty period longer than the Company's standard warranty. In those instances where extended warranty services are separately quoted to the customer, the associated revenue is deferred and recognized as service revenue ratably over the term of the contract. The portion of service contracts and extended warranty services agreements that are uncompleted at the end of any reporting period are included in deferred revenue.

As part of its customer services, the Company sells software that is considered to be an upgrade to a customer's existing systems. These standalone software upgrades are not essential to the tangible product's functionality and are accounted for under software revenue recognition rules which require vendor specific objective evidence ("VSOE") of fair value to allocate revenue in a multiple element arrangement. Revenue from upgrades is recognized when the upgrades are delivered to the customer, provided that all other recognition criteria have been met.

Revenue related to spare parts is recognized upon shipment. Revenue related to billable services is recognized as the services are performed. Service contracts may be purchased by the customer during or after the warranty period and revenue is recognized ratably over the service contract period.

Frequently, the Company delivers products and various services in a single transaction. The Company's deliverables consist of tools, installation, upgrades, billable services, spare parts, and service contracts. The Company's typical multi-element arrangements include a sale of one or multiple tools that include installation and standard warranty. Other arrangements consist of a sale of tools bundled with service elements or delivery of different types of services. The Company's tools, upgrades, and spare parts are generally delivered to customers within a period of up to six months from order date. Installation is usually performed soon after delivery of the tool. The portion of revenue associated with installation is deferred based on relative selling price and that revenue is recognized upon completion of the installation. Billable services are billed on a time and materials basis and performed as requested by customers. Under service contract arrangements, services are provided as needed over the fixed arrangement term, which terms can be up to twelve months. The Company does not grant its customers a general right of return or any refund terms and imposes a penalty on orders cancelled prior to the scheduled shipment date.

The Company regularly evaluates its revenue arrangements to identify deliverables and to determine whether these deliverables are separable into multiple units of accounting. In accordance with revenue recognition guidance, the Company allocates the arrangement consideration among the deliverables based on relative selling prices. The Company has established VSOE for some of its products and services when a substantial majority of selling prices falls within a narrow range when sold separately. For deliverables with no established VSOE, the Company uses best estimate of selling price to determine standalone selling price for such deliverable. The Company does not use third party evidence to determine standalone selling price since this information is not widely available in the market as the Company's products contain a significant element of proprietary technology and the solutions offered differ substantially from competitors. The Company has established a process for developing estimated selling prices, which incorporates historical selling prices, the effect of market conditions, gross margin objectives, pricing practices, as well as entity-specific factors. The Company monitors and evaluates estimated selling price on a regular basis to ensure that changes in circumstances are accounted for in a timely manner.

When certain elements in multiple-element arrangements are not delivered or accepted at the end of a reporting period, the relative selling prices of undelivered elements are deferred until these elements are delivered and/or accepted. If deliverables cannot be accounted for as separate units of accounting, the entire arrangement is accounted for as a single unit of accounting and revenue is deferred until all elements are delivered and all revenue recognition requirements are met.

Business Combinations - The Company allocates the purchase price of acquired companies to the tangible and intangible assets acquired and liabilities assumed based upon their estimated fair values at the acquisition date. The purchase price allocation process requires management to make significant estimates and assumptions, especially at the acquisition date with respect to intangible assets and inventory acquired. While best estimates and assumptions as a part of the purchase price allocation process are used to accurately value assets acquired and liabilities assumed at the acquisition date, estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, the Company may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded in the consolidated statements of operations.

The Company estimates the fair value of inventory acquired by utilizing the net realizable value method which is based on the estimated sales price of the product less appropriate costs to complete and selling costs. Examples of critical estimates in valuing certain intangible assets that were acquired or may be acquired in the future include but are not limited to:

- future expected cash flows from sales of products, services and acquired developed technologies and patents;
- expected costs to develop the in-process research and development into commercially viable products and estimated cash flows from the projects when completed;
- the acquired company's customer relationships, as well as assumptions about the estimated useful lives of the relationships; and
- discount rates.

Unanticipated events and circumstances may occur that may affect the accuracy or validity of assumptions, estimates or actual results associated with business combinations.

Cash, Cash Equivalents and Marketable Securities – The Company considers all highly liquid investments with original maturities of three months or less, when purchased, to be cash equivalents. Marketable securities are classified as “available-for-sale” and are reported at fair value with unrealized gains and losses reported in stockholders' equity as a component of other comprehensive income. The cost of securities sold is based on the specific identification method. The Company classifies its investments as current based on the nature of the investment and their availability for use in current operations. The Company reviews its investment portfolio quarterly to determine if any securities may be other-than-temporarily impaired due to increased credit risk, changes in industry or sector of a certain instrument or ratings downgrades.

Fair Value of Financial Instruments – Financial instruments include cash and cash equivalents, accounts receivable and accounts payable. Cash equivalents are stated at fair market value based on quoted market prices. The carrying values of accounts receivable and accounts payable approximate their fair values because of the short-term maturity of these financial instruments.

Allowance for Doubtful Accounts – The Company maintains allowances for estimated losses resulting from the inability of its customers to make required payments. Credit limits are established through a process of reviewing the financial history and stability of its customers. Where appropriate and available, the Company obtains credit rating reports and financial statements of customers when determining or modifying their credit limits. The Company regularly evaluates the collectability of its trade receivable balances based on a combination of factors such as the length of time the receivables are past due, customary payment practices in the respective geographies and historical collection experience with customers. The Company believes that its allowance for doubtful accounts adequately reflects the risk associated with its receivables. If the financial conditions of a customer were to deteriorate, resulting in their inability to make payments, the Company may need to record additional allowances, which would result in additional general and administrative expenses being recorded for the period in which such determination was made.

Inventories – Inventories are stated at the lower of cost, which approximates actual cost on a first-in, first-out basis, or market. The Company is exposed to a number of economic and industry factors that could result in portions of inventory becoming either obsolete or in excess of anticipated usage, or saleable only for amounts that are less than their carrying amounts. These factors include, but are not limited to, technological changes in the market, the Company’s ability to meet changing customer requirements, competitive pressures in products and prices, and the availability of key components from suppliers. The Company has established inventory reserves when conditions exist that suggest that inventory may be in excess of anticipated demand or is obsolete based upon assumptions about future demand for the Company’s products and market conditions. Once a reserve has been established, it is maintained until the part to which it relates is sold or is otherwise disposed of. The Company regularly evaluates its ability to realize the value of inventory based on a combination of factors including the following: historical usage rates, forecasted sales of usage, product end-of-life dates, estimated current and future market values and new product introductions. For demonstration inventory, the Company also considers the age of the inventory and potential cost to refurbish the inventory prior to sale. Demonstration inventory is amortized over its useful life and the amortization expense is included in total inventory write down on the statements of cash flows. When recorded, reserves are intended to reduce the carrying value of the Company’s inventory to its net realizable value. If actual demand for the Company’s products deteriorates, or market conditions are less favorable than those that the Company projects, additional reserves may be required.

Inventories – delivered systems – The Company reflects the cost of systems that were invoiced upon shipment but deferred for revenue recognition purposes separate from its inventory held for sale as “Inventories – delivered systems.”

Property, Plant and Equipment – Property, plant and equipment are stated at cost. Depreciation and amortization is computed using the straight–line method over the following estimated useful lives of the assets:

Building and Improvements	5-40 years
Machinery and equipment	3-10 years
Furniture and fixtures	3-10 years
Software	3-7 years

Goodwill and Intangible Assets – Goodwill is initially recorded when the purchase price paid for an acquisition exceeds the estimated fair value of the net identified tangible and intangible assets acquired. Intangible assets with finite lives are amortized over their respective useful lives on a straight-line basis and are also evaluated annually for impairment or whenever events or circumstances occur which indicate that those assets might be impaired. Goodwill and indefinite lived assets are not amortized but tested annually for impairment. The Company's impairment review process is completed during the fourth quarter of each year or whenever events, or circumstances occur which indicate that an impairment may have occurred. The Company assesses qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. If, after assessing the qualitative factors, the Company determines that it is not likely that the fair value of a reporting unit is less than its carrying value, then performing the two-step impairment test is unnecessary. However, if the Company concludes otherwise, then it is required to perform the first step of the two-step goodwill impairment test. The first step requires a comparison of the fair value of Nanometrics' reporting unit to its net book value. If the fair value of the reporting unit is greater than its carrying value, then no impairment is deemed to have occurred. If the fair value is less, then the second step must be performed to determine the amount, if any, of actual impairment. Amortization of intangible assets with finite lives is computed using the straight-line method over the following estimated useful lives of the assets:

Developed technology	5-10 years
Customer relationships	2-10 years
Brand name	5-10 years
Patented technology	7-10 years
Trademark	5 years

Long-Lived Assets – The Company evaluates its long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. When the sum of the undiscounted future net cash flows expected to result from the use of the asset and its eventual disposition is less than its carrying amount, impairment may exist. To determine the amount of impairment, the Company compares the fair value of the asset to its carrying value. If the carrying value of the asset exceeds its fair value, an impairment loss equal to the difference is recognized. See Note 7, "Goodwill and Intangible Assets" for further details.

Income Tax Assets and Liabilities – The Company accounts for income taxes such that deferred tax assets and liabilities must be recognized using enacted tax rates for the effect of temporary differences between the book and tax accounting for assets and liabilities. Also, deferred tax assets are reduced by a valuation allowance to the extent that management cannot conclude that it is more likely than not that a portion of the deferred tax asset will be realized in the future. The Company evaluates the deferred tax assets on a continuous basis throughout the year to determine whether or not a valuation allowance is appropriate. Factors used in this determination include future expected income and the underlying asset or liability which generated the temporary tax difference. The income tax provision is primarily impacted by federal statutory rates, state and foreign income taxes and changes in the valuation allowance.

Product Warranties – The Company sells the majority of its products with a twelve months repair or replacement warranty from the date of acceptance, which generally represents the date of shipment. The Company provides an accrual for estimated future warranty costs based upon the historical relationship of warranty costs to the cost of products sold. The estimated future warranty obligations related to product sales are reported in the period in which the related revenue is recognized. The estimated future warranty obligations are affected by the warranty periods, sales volumes, product failure rates, material usage and labor and replacement costs incurred in correcting a product failure. If actual product failure rates, material usage, labor or replacement costs differ from the Company's estimates, revisions to the estimated warranty obligations would be required. For new product introductions where limited or no historical information exists, the Company may use warranty information from other previous product introductions to guide it in estimating the warranty accrual. The warranty accrual represents the best estimate of the amount necessary to settle future and existing claims on products sold as of the balance sheet date. The Company periodically assesses the adequacy of its recorded warranty reserve and adjusts the amounts in accordance with changes in these factors.

Shipping and Handling Costs – Shipping and handling costs are included as a component of cost of net revenues.

Advertising Costs – The Company expenses advertising costs as incurred. Advertising costs were $0.2 million in 2014, $0.2 million in 2013, and $0.1 million in 2012.

Stock-Based Compensation – The Company estimates the value of employee stock options on the date of grant using the Black-Scholes model. The determination of fair value of share-based payment awards on the date of grant using an option-pricing model is affected by the Company's stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the expected stock price volatility over the term of the awards, and actual and projected employee stock option exercise behaviors. The expected term of options granted is calculated based on the simplified method allowed under SEC Staff Accounting Bulletin 107 ("SAB 107"). The expected volatility is based on the historical volatility of the Company's stock price.

Defined Employee Benefit Plans **–** The Company maintains a defined benefit pension plan in Taiwan for which current service costs are charged to operations as they accrue based on services rendered by employees during the year. Pension benefit obligations are determined by using management's actuarial assumptions, including discount rates, assumed asset rates of return, compensation increases and employee turnover rates.

Net Income (Loss) Per Share - Basic net income (loss) per share excludes dilution and is computed by dividing net income (loss) by the number of weighted average common shares outstanding for the period. Diluted net income (loss) per share reflects the potential dilution from outstanding dilutive stock options (using the treasury stock method) and shares issuable under the employee stock purchase plan. The Company had net income in fiscal year 2012, therefore, the potential dilutive effect of stock options was considered to calculate the diluted income per share. In applying the treasury stock method, 0.9 million of stock option shares for fiscal year 2012 were excluded because their effect was anti-dilutive.

Certain Significant Risks and Uncertainties – Financial instruments that potentially subject us to a concentration of credit risk consist of cash, cash equivalents, marketable securities, and accounts receivable. The Company's cash and cash equivalents are primarily invested in deposit accounts and money market accounts with large financial institutions. At times, these deposits and securities may exceed federally insured limits; however, the Company has not experienced any losses on such accounts. The Company invests its cash not required for use in operations in high credit quality securities based on the Company's investment policy. The Company's investment policy provides guidelines and limits regarding credit quality, investment concentration, investment type, and maturity that the Company believes will provide liquidity while reducing risk of loss of capital. Investments are of a short-term nature and include investments in commercial paper, corporate debt securities, U.S. Treasury, U.S. Government, and U.S. Agency debt.

The Company sells its products primarily to end users in the United States, Asia and Europe and, generally, does not require its customers to provide collateral or other security to support accounts receivable. Management performs ongoing credit evaluations of its customers' financial condition and maintains an allowance for estimated potential bad debt losses. The Company's customer base is highly concentrated and historically, a relatively small number of customers have accounted for a significant portion of its revenues. Aggregate revenue from the Company's top five largest customers in 2014, 2013 and 2012 consisted of 72%, 71% and 74%, respectively, of its total net revenues. The Company participates in a dynamic high technology industry and believes that changes in any of the following areas could have a material adverse effect on its future financial position, results of operations or cash flows: advances and trends in new technologies and industry standards; competitive pressures in the form of new products or price reductions on current products; changes in product mix; changes in the overall demand for products offered; changes in third-party manufacturers; changes in key suppliers; changes in certain strategic relationships or customer relationships; litigation or claims against the Company based on intellectual property, patent, product, regulatory or other factors; fluctuations in foreign currency exchange rates; risk associated with changes in domestic and international economic and/or political regulations; availability of necessary components or sub-assemblies; disruption of manufacturing facilities; and its ability to attract and retain employees necessary to support its growth.

Certain components and sub-assemblies used in the Company's products are purchased from a sole supplier or a limited group of suppliers. In particular, the Company currently purchases its spectroscopic ellipsometer and robotics used in its advanced measurement systems from a sole supplier or a limited group of suppliers located in the United States. Any shortage or interruption in the supply of any of the components or sub-assemblies used in its products or its inability to procure these components or sub-assemblies from alternate sources on acceptable terms could have a material adverse effect on its business, financial condition and results of operations.

Note 2. Recent Accounting Pronouncements

Recently Issued Accounting Pronouncements

In January 2015, the Financial Accounting Standards Board ("FASB") issued an accounting standard update which simplifies income statement classification by removing the concept of extraordinary items from the U.S. GAAP. As a result, items that are both unusual and infrequent will no longer be separately reported net of tax after continuing operations. The new standard is effective for the fiscal years, and interim periods within those fiscal years, beginning after December 15, 2015. Early adoption is permitted. The Company does not expect any impact on the adoption of this standard on its consolidated financial statements.

In August 2014, the FASB issued an accounting standard update related to the disclosures around going concern. The new standard provides guidance around management's responsibility to evaluate whether there are conditions or events that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued. The new standard is effective for the annual periods and interim periods within those annual periods beginning after December 15, 2016. Early application is permitted. The Company does not expect any impact on the adoption of this standard on its consolidated financial statements.

In May 2014, the FASB issued an accounting standards update which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The standard will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. The new standard is effective for the Company on January 1, 2017. Early application is not permitted. The standard permits the use of either the retrospective or cumulative effect transition method. The Company is evaluating the effect that the standard will have on its consolidated financial statements and related disclosures. The Company has not yet selected a transition method nor has it determined the effect of the standard on its ongoing financial reporting.

In July 2013, the FASB issued an accounting standards update which provides that a liability related to an unrecognized tax benefit would be offset against a deferred tax asset for a net operating loss carryforward, a similar tax loss or a tax credit carryforward if such settlement is required or expected in the event the uncertain tax position is disallowed. In situations in which a net operating loss carryforward, a similar tax loss or a tax credit carryforward is not available at the reporting date under the tax law of the jurisdiction or the tax law of the jurisdiction does not require, and the entity does not intend to use, the deferred tax asset for such purpose, the unrecognized tax benefit will be presented in the financial statements as a liability and will not be combined with deferred tax assets. The amendments should be applied prospectively to all unrecognized tax benefits that exist at the effective date. Retrospective application is permitted. The new standard is effective for fiscal years and interim periods beginning after December 15, 2013. The Company adopted this standard during the three months ended March 29, 2014, resulting in a one-time tax benefit of $0.3 million, a reduction in deferred tax assets of $0.3 million, and a reduction in long-term income taxes payable of $0.6 million.

Note 3. Fair Value Measurements and Disclosures

Fair value is defined as the price that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The standard assumes that the transaction to sell the asset or transfer the liability occurs in the principal or most advantageous market for the asset or liability and establishes that the fair value of an asset or liability shall be determined based on the assumptions that market participants would use in pricing the asset or liability.

The Company determines the fair values of its financial instruments based on the fair value hierarchy established in FASB Accounting Standards Codification ("ASC") 820, *Fair Value Measurement*, which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The classification of a financial asset or liability within the hierarchy is based upon the lowest level input that is significant to the fair value measurement. The fair value hierarchy prioritizes the inputs into the following three levels that may be used to measure fair value:

Level 1 — Quoted prices in active markets for identical assets or liabilities.

Level 2 — Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument.

Level 3 — Unobservable inputs that are supported by little or no market activity and are significant to the fair value of the assets or liabilities. Such unobservable inputs include an estimated discount rate used in the Company's discounted present value analysis of future cash flows, which reflects the Company's estimate of debt with similar terms in the current credit markets. As there is currently minimal activity in such markets, the actual rate could be materially different.

The following tables present the Company's assets and liabilities measured at estimated fair value on a recurring basis, excluding accrued interest components, categorized in accordance with the fair value hierarchy (in thousands), as of the following dates:

	December 27, 2014				December 28, 2013			
	Fair Value Measurements Using Input Types				Fair Value Measurements Using Input Types			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets:								
Cash equivalents:								
Money market funds	$ 610	$ —	$ —	$ 610	$ 876	$ —	$ —	$ 876
Commercial paper and corporate debt securities	—	—	—	—	—	750	—	$ 750
Total cash equivalents	610	—	—	610	876	750	—	1,626
Marketable securities:								
U.S. Treasury, U.S. Government and U.S. Government agency debt securities	2,497	20,537	—	23,034	5,036	11,980	—	17,016
Commercial paper, municipal securities and corporate debt securities	—	26,252	—	26,252	—	31,081	—	31,081
Total marketable securities	2,497	46,789	—	49,286	5,036	43,061	—	48,097
Total (1)	$ 3,107	$ 46,789	$ —	$ 49,896	$ 5,912	$ 43,811	$ —	$ 49,723
Liabilities:								
Contingent consideration payable	$ —	$ —	$ 2,397	$ 2,397	$ —	$ —	$ 2,783	$ 2,783

(1) Excludes $34.1 million and $43.1 million held in operating accounts as of December 27, 2014 and December 28, 2013, respectively.

The fair values of the marketable securities that are classified as Level 1 in the table above were derived from quoted market prices for identical assets or liabilities in active markets that the Company has the ability to access. The fair value of marketable securities that are classified as Level 2 in the table above were derived from non-binding market consensus prices that were corroborated by observable market data, quoted market prices for similar instruments, or pricing models, such as discounted cash flow techniques with all significant inputs derived from or corroborated by observable market data. There were no transfers of instruments between Level 1, Level 2 and Level 3 during the financial periods presented.

Changes in Level 3 liabilities (in thousands)	
Fair value at December 29, 2012	$ 2,462
Payments made to Zygo Corporation	(1,004)
Change in fair value included in earnings	1,325
Fair value at December 28, 2013	2,783
Payments made to Zygo Corporation	(587)
Change in fair value included in earnings	201
Fair value at December 27, 2014	$ 2,397

As of December 27, 2014, the Company had liabilities of $2.4 million resulting from the acquisition of certain assets from Zygo Corporation ("Zygo"), which are measured at fair value on a recurring basis, and changes in fair value recorded in Other income (expense), net. Of the $2.4 million of Zygo liabilities at December 27, 2014, $1.4 million was a current liability and $1.0 million was a long-term liability. As of December 28, 2013, the Company had liabilities of $2.8 million resulting from the acquisition of certain assets from Zygo which are measured at fair value on a recurring basis. Of the $2.8 million of Zygo liability at December 28, 2013, $1.3 million was a current liability and $1.5 million was a long-term liability. The fair values of these liabilities were determined using Level 3 inputs using a discounted cash flow model incorporating assumptions that market participants would use in their estimates of fair value. Some of these assumptions included estimates for discount rate, and timing and the amount of cash flows.

Note 4. Cash and Investments

The following table presents cash, cash equivalents, and available-for-sale investments as of the following dates (in thousands):

	December 27, 2014			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Market Value
Cash	$ 34,066	—	$ —	$ 34,066
Cash equivalents:				
Money market funds	610	—	—	610
Marketable securities:				
Commercial paper	805	—	—	805
U.S. Treasury securities	2,498		(1)	2,497
U.S. Government agency securities	20,556	1	(19)	20,538
Municipal securities	3,755	1	(7)	3,749
Corporate debt securities	21,722	1	(26)	21,697
Total cash, cash equivalents, and marketable securities	$ 84,012	$ 3	$ (53)	$ 83,962

	December 28, 2013			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Market Value
Cash	$ 43,139	$ —	$ —	$ 43,139
Cash equivalents:				
Money market funds	876	—	—	876
Commercial paper	750	—	—	750
Marketable securities:				
U.S. Treasury Securities	5,036	—	—	5,036
U.S. Government agency securities	11,980	4	(4)	11,980
Municipal securities	9,756	11	(4)	9,763
Corporate debt securities	21,316	7	(5)	21,318
Total cash, cash equivalents, and marketable securities	$ 92,853	$ 22	$ (13)	$ 92,862

Available-for-sale marketable securities, readily convertible to cash, with maturity dates of 90 days or less are classified as cash equivalents, while those with maturity dates greater than 90 days are classified as marketable securities within short-term assets. All marketable securities as of December 27, 2014 and December 28, 2013, were available-for-sale and reported at fair value based on the estimated or quoted market prices as of the balance sheet date. Unrealized gains or losses, net of tax effect, are recorded in accumulated other comprehensive income (loss) within stockholders' equity. Both the gross unrealized gains and gross unrealized losses for the fiscal years ended December 27, 2014, December 28, 2013 and December 29, 2012 were insignificant and no marketable securities had other than temporary impairment. All marketable securities as of December 27, 2014 and December 28, 2013, had maturity dates of less than two years and were not invested in foreign entities.

Note 5. Accounts Receivable

The Company maintains arrangements under which eligible accounts receivable in Japan are sold without recourse to unrelated third-party financial institutions. These receivables were not included in the consolidated balance sheets as the criteria for sale treatment had been met. After a transfer of financial assets, an entity stops recognizing the financial assets when control has been surrendered. The agreement met the criteria of a true sale of these assets since the acquiring party retained the title to these receivables and had assumed the risk that the receivables will be collectible. The Company pays administrative fees as well as interest ranging from 1.17% to 1.68% based on the anticipated length of time between the date the sale is consummated and the expected collection date of the receivables sold. The Company sold $7.7 million and $6.3 million of receivables during fiscal years ended December 27, 2014 and December 28, 2013, respectively. There were no material gains or losses on the sale of such receivables. There were no amounts due from such third party financial institutions at December 27, 2014 and December 28, 2013.

Note 6. Financial Statement Components

The following tables provide details of selected financial statement components as of the following dates (in thousands):

Consolidated Balance Sheets

	At	
	December 27, 2014	December 28, 2013
Inventories:		
Raw materials and sub-assemblies	$ 19,463	$ 19,655
Work in process	7,723	7,597
Finished goods	7,919	7,268
Inventories	35,105	34,520
Inventories-delivered systems	1,912	6,901
Total inventories	$ 37,017	$ 41,421
Property, plant and equipment, net[(1)]:		
Land	$ 15,572	$ 15,569
Building and improvements	19,641	19,403
Machinery and equipment	29,456	27,820
Furniture and fixtures	2,225	2,308
Software	7,942	1,851
Capital in progress	3,512	5,833
Total property, plant and equipment, gross	78,348	72,784
Accumulated depreciation and amortization	(28,715)	(25,345)
Total property, plant and equipment, net	$ 49,633	$ 47,439
Other current liabilities:		
Accrued warranty	$ 2,953	$ 3,426
Accrued restructuring	997	—
Accrued professional services	778	545
Fair value of current portion of contingent payments to Zygo Corporation related to acquisition	1,385	1,344
Other	2,152	2,678
Total other current liabilities	$ 8,265	$ 7,993

(1) Total depreciation and amortization expense for the years ended December 27, 2014, December 28, 2013, and December 29, 2012 was $6.6 million, $5.4 million, and $4.8 million, respectively.

Components of Accumulated Other Comprehensive Income (Loss)

	Years Ended			
	Foreign Currency Translations	Defined Benefit Pension Plans	Unrealized Income (Loss) on Investment	Accumulated Other Comprehensive Income
Balance as of December 29, 2012	$ 1,453	$ (179)	$ (2)	$ 1,272
Current period change	(818)	151	7	(660)
Balance as of December 28, 2013	635	(28)	5	612
Current period change	(3,239)	(106)	(36)	(3,381)
Balance as of December 27, 2014	$ (2,604)	$ (134)	$ (31)	$ (2,769)

The items above, except for unrealized income (loss) on investment, did not impact the Company's income tax provision. The amounts reclassified from each component of accumulated other comprehensive income into income statement line items were insignificant.

Note 7. Goodwill and Intangible Assets

The following table summarizes the activity in the Company's goodwill during the years ended December 27, 2014 and December 28, 2013, respectively (in thousands):

Balance as of December 29, 2012	$ 11,352
Foreign currency movements	391
Balance as of December 28, 2013	11,743
Foreign currency movements	(1,249)
Balance as of December 27, 2014	$ 10,494

There were no business acquisitions made by the Company during fiscal years 2014 and 2013.

Goodwill Impairment and Long-lived Asset Impairment

The Company's impairment review process is completed during the fourth quarter of each year, or whenever events or circumstances occur that indicate that an impairment may have occurred. The goodwill impairment assessment involves three tests, Step 0, Step 1 and Step 2. The Company performs a Step 0 test, which involves an initial qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. If, after assessing the qualitative factors, the Company determines that it is more likely than not that the fair value of a reporting unit is less than its carrying value, then performing the two-step impairment test is necessary. Otherwise, no further testing is necessary.

The Company completed its annual goodwill impairment assessment during the fourth quarter of 2014 by first performing a Step 0 qualitative assessment. As part of this assessment, the Company considered the trading value of the Company's stock, the industry trends, and the Company's sales forecast and products plans. The Company concluded that it was more likely than not that the fair value was more than the carrying values of the Company's reporting unit and therefore did not proceed to the Step 1 goodwill impairment test.

The process of evaluating the potential impairment of long-lived assets is highly subjective and requires significant judgment. In estimating the fair value of these assets, the Company made estimates and judgments about future revenues and cash flows. The Company's forecasts were based on assumptions that are consistent with the plans and estimates the Company is using to manage its business. Changes in these estimates could change the Company's conclusion regarding impairment of the long-lived assets and potentially result in future impairment charges for all or a portion of their balance at December 27, 2014. The Company did not record any impairment charges related to goodwill in fiscal year 2014.

The Company assesses if there have been triggers that may require it to evaluate the reasonableness of the remaining estimated useful lives of its intangible assets. No such triggers were identified during fiscal year 2014.

Finite-lived intangible assets are recorded at cost, less accumulated amortization. Finite-lived intangible assets as of December 27, 2014 and December 28, 2013 consisted of the following (in thousands):

	December 27, 2014		
	Adjusted cost	Accumulated amortization	Net carrying amount
Developed technology	$ 16,950	$ (12,991)	$ 3,959
Customer relationships	9,461	(9,449)	12
Brand names	1,927	(1,802)	125
Patented technology	2,252	(2,054)	198
Trademark	80	(80)	—
Total	$ 30,670	$ (26,376)	$ 4,294

	December 28, 2013		
	Adjusted cost	Accumulated amortization	Net carrying amount
Developed technology	$ 18,095	$ (11,032)	$ 7,063
Customer relationships	9,573	(9,263)	310
Brand names	1,927	(1,700)	227
Patented technology	2,252	(1,988)	264
Trademark	80	(80)	—
Total	$ 31,927	$ (24,063)	$ 7,864

The amortization of finite-lived intangibles is computed using the straight-line method. Estimated lives of finite-lived intangibles range from two to ten years. Total amortization expense for the fiscal years ended December 27, 2014, December 28, 2013 and December 29, 2012 was $3.1 million, $3.3 million and $3.3 million, respectively.

There were no impairment charges related to intangible assets recorded during the year ended December 27, 2014.

The estimated future amortization expense of finite intangible assets as of December 27, 2014 is as follows (in thousands):

Fiscal Years	Amounts
2015	$ 2,199
2016	1,683
2017	206
2018	140
2019	66
Total future amortization expense	$ 4,294

Note 8. Warranties

Product Warranty – The Company sells the majority of its products with a 12 months repair or replacement warranty from the date of acceptance or shipment date. The Company provides an accrual for estimated future warranty costs based upon the historical relationship of warranty costs to the cost of products sold. The estimated future warranty obligations related to product sales are recorded in the period in which the related revenue is recognized. The estimated future warranty obligations are affected by the warranty periods, sales volumes, product failure rates, material usage, and labor and replacement costs incurred in correcting a product failure. If actual product failure rates, material usage, labor or replacement costs were to differ from the Company's estimates, revisions to the estimated warranty obligations would be required. For new product introductions where limited or no historical information exists, the Company may use warranty information from other previous product introductions to guide it in estimating its warranty accrual. The warranty accrual represents the best estimate of the amount necessary to settle future and existing claims on products sold as of the balance sheet date. The Company periodically assesses the adequacy of its reported warranty reserve and adjusts such amounts in accordance with changes in these factors.

Components of the warranty accrual, which were included in the accompanying consolidated balance sheets with other current liabilities, were as follows (in thousands):

	Years Ended	
	December 27, 2014	December 28, 2013
Balance as of beginning of period	$ 3,426	$ 4,203
Accruals for warranties issued during period	5,987	4,176
Settlements during the period	(6,460)	(4,953)
Balance as of end of period	$ 2,953	$ 3,426

Note 9. Restructuring

The Company recorded a restructuring charge of approximately $2.3 million in 2014 as a result of its decision to consolidate and reorganize certain of its operations, primarily in the U.K. This amount includes charges primarily related to employee severance, other expenses (primarily vendor contract termination costs) and early termination costs of a facility lease due to expire in 2017 in the amounts of $1.0 million, $0.4 million and $0.9 million, respectively. The Company expects to complete this restructuring plan by March 2015. Other related costs will be recognized as incurred.

The Company recorded a restructuring charge of $1.7 million in 2013 as a result of its decision to consolidate a portion of its European operations. This amount includes charges primarily related to employee severance and non-cash acceleration of vesting of RSUs in the amount of $0.8 million and $0.9 million, respectively. As of December 28, 2013, the Company had completed and settled in full all cash payments related to employee severance and non-cash acceleration of vesting of RSUs.

As of December 27, 2014 and December 28, 2013, respectively, the components of the Company's restructuring reserves were included in other current liabilities and were as follows (in thousands):

	Employee severance and benefits	Facility termination costs	Other	Total
Balance as of December 28, 2013	$ —	$ —	$ —	$ —
Charges	1,016	899	351	2,266
Cash Payments	(780)	(201)	(288)	(1,269)
Balance as of December 27, 2014	$ 236	$ 698	$ 63	$ 997

	Employee severance and benefits	Facility termination costs	Other	Total
Balance as of December 29, 2012	$ —	$ —	$ —	$ —
Charges	1,740	—	—	1,740
Cash Payments	(844)	—	—	(844)
Non-cash items	(896)	—	—	(896)
Balance as of December 28, 2013	$ —	$ —	$ —	$ —

Note 10. Line of Credit and Debt Obligations

Line of Credit - On May 30, 2014, the Company amended its revolving line of credit facility to (i) extend the maturity date of such facility by two years to May 30, 2016, and (ii) to increase the minimum amount available to borrow to $12.0 million.

The instrument governing the line of credit facility includes certain financial covenants regarding tangible net worth. The revolving line of credit agreement includes a provision for the issuance of commercial or standby letters of credit by the bank on behalf of the Company. The value of all letters of credit outstanding reduces the total line of credit available. The revolving line of credit is collateralized by a blanket lien on all of the Company's domestic assets excluding intellectual property and real estate. The minimum borrowing interest rate is 3.00% per annum. Borrowing is limited to the lesser of (a) $12.0 million plus the borrowing base, or (b) $20.0 million. The total borrowing base available as of December 27, 2014 was $18.8 million. As of December 27, 2014, the Company was not in breach of any restrictive covenants in connection with this line of credit. There were no outstanding amounts drawn on this facility as of December 27, 2014. Although management has no current plans to request advances under this credit facility, the Company may use the proceeds of any future borrowing for general corporate purposes, future acquisitions or expansion of the Company's business.

Mortgage Loan - On July 18, 2013, the Company repaid $4.8 million of the balance of a mortgage loan, secured, in part, by a lien on and security interest in the building and land comprising the Company's principal offices in Milpitas, California and representing the entire outstanding principal balance of the loan as well as all accrued interest. The Company did not incur any fees associated with the prepayment of the loan. At December 28, 2013, there was no outstanding balance on the loan.

Note 11. Commitments and Contingencies

Intellectual Property Indemnification Obligations – The Company will, from time to time, in the normal course of business, agree to indemnify certain customers, vendors or others against third party claims that Nanometrics' products, when used for their intended purpose(s), or the Company's intellectual property, infringe the intellectual property rights of such third parties or other claims made against parties with whom it enters into contractual relationships. It is not possible to determine the maximum potential amount of liability under these indemnification obligations due to the limited history of prior indemnification claims and the unique facts and circumstances that are likely to be involved in each particular claim. Historically, the Company has not made payments under these obligations and believes that the estimated fair value of these agreements is immaterial. Accordingly, no liabilities have been recorded for these obligations in the accompanying consolidated balance sheets as of December 27, 2014 and December 28, 2013.

On January 13, 2012, the Company entered into a settlement and limited patent cross license agreement with KLA-Tencor ("KLA-Tencor") to resolve all existing patent litigation between the parties. Pursuant to the settlement agreement, the Company agreed to make a one-time payment of $2.5 million to KLA-Tencor. The settlement included other features such as limited cross-licenses of the patents that were subject to the litigation. The Company determined the principal benefit of the settlement was the economic benefit of avoiding litigation expenses and that the value attributable to the other settlement features was de minimus. As a result, the Company recorded a $2.5 million charge to legal settlement in operating expense in 2011. The payment was made in 2012.

The Company maintains certain open inventory purchase agreements with its suppliers to ensure a smooth and continuous supply availability for key components. The Company's liability under these purchase commitments is generally restricted to a forecasted time-horizon as mutually agreed upon between the parties. This forecasted time-horizon can vary among different suppliers. The Company estimates its open inventory purchase commitment as of December 27, 2014 was approximately $29.5 million. Actual expenditures will vary based upon the volume of the transactions and length of contractual service provided. In addition, the amounts paid under these arrangements may be less in the event that the arrangements are renegotiated or cancelled.

The Company leases facilities and certain equipment under non-cancelable operating leases. Rent expense, which is recorded on a straight-line basis over the term of the respective lease, for 2014, 2013 and 2012, was approximately $2.1 million, $2.0 million and $2.2 million, respectively. Future minimum lease payments under its operating leases are as follows (in thousands):

	Operating Leases
2015	$ 1,468
2016	1,083
2017	570
2018	294
2019	195
Total	$ 3,610

On June 17, 2009, the Company announced a strategic business partnership with Zygo Corporation whereby it has purchased inventory and certain other assets from Zygo Corporation, and the two companies entered into a supply agreement. The Company will make payments to Zygo Corporation (with an estimated present value of $2.4 million and an estimated future value of $2.9 million as of December 27, 2014) over a period of time as acquired inventory is sold and other aspects of the supply agreement are executed.

Note 12. Net Income (Loss) Per Share

The Company presents both basic and diluted net income (loss) per share on the face of its consolidated statements of operations. Basic net income (loss) per share excludes the effect of potentially dilutive shares and is computed by dividing net income (loss) by the weighted-average number of shares of common stock outstanding for the period. Diluted net income (loss) per share is computed using the weighted-average number of shares of common stock outstanding for the period plus the effect to all potentially dilutive common shares outstanding during the period, including contingently issuable shares and certain stock options, calculated using the treasury stock method. A reconciliation of the share denominator of the basic and diluted net income (loss) per share computations is as follows (in thousands):

	Years Ended		
	December 27, 2014	December 28, 2013	December 29, 2012
Weighted average common shares outstanding used in basic net income (loss) per share calculation	23,958	23,290	23,358
Potential dilutive common stock equivalents, using treasury stock method	—	—	487
Weighted average shares used in diluted net income (loss) per share calculation	23,958	23,290	23,845

For the years ended December 27, 2014 and December 28, 2013 potential dilutive common stock equivalents of 0.4 million shares and 0.4 million shares, respectively, were anti-dilutive and therefore were excluded from the calculation due to the net loss positions. For the year ended December 29, 2012, the Company had securities outstanding which could potentially dilute basic earnings per share in the future and weighted average common share equivalents consisting of stock options included in the calculation of diluted net income per share were 0.5 million shares.

Note 13. Stockholders' Equity and Stock-Based Compensation

Stockholders' Equity

Preferred and Common Stock

The authorized capital stock of Nanometrics consists of 47,000,000 shares of common stock, par value $0.001 per share, and 3,000,000 shares of preferred stock, par value $0.001 per share.

Stock Repurchase

On November 29, 2010, the Company's Board of Directors approved a program to repurchase up to $10.0 million of the Company's common stock, referred to as the 2010 program. Stock repurchases under this program occurred as follows: fiscal year 2010, $0.8 million; fiscal year 2011, $4.3 million; and fiscal year 2012, $4.9 million. As of June 30, 2012, the Company repurchased and retired an aggregate of 667,406 shares of its common stock at a weighted average price of $14.97 per share under the 2010 program utilizing the entire $10.0 million approved by the Board on November 29, 2010, for the repurchase of shares of its common stock.

On May 29, 2012, the Company's Board of Directors approved a program to repurchase up to $20.0 million of its common stock, referred to as the 2012 program. Stock repurchases under this program may be made through open market and privately negotiated transactions, at times and in such amounts as management deems appropriate. The timing and actual number of shares repurchased is dependent on a variety of factors including price, corporate and regulatory requirements and other market conditions. During fiscal year 2012, the Company repurchased and retired 250,400 shares of its common stock under this approved program at the weighted average price of $14.15 per share. Shares repurchased and retired for the indicated periods of the applicable repurchase programs with the associated cost of repurchase and amount available for repurchase at the end of the respective periods are as follows (in thousands, except number of shares and weighted average price per share):

	Fiscal Year 2014	Fiscal Year 2013	Fiscal Year 2012
Number of shares of common stock repurchased	362,633	332,771	587,766
Weighted average price per share	$ 14.74	$ 15.03	$ 14.47
Total cost of repurchase	$ 5,344	$ 5,000	$ 8,504
Amount available for repurchase at end of period	$ 6,118	$ 11,462	$ 16,462

Subsequent to December 27, 2014, the Company repurchased 111,050 shares at an average purchase price of $15.49 per share for a total of $1.7 million. After these purchases, $4.4 million remained available for the future repurchase of the Company's common stock under the 2012 program.

Stock Option Plans

The Nanometrics option plans are as follows:

Plan Name	Participants	Shares Authorized
2005 Equity Incentive Plan	Employees, consultants and directors	7,292,594
2002 Non-statutory Stock Option Plan	Employees and consultants	1,200,000
2000 Employee Stock Option Plan	Employees and consultants	2,450,000
2000 Director Stock Option Plan	Non-employee directors	250,000
Accent Optical Technologies, Inc. Stock Incentive Plan	Employees and consultants	205,003

Employee Stock Purchase Plan

Under the 2003 Employee Stock Purchase Plan (“ESPP”), eligible employees are allowed to have salary withholdings of up to 10% of their base compensation to purchase shares of common stock at a price equal to 85% of the lower of the market value of the stock at the beginning or end of each six-month offering period, subject to an annual statutory limitation. At the end of the fiscal year ended December 27, 2014, the Company had 0.4 million shares remaining for issuance under the ESPP. Shares purchased under the ESPP were 122,112 shares, 126,068 shares and 113,512 shares in 2014, 2013 and 2012 at a weighted average price of $13.76, $12.36 and $14.16, respectively.

Stock-based Compensation

The Company measures and recognizes compensation expense for all share-based payment awards made to employees and directors including employee stock options, restricted stock units and employee stock purchases related to the Employee Stock Purchase Plan (collectively “Employee Stock Purchases”) based on estimated fair values. The fair value of share-based payment awards is estimated on the date of grant using an option-pricing model. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the requisite service periods in the Company's consolidated statement of operations.

Stock-based compensation expense recognized during the period is based on the value of the portion of share-based payment awards that is ultimately expected to vest during the period. As stock-based compensation expense recognized in the consolidated statement of operations for the years ended December 27, 2014, December 28, 2013 and December 29, 2012 is based on awards expected to vest, it has been reduced for estimated forfeitures. ASC 740 requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The Company's estimated forfeiture rates in 2014, 2013 and 2012 of 10.7%, 11.9%, and 7.6%, respectively, were based on historical forfeiture experience, which the Company believes is the best available information to estimate the future forfeiture rate. Tax benefits resulting from tax deductions in excess of the compensation cost recognized for those options are required to be separately classified in the consolidated statements of cash flows. The Company recognized zero, $0.1 million and $0.9 million of excess tax benefit in fiscal years 2014, 2013 and 2012, respectively.

Valuation and Expense Information

The fair value of stock-based awards to employees is calculated using the Black-Scholes option pricing model, which requires subjective assumptions, including future stock price volatility and expected time to exercise. The expected life of options granted were calculated using the simplified method allowed by the SAB 107. The risk-free rates were based on the U.S Treasury rates in effect during the corresponding period of grant. The expected volatility were based on the historical volatility of the Company's stock price. These factors could change in the future, which would affect the stock-based compensation expense in future periods.

The weighted-average fair value of stock-based compensation to employees is based on the single option valuation approach. Forfeitures are estimated and it is assumed no dividends will be declared. The estimated fair value of stock-based compensation awards to employees is amortized over the vesting period of the options. The weighted-average fair value calculations are based on the following average assumptions:

	Fiscal Year 2014	Fiscal Year 2013	Fiscal Year 2012
Stock Options:			
Expected life	4.6 years	4.5 years	4.5 years
Volatility	54.9%	69.9%	77.3%
Risk free interest rate	1.54%	1.05%	0.80%
Dividends	—	—	—
Employee Stock Purchase Plan:			
Expected life	0.5 years	0.5 years	0.5 years
Volatility	31.2%	26.8%	45.5%
Risk free interest rate	0.54%	0.11%	0.12%
Dividends	—	—	—

Stock Options and Restricted Stock Units (RSUs)

Prior to December 2008, the majority of options granted by the Compensation Committee vested at a rate of 33 $^{1}/_{3}$ percent over the first three years of the seven-year option term on each of the first, second and third anniversary of such grants. Starting in December 2008, the majority of the options granted to employees employed for less than one year vest one-third ($^{1}/_{3}{}^{rd}$) of the shares subject to the option on the first anniversary of the grant date, and vest one thirty sixth ($^{1}/_{36}{}^{th}$) each month for the following two years, for a total three year vesting period with a seven-year option term. Starting in November 2008, the majority of the options granted for employees employed for more than one year vest one thirty-sixth ($^{1}/_{36}{}^{th}$) of the shares subject to the options in equal monthly installments starting on the monthly anniversary of the date of grant with a seven-year option term. On February 22, 2010, the Compensation Committee reviewed best practice with regard to stock option vesting and made the following changes: existing employees generally receive vesting terms of monthly ratable vesting for a total period of four years. New employees, in general, receive vesting terms that are equivalent to 25% vesting on the one year anniversary of the grant with monthly vesting thereafter for a total of four years. All other terms remained the same. Grant of each Restricted Stock Unit (“RSU”) counts against the Company's available for grant pool at a ratio of 2:1 against the 2005 Equity Incentive Plan as depicted below under “RSUs granted.” On May 24, 2013, the Company approved further amendments to the 2005 Equity Incentive Plan including: increasing the number of shares of common stock authorized by 2.6 million shares, changing the multiplier ratio from 2:1 to 1.7:1 against the plan for each award, other than a stock option or stock appreciation right, and providing the maximum term of stock options to be seven years. All other terms remained the same.

The number of RSUs granted during fiscal year 2014 was 473,600, which counted as 805,120 shares against the 2005 Equity Incentive Plan. The number of RSUs cancelled during fiscal year 2014 was 98,473, which counted as 167,404 shares against the 2005 Equity Incentive Plan. Each RSU represents an amount equal to the fair value of one share of the Company's common stock.

A summary of activity under the Company's stock option plans including options and RSUs during fiscal year 2014, 2013 and 2012 and shares available for grant as of the respective period end dates, is as follows:

	Fiscal Year 2014	Fiscal Year 2013	Fiscal Year 2012
Shares available for grant at beginning of fiscal year	2,937,001	1,093,565	1,391,930
Increase in authorized shares	—	2,600,000	—
Options - granted	(74,300)	(430,800)	(281,085)
Options - cancelled	191,061	150,459	139,376
Options - expired plan shares	(17,491)	(53,607)	(53,102)
RSUs - granted	(805,120)	(664,902)	(103,554)
RSUs - cancelled	167,404	133,418	—
RSUs - shares issued to satisfy tax withholding obligations	65,527	108,868	—
Shares available for grant at end of fiscal year	2,464,082	2,937,001	1,093,565

Options

The weighted average fair value per share of the stock options awarded in fiscal years 2014, 2013, and 2012 was $8.13, $8.58 and $10.00, respectively. A summary of activity of stock options in 2014 is as follows:

	Number of Shares Outstanding (Options)	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (in Thousands)
Options				
Outstanding at December 28, 2013	1,909,039	$ 13.22	4.02	$ 10,341
Exercised	(409,285)	10.45	—	—
Granted	74,300	17.56	—	—
Cancelled	(191,061)	15.74	—	—
Outstanding at December 27, 2014	1,382,993	$ 13.92	3.41	$ 4,108
Exercisable at December 27, 2014	1,052,110	$ 13.15	2.84	$ 3,867

The aggregate intrinsic value in the above table represents the total pretax intrinsic value, based on the Company's closing stock price of $16.59 as of December 27, 2014, which would have been received by the option holders had all option holders exercised their options as of that date. The total intrinsic value of options exercised during 2014, 2013 and 2012 was $3.0 million, $2.9 million and $4.9 million, respectively. The fair value of options vested during 2014, 2013 and 2012 was $3.2 million, $3.7 million and $3.6 million, respectively.

The following table summarizes ranges of outstanding and exercisable options as of December 27, 2014.

	Options Outstanding			Options Exercisable	
Exercise Prices	Number Outstanding	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
$0.93-$7.50	156,237	1.25	$ 3.67	156,237	$ 3.67
$8.81-$11.37	237,214	2.57	$ 10.79	237,214	$ 10.79
$11.63-$14.80	146,135	3.89	$ 13.68	99,128	$ 13.54
$14.88-$15.74	143,682	4.80	$ 15.45	75,875	$ 15.47
$15.85-$15.98	170,943	2.95	$ 15.92	124,931	$ 15.94
$16.00-$16.59	45,567	5.77	$ 16.40	9,214	$ 16.32
$16.70-$16.70	223,432	3.22	$ 16.70	206,048	$ 16.70
$16.89-$18.27	155,483	4.46	$ 17.54	83,466	$ 17.51
$18.51-$19.77	99,800	4.56	$ 18.94	55,686	$ 19.06
$19.84-$19.84	4,500	3.14	$ 19.84	4,311	$ 19.84
$0.93-$19.84	1,382,993	3.41	$ 13.92	1,052,110	$ 13.15

As of December 27, 2014, the total unrecognized compensation costs related to unvested stock options was $2.5 million and is expected to be recognized as an expense over a weighted average remaining amortization period of 2.21 years.

Restricted Stock Units (RSUs)

Each RSU counts against the Company's “2005 Equity Incentive Plan” at a ratio of one and seven tenths shares for each unit granted but represents an amount equal to the fair value of one share of the Company's common stock. The Company granted 473,600 and 348,328 RSUs during the years ended December 27, 2014 and December 28, 2013, respectively, to key employees with vesting periods spanning from one to three years.

A summary of activity for RSUs is as follows:

RSU	Number of RSUs	Weighted Average Fair Value
Outstanding RSUs as of December 28, 2013	334,444	$ 18.61
Granted	473,600	17.14
Released	(146,234)	17.60
Cancelled	(98,473)	17.12
Outstanding RSUs as of December 27, 2014	563,337	$ 17.90

As of December 27, 2014, the total unrecognized compensation costs related to RSU's was $5.7 million and is expected to be recognized as an expense over a weighted average remaining amortization period of 1.88 years.

Stock-based Compensation Expense

Stock-based compensation expense for all share-based payment awards made to the Company’s employees and directors pursuant to the employee stock option and employee stock purchase plans by function were as follows (in thousands):

	Fiscal Year 2014	Fiscal Year 2013	Fiscal Year 2012
Cost of products	$ 268	$ 207	$ 164
Cost of service	287	278	230
Research and development	1,245	1,478	1,220
Selling	1,642	1,894	1,791
General and administrative	3,243	2,919	2,485
Restructuring	67	898	—
Total stock-based compensation expense related to employee stock options and employee stock purchases	$ 6,752	$ 7,674	$ 5,890

Note 14. Defined Benefit Pension Plan

Nanometrics sponsors a statutory government mandated defined benefit pension plan (the "Benefit Plan") in Taiwan for its local employees. The fair value of plan assets was $0.2 million, $0.2 million and $0.2 million for the fiscal years ended 2014, 2013 and 2012, respectively; and the net funding deficiency of the Benefit Plan was $0.3 million, $0.2 million, and $0.3 million for the fiscal years ended December 27, 2014, December 28, 2013, and December 29, 2012, respectively. Based on the nature and limited extent of the pension plan, we determined this pension plan was not material for separate disclosure.

Note 15. Income Taxes

Income Tax Assets and Liabilities - The Company accounts for income taxes whereby deferred tax assets and liabilities are recognized using enacted tax rates for the effect of temporary differences between the book and tax accounting for assets and liabilities. Also, deferred tax assets are reduced by a valuation allowance to the extent that management cannot conclude that it is more likely than not that a portion of the deferred tax asset will be realized in the future. The Company evaluates the deferred tax assets on a continuous basis throughout the year to determine whether or not a valuation allowance is appropriate. Factors used in this determination include future expected income and the underlying asset or liability which generated the temporary tax difference. The income tax provision is primarily impacted by federal statutory rates, state and foreign income taxes, and changes in the valuation allowance.

Income (loss) before provision for income taxes consists of the following (in thousands):

	Years Ended		
	December 27, 2014	December 28, 2013	December 29, 2012
Domestic	$ (15,691)	$ (26,447)	$ 1,887
Foreign	4,070	2,882	2,732
Income (loss) before income taxes	$ (11,621)	$ (23,565)	$ 4,619

The provision (benefit) for income taxes consists of the following (in thousands):

	Years Ended		
	December 27, 2014	December 28, 2013	December 29, 2012
Current:			
Federal	$ 358	$ 119	$ (2,403)
State	(151)	5	(492)
Foreign	1,327	933	270
Total current	1,534	1,057	(2,625)
Deferred:			
Federal	17,368	(10,686)	1,753
State	550	(325)	379
Foreign	45	535	647
Total deferred	17,963	(10,476)	2,779
Provision (benefit) for income taxes	$ 19,497	$ (9,419)	$ 154

Significant components of the Company's deferred tax assets and liabilities are as follows (in thousands):

	At	
	December 27, 2014	December 28, 2013
Deferred tax assets:		
Reserves and accruals	$ 10,744	$ 10,592
Deferred revenue	1,370	1,614
Shared based compensation	4,030	3,789
Tax credit carry-forwards	8,122	6,591
Net operating losses	14,695	10,220
Depreciation & amortization	2,750	3,241
Other	372	966
Total deferred tax assets	42,083	37,013
Less: Valuation allowance	(35,835)	(11,665)
Total deferred tax assets net of valuation allowance	6,248	25,348
Deferred tax liabilities:		
Depreciation & amortization	(4,020)	(5,567)
Other	(1,485)	(926)
Total deferred tax liabilities	(5,505)	(6,493)
Net deferred tax assets	$ 743	$ 18,855

As of December 27, 2014, the Company had net operating loss carryforwards of $13.4 million for federal, $45.0 million in California and $36.3 million in foreign countries, which begin to expire in 2015. A total of $0.2 million of the federal net operating loss, $3.0 million of the California net operating loss carryforward and $1.7 million of the foreign net operating loss carryforwards are related to excess tax benefits as a result of stock option exercises, and therefore will be recorded in additional paid-in capital in the period that they become realized. During the year ended December 27, 2014, the Company did not realize any excess tax benefits as a result of stock option exercises, therefore, there were no amounts recorded to additional paid-in capital.

As of December 27, 2014, the Company had available carryforward Federal and California R&D tax credits of $6.2 million and $5.7 million, respectively. Federal R&D tax credit carryforwards begin to expire in 2024. State R&D tax credits carryforward indefinitely. A total of $0.2 million of the state R&D tax credits are related to excess tax benefits as a result of stock option exercises, and therefore will be recorded to additional paid-in-capital in the period that they become realized.

During the years ended December 27, 2014 and December 28, 2013, the valuation allowances increased by $23.9 million and $1.4 million, respectively. The valuation allowance increase in 2014 was primarily related to a full valuation allowance recorded against the Company's U.S. deferred tax assets. The realization of deferred tax assets is primarily dependent on the Company generating sufficient U.S. and foreign taxable income in future fiscal years. The Company regularly assesses the need for a valuation allowance against its deferred tax assets. In making that assessment, the Company considers both positive and negative evidence related to the likelihood of realization of the deferred tax assets to determine, based on the weight of available evidence, whether it is more-likely-than-not that some or all of the deferred tax assets will not be realized. In evaluating the need for a valuation allowance, the Company considers its cumulative loss in the U.S. as a significant piece of negative evidence. During the year ended December 27, 2014, the Company recorded a $21.1 million valuation allowance against its U.S. deferred tax assets as it determined, within the period, it would not meet the more likely than not threshold. The Company continues to maintain valuation allowances against certain foreign deferred tax assets as a result of uncertainties regarding the realization of the asset due to cumulative losses and uncertainty of future taxable income. The Company will continue to assess the realizability of the deferred tax assets in each of the applicable jurisdictions and maintain the valuation allowances until sufficient positive evidence exists to support a reversal. In the event the Company determines that the deferred tax assets are realizable, an adjustment to the valuation allowances will be reflected in the tax provision for the period such determination is made.

Changes in tax laws and tax rates could affect the Company's recorded deferred tax assets and liabilities in the future. The Company's tax liabilities involve dealing with uncertainties in the application of complex tax laws and regulations in a multitude of jurisdictions across its global operations. Management will account for any such changes or factors in the period in which such law changes are enacted.

Differences between income taxes computed by applying the statutory federal income tax rate to income (loss) before income taxes and the provision (benefit) for income taxes consist of the following (in thousands):

	Years Ended		
	December 27, 2014	December 28, 2013	December 29, 2012
Income taxes computed at U.S. statutory rate	$ (4,067)	$ (8,247)	$ 1,616
State income taxes	254	(324)	(116)
Foreign tax rate differential	(172)	9	(275)
Change in valuation allowance	23,126	—	—
Domestic production activities deduction	—	—	(17)
Tax credits	(561)	(1,377)	—
Benefit of tax elections	—	—	(1,309)
Liabilities for uncertain tax positions	118	111	66
Other, net	799	409	189
Provision (benefit) for income taxes	$ 19,497	$ (9,419)	$ 154

As of December 27, 2014, approximately $1.0 million of undistributed earnings from non-U.S. operations held by the Company's foreign subsidiaries are designated as indefinitely reinvested outside the U.S. Accordingly, no additional U.S. income taxes or additional foreign withholding taxes have been provided thereon. The amount of unrecognized deferred tax liability related to these earnings would be immaterial.

The Company recognizes tax liabilities for uncertain tax positions and adjust these liabilities when its judgment changes as a result of the evaluation of new information not previously available. Due to the complexity of some of these uncertainties, the ultimate resolution may result in a payment that is materially different from the Company's current estimate of the tax liabilities. These differences will be reflected as increases or decreases to income tax expense in the period in which they are determined.

The accounting for uncertainty in income taxes recognized in an enterprise's financial statements prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken on a tax return, and the derecognition of tax benefits, classification on the balance sheet, interest and penalties, accounting in interim periods, disclosure, and transition.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in thousands):

	Years Ended		
	December 27, 2014	December 28, 2013	December 29, 2012
Unrecognized tax benefits - beginning of the period	$ 4,436	$ 3,464	$ 3,599
Foreign currency movements	—	—	—
Gross increases-tax positions in prior period	655	305	—
Gross decreases-tax positions in prior period	(123)	—	(183)
Gross increases-current-period tax positions	1,541	688	265
Lapse of statute of limitations	(67)	(21)	(217)
Unrecognized tax benefits - end of the period	$ 6,442	$ 4,436	$ 3,464

The unrecognized tax benefit at December 27, 2014 was $6.4 million, of which $0.7 million would impact the effective tax rate if recognized. The Company accrues interest and penalties related to unrecognized tax benefits in its provision for income taxes. The total amount of penalties and interest were not material as of December 27, 2014, December 28, 2013 and December 29, 2012. The Company does not expect a material change in its unrecognized tax benefits within the next 12 months.

The Company is subject to taxation in the U.S. and various states including California, and foreign jurisdictions including Korea, Japan, Taiwan, and China. Due to tax attribute carry-forwards, the Company is subject to examination for tax years 2003 forward for U.S. tax purposes. The Company was also subject to examination in various states for tax years 2002 forward. The Company is subject to examination for tax years 2007 forward for various foreign jurisdictions.

Note 16. Segment, Geographic, Product and Significant Customer Information

The Company has one operating segment, which is the sale, design, manufacture, marketing and support of thin film and optical critical dimension systems. The Chief Executive Officer has been identified as the Chief Operating Decision Maker ("CODM") because he has the final authority over resource allocation decisions and performance assessment. The CODM does not receive discrete financial information about individual components of the Company's business. For the years ended December 27, 2014, December 28, 2013, and December 29, 2012, the Company recorded revenue from customers primarily in the United States, Asia and Europe. The following tables summarize total net revenues and long-lived assets (excluding intangible assets) attributed to significant countries (in thousands):

	Years Ended		
	December 27, 2014	December 28, 2013	December 29, 2012
Total net revenues [1]:			
United States	$ 36,123	47,019	44,811
South Korea	41,381	34,873	79,555
China	28,702	13,063	5,323
Taiwan	19,790	9,645	16,757
Other	40,447	39,707	36,435
Total net revenues	$ 166,443	$ 144,307	$ 182,881

[1] Net revenues are attributed to countries based on the customer's deployment and service locations of systems.

Long-lived tangible assets:	December 27, 2014	December 28, 2013
United States	$ 47,729	$ 44,775
Japan	71	125
South Korea	284	445
All Other	1,549	2,094
Total long-lived tangible assets	$ 49,633	$ 47,439

The Company's product lines differ primarily based on the environment in which the systems will be used. Automated systems are used primarily in high-volume production environments. Materials characterization products are primarily used to measure the composition, band gap, structure, and other physical and electrical properties of semiconducting materials for discrete electronic industry, high brightness LED and solar/photovoltaic structures in both development and high volume environments. Integrated systems are installed inside wafer processing equipment to provide near real-time measurements for improving process control and increasing throughput. Revenues by product type were as follows (in thousands):

	Years Ended		
	December 27, 2014	December 28, 2013	December 29, 2012
Automated Systems	$ 108,768	$ 82,924	$ 119,451
Integrated Systems	15,334	11,412	12,379
Materials Characterization Systems	9,487	13,066	11,997
Total product revenues	$ 133,589	$ 107,402	$ 143,827

The following customers accounted for 10% or more of total accounts receivable, net:

	At		
	December 27, 2014	December 28, 2013	December 29, 2012
Samsung Electronics Co. Ltd.	10.0%	27.4%	***
Intel Corporation	***	14.4%	12.3%
Taiwan Semiconductor Manufacturing Company Limited	20.2%	12.1%	17.3%
SK Hynix	***	21.8%	***
Micron	23.7%	***	***
GLOBALFOUNDRIES	10.2%	***	***

*** The customer accounted for less than 10% of total accounts receivable, net, as of that period end.

The following customers accounted for 10% or more of total net revenue:

	Years Ended		
	December 27, 2014	December 28, 2013	December 29, 2012
Samsung Electronics Co. Ltd.	26.9%	14.4%	27.8%
Intel Corporation	12.6%	30.0%	22.3%
SK Hynix	12.2%	18.4%	16.5%
Micron	10.4%	***	***

*** The customer accounted for less than 10% of total net revenue during the period.

SUPPLEMENTAL FINANCIAL INFORMATION

Selected Quarterly Financial Results (Unaudited)

The following table sets forth selected consolidated quarterly results of operations for the years ended December 27, 2014 and December 28, 2013 (in thousands, except per share amounts):

	Quarters Ended			
	December 27, 2014	September 27, 2014[1]	June 28, 2014	March 29, 2014
Total net revenues	$ 39,705	$ 27,133	$ 48,029	$ 51,576
Gross profit	17,349	11,416	22,908	24,149
Income (loss) from operations	(3,806)	(10,609)	746	2,016
Net income (loss)	(4,639)	(28,662)	588	1,595
Net income (loss) per share:				
Basic	$ (0.19)	$ (1.19)	$ 0.02	$ 0.07
Diluted	$ (0.19)	$ (1.19)	$ 0.02	$ 0.07
Shares used in per share computations:				
Basic	24,048	24,132	23,939	23,711
Diluted	24,048	24,132	24,220	24,159

	Quarters Ended			
	December 28, 2013	September 28, 2013	June 29, 2013	March 30, 2013
Total net revenues	$ 46,159	$ 39,044	$ 34,552	$ 24,552
Gross profit	21,909	15,801	14,480	10,486
Income (loss) from operations	1,292	(7,242)	(6,156)	(9,603)
Net income (loss)	556	(4,554)	(4,566)	(5,582)
Net income (loss) per share:				
Basic	$ 0.02	$ (0.20)	$ (0.20)	$ (0.24)
Diluted	$ 0.02	$ (0.20)	$ (0.20)	$ (0.24)
Shares used in per share computations:				
Basic	23,420	23,261	23,138	23,273
Diluted	23,913	23,261	23,138	23,273

[1] Net loss included a non-cash valuation allowance of $21.1 million on certain U.S. deferred tax assets.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management, including our Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), as appropriate, to allow timely decisions regarding required disclosure. Our management, with participation of our CEO and CFO, has evaluated the effectiveness of our disclosure controls and procedures as of the end of the fiscal year covered by this Annual Report on Form 10-K.

Based upon that evaluation, our CEO and CFO have concluded that, as of the end of the period covered in this report, our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms and is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Report of Management on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our internal control over financial reporting was designed to provide reasonable, not absolute, assurance regarding the integrity, reliability and fair presentation of our financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Further, the design of a control system must reflect the fact that there are resource constraints. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within our company have been detected. Under the supervision and with the participation of our management, including our CEO and CFO, we assessed the effectiveness of our internal control over financial reporting as of December 27, 2014. In making this assessment, we used the criteria established in the framework on *Internal Control – Integrated Framework 2013* issued by the Committee of Sponsoring Organizations ("COSO") of the Treadway Commission.

Based on our assessment, which was conducted according to the COSO criteria, we have concluded that our internal control over financial reporting was effective in achieving its objectives as of December 27, 2014.

The effectiveness of our internal control over financial reporting as of December 27, 2014 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Changes in Internal Control over Financial Reporting

No change in our internal controls over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) occurred during the fourth quarter ended December 27, 2014, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item is incorporated by reference to our Proxy Statement for our 2015 Annual Meeting of Stockholders (the “Proxy Statement”) to be filed with the SEC not later than 120 days after the end of our fiscal year ended December 27, 2014, specifically:

- Information regarding our directors and any persons nominated to become a director, as well as with respect to some other required board matters, is set forth under Proposal 1 entitled “Election of Directors” and under “Corporate Governance.”
- Information regarding our audit committee and our designated “audit committee financial expert” is set forth under the caption “Corporate Governance.”
- Information on our code of business conduct and ethics for directors, officers and employees is set forth under the caption “Code of Ethics” under “Corporate Governance.”
- Information regarding Section 16(a) beneficial ownership reporting compliance is set forth under the caption “Section 16(a) Beneficial Ownership Reporting Compliance.”
- Information regarding procedures by which stockholders may recommend nominees to our board of directors is set forth under the caption “Nominating and Governance Committee” under “Corporate Governance.”

Information regarding our executive officers is set forth at the end of Item 1, Part 1 of this Annual Report on Form 10-K under the caption “Executive Officers of the Registrant."

ITEM 11. EXECUTIVE COMPENSATION

Information regarding compensation of our named executive officers is set forth under the caption “Executive Compensation” in the Proxy Statement, which information is incorporated herein by reference.

Information regarding compensation of our directors is set forth under the caption "Compensation of Directors" in the Proxy Statement, which information is incorporated herein by reference.

Information relating to compensation policies and practices as they relate to risk management is set forth in the section titled “The Board's Role in Risk Oversight” under the caption “Corporate Governance” in the Proxy Statement,

Information regarding compensation committee interlocks is set forth under the caption "Compensation Committee Interlocks and Insider Participation" in the Proxy Statement, which information is incorporated herein by reference.

The Compensation Committee Report is set forth under the caption "Compensation Committee Report" in the Proxy Statement, which report is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information regarding security ownership of certain beneficial owners, directors and executive officers is set forth under the caption "Security Ownership of Certain Beneficial Owners and Management" in the Proxy Statement, which information is incorporated herein by reference.

Equity Compensation Plan Information

The following table gives information about the common stock that may be issued under all of our existing equity compensation plans as of December 27, 2014.

Plan category	Number of securities to Be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in first column)
Equity compensation plans approved by security holders	1,234,104	$ 13.60	2,464,082
Equity compensation plans not approved by security holders (1)	148,889	$ 16.60	—
Total	1,382,993	$ 13.92	2,464,082

(1) Represents the 2002 Non-Statutory Stock Plan, which was adopted without the approval of security holders. This Plan provides for the grant of non-statutory stock options to employees and service providers at grant prices equal to the fair market value on the date of grant, with an expiration date not to exceed 10 years from the grant date.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

Information regarding certain relationships and related transactions is set forth under the caption "Related Person Transaction Policy" under the caption "Corporate Governance" in the Proxy Statement, which information is incorporated herein by reference.

Information regarding director independence is set forth under the caption “Board of Directors Meetings and Committees” under “Corporate Governance” in the Proxy Statement, which information is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information regarding principal auditor fees and services is set forth under the proposal entitled “Ratification of Appointment of Independent Registered Public Accounting Firm” in the Proxy Statement, which information is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report on Form 10-K:

(1) **Consolidated Financial Statements.**

See Index to Consolidated Financial Statements in Item 8 on page 33 of this Annual Report on Form 10-K.

(2) **Consolidated Financial Statement Schedule.**

The following consolidated financial statement schedule of Nanometrics Incorporated is filed as part of this Annual Report on Form 10-K and should be read in conjunction with the Consolidated Financial Statements:

Schedule	Page
II - Valuation and Qualifying Accounts as of and for the years ended December 27, 2014, December 28, 2013 and December 29, 2012	71

Schedules not listed above have been omitted because they are not applicable or are not required or the information required to be set forth therein is included in the Consolidated Financial Statements or notes thereto.

(3) **Exhibits.**

See Exhibit Index beginning on page 69 of this Annual Report on Form 10-K which is incorporated by reference here.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Dated: February 24, 2015

NANOMETRICS INCORPORATED

By: /S/ TIMOTHY J. STULTZ

Timothy J. Stultz
President and Chief Executive Officer
(Duly Authorized Officer and Principal Executive Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report on Form 10-K has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/S/ TIMOTHY J. STULTZ Timothy J. Stultz	President, Chief Executive Officer and Director (Principal Executive Officer)	February 24, 2015
/S/ JEFFREY ANDRESON Jeffrey Andreson	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	February 24, 2015
/S/ BRUCE C. RHINE Bruce C. Rhine	Chairman of the Board of Directors	February 24, 2015
/S/ J. THOMAS BENTLEY J. Thomas Bentley	Director	February 24, 2015
/S/ EDWARD J. BROWN JR. Edward J. Brown Jr.	Director	February 24, 2015
/S/ STEPHEN G. NEWBERRY Stephen G. Newberry	Director	February 24, 2015
/S/ CHRISTINE TSINGOS Christine Tsingos	Director	February 24, 2015

EXHIBIT INDEX

Exhibit No.	Description
3.(i)	**Certificate of Incorporation**
3.1 (1)	Certificate of Incorporation of the Registrant
3.(ii)	**Bylaws**
3.2 (2)	Bylaws of the Registrant
4	**Instruments Defining the Rights of Security Holders, Including Indentures**
4.1 (3)	Form of Common Stock Certificate
10	**Material Contracts**
	Management Contracts, Compensatory Plans, Contracts or Arrangements
10.1 (4)	Form of Indemnification Agreement between the Registrant and each of its directors and executive officers
10.2 (5)	Registrant's 2000 Employee Stock Option Plan and form of Stock Option Agreement
10.3 (6)	Registrant's 2000 Director Stock Option Plan and form of Stock Option Agreement
10.4 (7)	Registrant's 2002 Non-statutory Stock Option Plan and form of Stock Option Agreement
10.5 (8)	Registrant's Amended and Restated 2003 Employee Stock Purchase Plan
10.6 (9)	Form of Subscription Agreement Under the Registrant's Amended and Restated 2003 Employee Stock Purchase Plan
10.7 (21)	Registrant's Amended and Restated 2005 Equity Incentive Plan
10.8 (6)	Registrant's Amended and Restated 2005 Equity Incentive Plan forms of Stock Option and Restricted Stock Unit Agreements
10.9 (10)	Executive Performance Bonus Plan
10.10 (11)	Form of Offer Letter to Timothy J. Stultz
10.11 (12)	Amended and Restated Executive Severance Agreement between the Registrant and Timothy J. Stultz, dated February 23, 2010
10.12 (12)	Amended and Restated Executive Severance Agreement between the Registrant and Bruce A. Crawford, dated February 23, 2010
10.13 (13)	Employment Agreement between Registrant and Ronald W. Kisling, dated February 28, 2011
10.14 (14)	Employment Agreement between Registrant and Nancy E. Egan, dated October 31, 2011
10.15 (22)	Employment Agreement between Registrant and Jeffrey Andreson, dated September 22, 2014
10.16 *	Separation Agreement between Registrant and Bruce A. Crawford, dated October 28, 2014
	All Other Material Contracts
10.17 (7)	Loan and Security Agreement effective as of February 14, 2007 by and between Comerica Bank, the Registrant, Accent Optical Technologies, Nanometrics, Inc. and Nanometrics IVS Division, Inc.
10.18 (15)	First Amendment to the Loan and Security Agreement dated September 14, 2007
10.19 (15)	Second Amendment to the Loan and Security Agreement dated May 11, 2009, with an effective date of April 29, 2009
10.20 (16)	Third Amendment to the Loan and Security Agreement dated June 15, 2009
10.21 (17)	Fourth Amendment to the Loan and Security Agreement dated April 13, 2010
10.22 (18)	Security Agreement, Balloon Promissory Note, and Deed of Trust by and between GE Commercial Finance Business Property Corporation and the Registrant, each dated July 25, 2008
10.23 (16)	Asset Transfer Agreement by and between Zygo Corporation and the Registrant, dated June 17, 2009
10.24 (16)	Supply Agreement by and between Zygo Corporation and the Registrant dated June 17, 2009
10.25 (20)	Fifth Amendment to the Loan and Security Agreement dated April 23, 2012
10.26 (23)	Compensation of Non-Employee Directors
10.27 (24)	Extension to the Loan and Security Agreement dated April 30, 2014
10.28 (25)	Sixth Amendment to the Loan and Security Agreement by and between the Registrant and Comerica Bank dated May 30, 2014
14	**Code of Ethics**
14.1 (19)	Registrant's Code of Business Conduct and Ethics
21	**Subsidiaries**
21.1*	Subsidiaries of the Registrant

Exhibit No.	Description
23	**Consents of Experts and Counsel**
23.1*	Consent of PricewaterhouseCoopers LLP Independent Registered Public Accounting Firm
31	**Rule 13a-14(a)/15d-14(a) Certifications**
31.1*	Certification of Timothy J. Stultz, principal executive officer of the Registrant, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of Jeffrey Andreson, principal financial officer and principal accounting officer of the Registrant, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32	**Section 1350 Certifications**
32.1*	Certification of Timothy J. Stultz, principal executive officer of the Registrant, and Jeffrey Andreson, principal financial officer and principal accounting officer of the Registrant pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS**	XBRL Instance Document
101.SCH**	XBRL Taxonomy Extension Schema Document
101.CAL**	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF**	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB**	XBRL Taxonomy Extension Label Linkbase Document
101.PRE**	XBRL Taxonomy Extension Presentation Linkbase Document

(1) Incorporated by reference to Exhibit 3.1 filed with the Registrant's Current Report on Form 8-K (File No. 000-13470) filed on April 12, 2012.
(2) Incorporated by reference to Exhibit 4.1 filed with the Registrant's Quarterly Report on Form 10-Q (File No. 000-13470) filed on November 9, 2006.
(3) Incorporated by reference to Exhibit 10.1 filed with the Registrant's Current Report on Form 8-K (File No. 000-13470) filed on March 28, 2013.
(4) Incorporated by reference to Exhibit 4.2 filed with the Registrant's Registration Statement on Form S-8 (File No. 333-40866) filed on July 6, 2000.
(5) Incorporated by reference to the like-described exhibit filed with the Registrant's Annual Report on Form 10-K (File No. 000-13470) filed on March 13, 2008.
(6) Incorporated by reference to the like-described exhibit filed with the Registrant's Quarterly Report on Form 10-Q (File No. 000-13470) filed on May 10, 2007.
(7) Incorporated by reference to Appendix 1 filed with the Registrant's definitive proxy statement on Schedule 14A (File No. 000-13470) filed on April 21, 2009.
(8) Incorporated by reference to Exhibit 4.1 filed with the Registrant's Registration Statement on Form S-8 (File No.333-108474) filed on September 3, 2003.
(9) Incorporated by reference to the like-described exhibit filed with the Registrant's Quarterly Report on Form 10-Q (File No. 000-13470) filed on May 11, 2011.
(10) Incorporated by reference to Exhibit 10.1 filed with the Registrant's Current Report on Form 8-K (File No. 000-13470) filed on August 8, 2007.
(11) Incorporated by reference to the like-described exhibit filed with the Registrant's Annual Report on Form 10-K (File No. 000-13470) filed on March 26, 2010.
(12) Incorporated by reference to Exhibit 10.21 filed with the Registrant's Annual Report on Form 10-K (File No. 000-13470) filed on March 14, 2011.
(13) Incorporated by reference to Exhibit 10.14 filed with the Registrant's Annual Report on Form 10-K (File No. 000-13470) filed on March 14, 2012.
(14) Incorporated by reference to the like-described exhibit filed with the Registrant's Quarterly Report on Form 10-Q (File No. 000-13470) filed on May 12, 2009.
(15) Incorporated by reference to the like-described exhibit filed with the Registrant's Quarterly Report on Form 10-Q (File No. 000-13470) filed on August 11, 2009.
(16) Incorporated by reference to Exhibit 99.1 filed with the Registrant's Current Report on Form 8-K (File No. 000-13470) filed on April 19, 2010.
(17) Incorporated by reference to Exhibit 10.2 filed with the Registrant's Quarterly Report on Form 10-Q (File No. 000-13470) filed on November 6, 2008.
(18) Incorporated by reference to Exhibit 14 filed with the Registrant's Annual Report on Form 10-K (File No. 000-13470) filed on April 1, 2004.
(19) Incorporated by reference to Exhibit 10.1 filed with the Registrant's Quarterly Report on Form 10-Q (File No. 000-13470) filed on May 9, 2012.
(20) Incorporated by reference to Appendix A filed with the Registrant's definitive proxy statement on Schedule 14A (File No. 000-13470) filed on April 10, 2013.
(21) Incorporated by reference to Exhibit 10.1 filed with the Registrant's Quarterly Report on Form 10-Q (File No. 000-13470) filed on October 31, 2014.
(22) Incorporated by reference to Exhibit 10.26 filed with the Registrant's Annual Report on Form 10-K (File No. 000-13470) filed on March 7, 2014.
(23) Incorporated by reference to Exhibit 10.1 filed with the Registrant's Quarterly Report on Form 10-Q (File No. 000-13470) filed on August 1, 2014.
(24) Incorporated by reference to Exhibit 99.1 filed with the Registrant's Current Report on Form 8-K (File No. 000-13470) filed on June 4, 2014.

* Filed herewith.
** Furnished herewith.

SCHEDULE II

NANOMETRICS INCORPORATED

VALUATION AND QUALIFYING ACCOUNTS

Our allowance for doubtful accounts receivable consists of the following (in thousands):

Year Ended	Balance at beginning of period	Charged to costs and expenses	Deductions – write-offs of accounts	Balance at end of period
December 27, 2014	$ 293	$ (40)	$ —	$ 253
December 28, 2013	$ 82	$ 255	$ (44)	$ 293
December 29, 2012	$ 117	$ (3)	$ (32)	$ 82

Our valuation allowance for deferred tax assets consists of the following (in thousands):

Year Ended	Balance at beginning of period	Charged to costs and expenses	Deductions – write-offs of accounts	Balance at end of period
December 27, 2014	$ 11,665	$ 24,170	$ —	$ 35,835
December 28, 2013	$ 10,229	$ 1,436	$ —	$ 11,665
December 29, 2012	$ 8,142	$ 2,087	$ —	$ 10,229

nanometrics