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acility. The higher restructuring costs in 2008, compared to 2009, were attributed to workforce reduction of higher salaried and longer tenure employees.

Asset impairment.

During the fiscal year 2010, we recognized impairment charges of $0.5 million related to write-offs of various IT projects, versus an impairment charge of $1.9 million that was recognized in fiscal year 2009 related to the closure of our South Korea manufacturing facility, during the challenging economic conditions facing the semiconductor industry.

During the fiscal year 2008, we recognized an impairment charge of $54.0 million, representing a write-off of the entire amount of our previously recorded goodwill, and an impairment charge $13.1 million was recorded to reflect certain brand names and developed technology intangible assets at their fair value. We also recorded an impairment charge of $1.5 million to account for machine shop related assets at its fair value.

Operating income (loss). Our operating income in fiscal year 2010 was $41.3 million, compared to a $13.4 million loss from operations in fiscal year 2009. The improved operating margin was a result of increased revenues (145.2%), improved gross margin (183.1%) and controlled operating expenses.

Other income (expense). Our net other income (expense) consisted of the following categories (in thousands):

	Fiscal Year			
	2010	2009	Change	
Interest income	$ 107	$ 53	$ 54	101.0%
Interest expense	(1,556)	(1,658)	102	(6.2)%
Other income (expense)	814	(1,927)	2,741	NM*
Total other income (expense), net	$ (635)	$ (3,532)	$ 2,897	NM*

* NM = not meaningful

	Fiscal Year			
	2009	2008	Change	
Interest income	$ 53	$ 185	$ (132)	(71.4)%
Interest expense	(1,658)	(635)	(1,023)	161.1%
Other income (expense)	(1,927)	1,624	(3,551)	NM*
Total other income (expense), net	$ (3,532)	$ 1,174	$ (4,706)	NM*

* NM = not meaningful

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During fiscal year 2010 our interest expenses were relatively flat compared to fiscal year 2009, the marginal decrease is attributed to pay down of $2.5 million on the mortgage related to our headquarter premises, as described below. Other income increased $2.7 million, due to a $2.0 million reduction in loss on foreign exchange from $1.7 million loss in fiscal year 2009 to $0.3 million gain in fiscal year 2010, and also due to $0.5 million change to the fair value of deferred payments to Zygo Corporation related to our acquisition of certain assets and entry into a supply agreement with Zygo Corporation (from $0.2 million increase in liability in fiscal year 2009, to a $0.3 million decrease in fiscal year 2010) and $0.2 million gain on sale of assets compared to 2009.

We incurred higher interest expenses in fiscal year 2009 from the comparable period in 2008 due to the Company s borrowing of $13.5 million in connection with a mortgage against our headquarter premises entered into during July 2008 and the imputed interest of $0.6 million on fair value of deferred payments to Zygo Corporation related to our acquisition of certain assets and entry into a supply agreement with Zygo Corporation. We incurred foreign exchange loss of $1.7 million due to exchange rate fluctuations associated with our intercompany balances among our various global entities.

Provision/Benefit for income taxes.

The Company s benefit for income taxes for 2010 of $15.2 million was primarily due to the decrease in the deferred income tax valuation allowance against US and Japan deferred tax assets and fully utilizing the Company s Federal net operating loss carry-forwards during 2010. The Company s benefit for income taxes for 2009 of $0.6 million was primarily a result of release of foreign income tax reserves and benefiting from refundable tax credits in the United States and United Kingdom. A provision for income taxes for 2008 of $0.4 million was primarily a result of foreign income taxes. Our effective tax rate was (37.5)%, (3.4)%, and 0.5% in 2010, 2009 and 2008, respectively. The Company maintains 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 the Company s income tax provision in the period of change. In determining whether a valuation allowance is warranted, the Company takes 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.

Net income (loss). Our net income for the fiscal year 2010 was $55.9 million, compared to a net loss of $16.3 million in fiscal year 2009, this was primarily due to the cumulative effect of increased revenues, leading to increased profits and improved absorption of manufacturing costs, as well as due to a one-time release (benefit) of income tax valuation allowance, which contributed $18.2 million.

Liquidity and Capital Resources

At January 1, 2011, our cash and cash equivalents totaled $66.5 million and working capital was $135.8 million, compared to $43.5 million cash as of January 2, 2010 and working capital of $76.8 million, respectively.

Operations

Cash provided by operations was $27.6 million which was the result of net income of $55.9 million, partially offset by non-cash transactions of $2.7 million and $25.6 million of changes in working capital. Non-cash transactions primarily consisted of i) $17.2 million net tax benefit, primarily consisting of a $18.2 million release of income tax valuation allowance , ii) stock based compensation of $3.0 million, iii) depreciation, amortization and impairment expense of $6.3 million, and iv) increases in inventory and warranty reserves of $6.2 million. Changes in working capital were mostly due to a $21.0 million increase in receivables due to higher revenue and timing of collections, an increase of $14.5 million in inventory and a $6.8 million increase in payables and accruals as a result of better cash management.

Operating activities used cash of $5.8 million for the twelve-month period ended January 2, 2010 primarily as a result of our net loss of $16.3 million, offset by certain non-cash charges including $6.1 million amortization and depreciation, $1.9 million of asset impairment, and $2.1 million of stock-based compensation. Operating activities provided cash of $2.4 million for the twelve-month period ended December 27, 2008 resulting from our $82.7 million net loss being offset by certain non-cash charges including $68.5 million of impairment charges for long-lived assets, $8.4 million of amortization and depreciation and $3.9 million in stock-based compensation, and increases attributable to changes in our net current assets and liabilities of $4.9 million.

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Investing

During the year ended January 1, 2011, investing activities used $6.1 million of cash, of which, $3.1 million was for purchases of capital equipment and patents and $3.5 million was paid to Zygo related to payments for inventories and fixed assets for the Unifire acquisition. These were offset by $0.5 million of cash received from the sale of assets, primarily related to the sale of the South Korean manufacturing facility.

Investing activities for the twelve-month period ended January 2, 2010 used cash of $0.6 million related to cash outlays of $0.8 million in capital equipment, offset by net cash received from the release of funds held in escrow in connection with our acquisition of Tevet Process Control Technologies, Ltd. (Tevet). Investing activities for the twelve-month period ended December 27, 2008 used cash of $6.0 million primarily related to cash outlays of $3.4 million for the Tevet acquisition and capital equipment acquisitions of $3.2 million.

Financing

Financing activities provided $1.2 million of cash, primarily attributed to $5.8 million from issuance of common stock for stock options exercised and stock purchased under the employee stock purchase program, offset by payment of $3.0 million towards the mortgage on our corporate headquarters and $2.1 million for repurchases of our common stock.

For the twelve-month period ended January 2, 2010, financing activities provided cash of $26.0 million. Proceeds were from a follow-on public offering of our common stock of $23.3 million, combined with $3.0 million of proceeds from the sale of Company shares to employees through the Company s Stock Option and Stock Purchase plans, and were offset by $0.3 million for repayment of debt obligation. For the twelve-month period ended December 27, 2008, financing activities provided cash of $11.8 million. Proceeds were from the issuance of $13.2 million of debt, and $0.8 million from the sale of stock from employee stock plans and purchase plan and were offset by $1.9 million used for the repurchase of our common stock and $0.2 million for debt payments.

In December 2009, we completed a public offering of our common stock resulting in the net proceeds of $23.3 million. The Company used $2.0 million of the net proceeds from the offering to repay certain obligations related to the Company s acquisition of certain assets of Zygo Corporation in June 2009, with the remainder used for general corporate purposes, including working capital.

In February 2007, we entered into a two-year agreement for a revolving line of credit facility in a maximum principal amount of $15.0 million. On April 30, 2009, we re-negotiated to extend the maturity date of the revolving line of credit facility by an additional two years, to April 30, 2011. On June 15, 2009, we amended the financial covenants governing the credit facility to reduce the tangible net worth requirements, effective as of June 27, 2009. On April 13, 2010, we amended the revolving line of credit facility to (i) increase the maximum principal amount available there under from $15.0 million to $20.0 million, (ii) extend the maturity date of such facility by one year to April 30, 2012, and (iii) decrease the unused revolving line commitment fee from 0.25% per annum to 0.1875% per annum.

The instrument governing the facility includes certain financial covenants regarding net 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 5.75% per annum. The maximum borrowing allowed on the line of credit is $20.0 million. Borrowing is limited to the lesser of (a) $7.5 million plus the borrowing base or (b) $20.0 million. The borrowing base available as of January 1, 2011 was $19.6 million. As of January 1, 2011, we were not in breach of any restrictive covenants in connection with our line of credit and debt obligations. There are no outstanding amounts drawn on this facility as of January 1, 2011. 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.

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There no drawings on (or payments to) the line of credit during the fiscal year 2010. We borrowed $7.0 million during fiscal year 2009 and also repaid the amounts in full during fiscal year 2009.

In July 2008, we entered into a loan agreement pursuant to which we borrowed $13.5 million; the loan is secured, in part, by a lien on and security interest in the building and land comprising our principal offices in Milpitas, California. The loan initially bears interest at the rate of 7.18% per annum, which rate will be reset in August 2013 to 3.03% over the weekly average yield of five-year U.S Dollar Interest Rate Swaps as published by the Federal Reserve. Monthly principal and interest payments are based on a twenty year amortization for the first sixty months and fifteen- year amortization thereafter. The remaining principal balance of the loan and any accrued but unpaid interest will be due on August 1, 2018.

On June 17, 2009, we announced a strategic business partnership with Zygo Corporation whereby Nanometrics has purchased inventory and certain other assets from Zygo Corporation and the two companies have entered into a supply agreement. The Company will make payments to Zygo Corporation (with an estimated present value of $2.6 million as of January 1, 2011) over a period of time as acquired inventory is sold and other aspects of the supply agreement are executed. A payment of $2.0 million of inventory and fixed assets was made to Zygo Corporation on January 7, 2010, in accordance with the terms of the acquisition agreement. We have evaluated and will continue to evaluate the acquisitions of products, technologies or business 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.

Additionally, in the third quarter of 2007, our Board of Directors authorized a $4.0 million stock repurchase program, we utilized the remaining $1.3 million under this program to repurchase the Company stock. The Board of Directors authorized another $10.0 million stock repurchase program in the fourth quarter of 2010, of this, we have utilized $0.8 million. We believe our cash, cash equivalents and borrowing availability will be sufficient to meet our needs through at least the next twelve months.

Off-Balance Sheet Arrangements

None.

Contractual obligations

The following table summarizes our contractual cash obligations as of January 1, 2011, and the effect such obligations are expected to have on liquidity and cash flow in future periods (in thousands):

			Payments due by period		
	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Debt obligations (1)	$ 13,705	$ 1,283	$ 3,181	$ 1,623	$ 7,618
Fair value of deferred payments to Zygo Corporation related to acquisition	$ 2,652	$ 750	$ 1,727	$ 81	$ 94
Other long-term liabilities	$ 3,472	$	$ 3,191	$	$
Operating lease obligations	$ 4,238	$ 1,537	$ 2,034	$ 472	$ 195
Total	$ 24,067	$ 3,570	$ 10,133	$ 2,457	$ 7,907

(1) Includes interest.

We maintain certain open inventory purchase agreements with our suppliers to ensure a smooth and continuous supply chain 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 forecast time-horizon can vary among different suppliers. We estimate our open inventory purchase commitment as of January 1, 2011 was approximately $13.2 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. Certain agreements provide for potential cancellation penalties.

Excluded from the contractual obligation table above, are $1.7 million of future payments related to uncertain tax positions because we cannot reliably estimate the timing of the settlements with the respective tax authorities.

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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: 65.4%, 70.3% and 70.5% of sales in 2010, 2009 and 2008, respectively. A portion of the net revenues we receive from such sales is denominated in currencies other than the U.S. dollar. Additionally, portions of our costs of net revenues and our other operating expenses are incurred by our international operations and denominated in local currencies. Foreign currency transactions resulted in a loss for 2010 of $0.3 million, a loss for 2009 of $1.7 million, and a gain for 2008 of $1.5 million.

Our exposure to foreign exchange rate fluctuations arises in part from current intercompany accounts in which costs from the United States and the United Kingdom are charged to 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 its respective local currency, the magnitude of potential exposure to foreign exchange risk on a consolidated basis, for the Company as a whole, could be significant. Intercompany balances are denominated in US dollars and other local currencies, and the net payable from the United States parent amounted to $5.7 million as of January 1, 2011. A hypothetical change of 10% in the foreign currency exchange rate at January 1, 2011 could result in an increase or decrease of approximately $0.6 million in transaction gains or losses which would be included in our statement of operations.

Interest Rate Risk

At January 1, 2011, January 2, 2010 and December 27, 2008, the Company did not hold investments in marketable securities. As of January 1, 2011, there were no amounts borrowed against the line of credit and the interest rate on the GE loan is fixed, therefore, there are no significant interest rate risks.

In July 2008, we entered into a loan agreement pursuant to which we borrowed $13.5 million. The loan initially bears interest at the rate of 7.18% per annum, which rate will be reset after five years to 3.03% over the then weekly average yield of five-year U.S. Dollar Interest Rate Swaps as published by the Federal Reserve. Monthly principal and interest payments are based on a twenty year amortization for the first sixty months and fifteen year amortization thereafter. The remaining principal balance of the loan and any accrued but unpaid interest will be due on August 1, 2018. The loan is secured, in part, by a lien on and security interest in the building and land comprising our principal offices in Milpitas, California. At January 1, 2011 and January 2, 2010 our total debt obligation was $10.0 million and $13.1 million, respectively, with a long-term portion of $9.5 million and $12.7 million, respectively.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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Report of Independent Registered Public Accounting Firm (PricewaterhouseCoopers LLP)	40
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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 consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of Nanometrics, Inc. and its subsidiaries (the Company) at January 1, 2011, and the results of their operations and their cash flows for the year then ended 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 index appearing under Item 15(a)2(a) presents fairly, in all material respect, 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 January 1, 2011, based on criteria established in *Internal Control Integrated Framework* 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 Management s Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements, on the financial statement schedule and on the Company s internal control over financial reporting based on our integrated audit. We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit 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 audit 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 audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides 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

March 11, 2011

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Report of Independent Registered Public Accounting Firm

Board of Directors and Stockholders

Nanometrics Incorporated

Milpitas, California

We have audited the accompanying consolidated balance sheets of Nanometrics Incorporated as of January 2, 2010 and the related consolidated statements of operations, stockholders equity and comprehensive income (loss), and cash flows for each of the two years in the period ended January 2, 2010. In connection with our audits of the financial statements, we have also audited the information included in the consolidated financial statement schedule listed in Item 15 for the years ended January 2, 2010 and December 27, 2008. These financial statements are the responsibility of the Company s management. Our responsibility is to express an opinion on these financial statements based on our 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 audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company s internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes 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, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Nanometrics Incorporated at January 2, 2010, and the results of its operations and its cash flows for each of the two years in the period ended January 2, 2010**,** in conformity with accounting principles generally accepted in the United States of America.

Also, in our opinion, the aforementioned information included in the financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, present fairly, in all material respects, the information set forth therein.

As discussed in Note 1 to the consolidated financial statements, the Company adopted FASB No. 141(R) Business Combinations, codified in ASC 805, Business Combinations, effective December 28, 2008.

/s/ BDO USA, LLP

(formerly known as BDO Seidman, LLP)

San Francisco, California

March 26, 2010

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NANOMETRICS INCORPORATED

CONSOLIDATED BALANCE SHEETS

(In thousands, except share amounts)

	January 1, 2011	January 2, 2010
ASSETS		
Current assets:		
Cash and cash equivalents	$ 66,460	$ 43,526
Accounts receivable, net of allowances of $63 and $241, respectively	44,523	23,047
Inventories	43,168	31,472
Inventories- delivered systems	1,466	1,175
Assets held for sale		220
Prepaid expenses and other	2,986	2,182
Deferred income taxes	9,644	245
Total current assets	168,247	101,867
Property, plant and equipment, net	35,186	36,365
Intangible assets, net	5,972	7,067
Deferred income tax assets long term	9,256	612
Other assets	1,235	1,559
Total assets	$ 219,896	$ 147,470
LIABILITIES AND STOCKHOLDERS EQUITY		
Current liabilities:		
Accounts payable	$ 11,486	$ 5,762
Accrued payroll and related expenses	8,813	4,012
Deferred revenue	4,063	5,162
Other current liabilities	7,293	8,952
Income taxes payable	250	865
Current portion of debt obligations	572	343
Total current liabilities	32,477	25,096
Deferred revenue	3,191	646
Other long-term liabilities	3,912	2,235
Debt obligations	9,467	12,739
Total liabilities	49,047	40,716
Stockholders equity:		
Preferred stock, $0.001 par value; 3,000,000 shares authorized; no shares issued or outstanding		
Common stock, $0.001 par value per share; 47,000,000 shares authorized; 22,314,783 and 21,506,791 respectively, issued and outstanding	22	21
Additional paid-in capital	225,755	218,308
Accumulated deficit	(57,000)	(112,948)
Accumulated other comprehensive income	2,072	1,373
Total stockholders equity	170,849	106,754
Total liabilities and stockholders equity	$ 219,896	$ 147,470

See notes to consolidated financial statements.

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NANOMETRICS INCORPORATED

CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands, except per share amounts)

	Years Ended		
	January 1, 2011	**January 2, 2010**	**December 27, 2008**
Net revenues:			
Products	$ 154,548	$ 49,153	$ 75,596
Service	33,517	27,554	26,505
Total net revenues	188,065	76,707	102,101
Costs of net revenues:			
Cost of products	66,484	26,594	38,692
Cost of service	19,328	13,992	18,675
Total costs of net revenues	85,812	40,586	57,367
Gross profit	102,253	36,121	44,734
Operating expenses:			
Research and development	18,973	14,672	17,110
Selling	21,320	15,072	17,798
General and administrative	18,617	15,168	19,689
Amortization of intangibles assets	1,556	1,535	3,531
Restructuring charge		1,134	1,525
Asset impairment	463	1,899	68,545
Total operating expenses	60,929	49,480	128,198
Income (loss) from operations	41,324	(13,359)	(83,464)
Other income (expense):			
Interest income	107	53	185
Interest expense	(1,556)	(1,658)	(635)
Other, net	814	(1,927)	1,624
Total other income (expense), net	(635)	(3,532)	1,174
Income (loss) before income taxes	40,689	(16,891)	(82,290)
Provision (benefit) for income taxes	(15,259)	(586)	436
Net income (loss)	$ 55,948	$ (16,305)	$ (82,726)
Basic net income (loss) per share	$ 2.56	$ (0.87)	$ (4.46)
Diluted net income (loss) per share	$ 2.43	$ (0.87)	$ (4.46)
Shares used in per share computation:			
Basic	21,855	18,639	18,546

Diluted	22,998	18,639	18,546

See notes to consolidated financial statements.

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NANOMETRICS INCORPORATED

CONSOLIDATED STATEMENTS OF STOCKHOLDERS EQUITY AND

COMPREHENSIVE INCOME (LOSS)

(In thousands, except share amounts)

	Common Stock		Additional Paid-In	Accumulated	Accumulated Other Comprehensive Income	Total Stockholders	Comprehensive Income
	Shares	Amount	Capital	Deficit	(Loss)	Equity	(Loss)
Balances, December 29, 2007	18,620,682	$ 19	$ 187,180	$ (13,917)	$ 2,562	$ 175,844	
Comprehensive loss:							
Net income (loss)				(82,726)		(82,726)	$ (82,726)
Other comprehensive income							
Employee benefit plan adjustment					157	157	157
Foreign currency translation adjustments					(3,254)	(3,254)	(3,254)
Comprehensive loss							$ (85,823)
Issuance of common stock under stock-based compensation plans	339,424		806			806	
Stock-based compensation expense			3,881			3,881	
Repurchases and retirement of common stock	(547,052)	(1)	(1,940)			(1,941)	
Balances, December 27, 2008	18,413,054	$ 18	$ 189,927	$ (96,643)	$ (535)	$ 92,767	
Comprehensive loss:							
Net income (loss)				(16,305)		(16,305)	$ (16,305)
Other comprehensive income							
Employee benefit plan adjustment					110	110	110
Foreign currency translation adjustments					1,798	1,798	1,798
Comprehensive loss							$ (14,397)
Issuance of common stock under stock-based compensation plans	786,585	1	3,037			3,038	
Common stock offering, net of $426 offering costs	2,307,152	2	23,290			23,292	
Stock-based compensation expense			2,054			2,054	
Balances, January 2, 2010	21,506,791	$ 21	$ 218,308	$ (112,948)	$ 1,373	$ 106,754	
Comprehensive loss:							
Net income (loss)				55,948		55,948	$ 55,948
Other comprehensive income							
Employee benefit plan adjustment					(51)	(51)	(51)
Foreign currency translation adjustments					750	750	750
Comprehensive income (loss)							$ 56,647
Issuance of common stock under stock-based compensation plans	969,484	1	6,622			6,623	

Common stock offering costs			(28)			(28)
Stock-based compensation expense			2,950			2,950
Repurchases and retirement of common stock	(161,492)		(2,097)			(2,097)
Balances, January 1, 2011	22,314,783	$ 22	$ 225,755	$ (57,000)	$ 2,072	$ 170,849

See notes to consolidated financial statements.

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NANOMETRICS INCORPORATED

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands, except share amounts)

	Years Ended		
	January 1, 2011	**January 2, 2010**	**December 27, 2008**
Cash flows from operating activities:			
Net income (loss)	$ 55,948	$ (16,305)	$ (82,726)
Reconciliation of net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	5,858	6,092	8,429
Stock-based compensation	2,950	2,054	3,881
Excess tax benefit from equity awards	(801)		
Asset impairment	463	1,899	68,545
Loss (gain) on disposal of asset	(140)	82	(72)
Inventory reserve	1,457	376	(112)
Changes in warranty reserves	4,770	1,439	1,923
Deferred taxes	(17,233)	(426)	(771)
Unrealized foreign exchange loss (gain)	(523)	939	(1,518)
Fair value changes of deferred payments to Zygo Corporation related to acquisition	467	596	
Changes in assets and liabilities, net of effects of assets acquired and liabilities assumed in acquisitions:			
Accounts receivable	(20,996)	(5,971)	18,304
Inventories	(14,495)	1,572	(33)
Inventories delivered systems	244	(975)	580
Prepaid expenses and other	(398)	(113)	1,172
Accounts payable, accrued and other liabilities	6,763	(664)	(14,637)
Deferred revenue	1,414	3,941	(777)
Income taxes payable	1,879	(291)	261
Net cash provided by (used in) operating activities	27,627	(5,755)	2,449
Cash flows from investing activities:			
Cash received from Tevet on escrow settlement		215	
Purchase of Tevet s net assets, net of cash received			(3,357)
Payments to Zygo, related to acquisition	(3,503)		
Purchases of property, plant and equipment	(3,096)	(822)	(3,237)
Proceeds from sale of property, plant and equipment	492	9	625
Net cash provided by (used in) investing activities	(6,107)	(598)	(5,969)
Cash flows from financing activities:			
Proceeds from issuance of debt obligations, net of issuance costs			13,203
Borrowings from line of credit		7,000	
Repayment of line of credit		(7,000)	
Repayments of debt obligations	(2,999)	(319)	(243)
Repurchases of common stock	(2,097)		(1,941)
Proceeds from issuance of common stock under employee stock purchase and stock option plans	5,784	3,038	806
Excess tax benefit from equity awards	801		
Taxes on net issuance of stock awards	(299)		
Proceeds from issuance of common stock offering, net of $426 offering costs	(28)	23,292	
Net cash provided by financing activities	1,162	26,011	11,825
Effect of exchange rate changes on cash and cash equivalents	252	(112)	756
Net increase in cash and cash equivalents	22,934	19,546	9,061
Cash and cash equivalents, beginning of year	43,526	23,980	14,919

Cash and cash equivalents, end of year	$ 66,460	$ 43,526	$ 23,980
Supplemental disclosure of cash flow information:			
Cash paid for interest	$ 965	$ 1,038	$ 623
Cash paid for income taxes	$ 1,572	$ 153	$ 797
Capitalization of inventory as property, plant and equipment	$ 1,107	$ 1,166	$ 255
Fair value of deferred payments to Zygo Corporation related to acquisition (see Note 3)	$ 2,652	$ 5,092	$

See notes to consolidated financial statements.

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NANOMETRICS INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Years Ended January 1, 2011, January 2, 2010 and December 27, 2008

Note 1. Significant Accounting Policies

Description of Business Nanometrics Incorporated (Nanometrics or the Company) and its wholly owned subsidiaries design, manufacture, market, sell and support thin film, optical critical dimension and overlay dimension metrology systems used primarily in the manufacturing of semiconductors, solar PVs and HB-LEDs, as well as by customers in the silicon wafer and data storage industries. These metrology systems precisely measure a wide range of film types deposited on substrates during manufacturing in order to control manufacturing processes and increase production yields in the fabrication of integrated circuits. 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 Company s optical critical dimension 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 overlay metrology systems are used to measure the overlay accuracy of successive layers of semiconductor patterns on wafers in the photolithography process. 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 The Company uses a 52/53 week fiscal year ending on the Saturday nearest to December 31. Accordingly, 2010 consisted of 52 weeks ending January 1, 2011 (fiscal year 2010), 2009 consisted of 53 weeks ending January 2, 2010 (fiscal year 2009), and 2008 consisted of 52 weeks and ended on December 27, 2008 (fiscal year 2008).

Reclassification Certain fiscal years 2009 and 2008 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 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, depreciation and amortization, valuation of intangible assets and long-lived assets, warranty reserves, 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 consist of income for 2010 of $0.3 million, a loss for 2009 of $1.7 million, and income for 2008 of $1.5 million, respectively.

Revenue Recognition 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. 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 that change the existing configuration of a product and are included in Service revenue. They are distinguished from Product revenue, which consists of complete, automated process control metrology systems (the system(s)). Nanometrics systems consist of hardware and of software which is incidental to the systems. 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, 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 has been met. This occurs at the time of shipment as the terms are FOB shipping point. For initial sales of product where the Company 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. Upon recognition of product revenue, a liability is recorded for anticipated warranty costs.

As part of its customer service, the Company sells software that is considered to be an upgrade to the customer s existing system. Such software is specific to the type of tool being upgraded and cannot be used in other tools. Software is not a significant focus of the Company s product offerings and marketing efforts, and the Company does not provide post-sale customer service. Revenue on software upgrades is recognized when the software is delivered to the customer, provided that all other recognition criteria have been met.

All of the Company s products are assembled prior to shipment to customers. The Company performs installation for its customers; however, such an installation is inconsequential and perfunctory, could be provided by outside third parties, and is not considered essential to the functionality of the equipment.

Revenue related to spare part sales is recognized upon shipment. Revenue related to billable service is recognized as the services are performed and, if billable service and spare parts are sold together, revenue is recognized when both the parts are delivered and the service is completed. Service contracts may be purchased by the customer during or after the warranty period, and for service contracts, revenue is recognized ratably over the service contract period. Revenue on upgrades (including software upgrades) is recognized when the upgrade has been delivered to the customer. For initial upgrade sales where the Company has not previously met the defined customer specified acceptance criteria, if any, revenue is recognized upon the earlier of receipt of written customer acceptance or the expiration of the contractual acceptance period. On occasion, customers request a warranty period longer than the Company s standard 12 month 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. The Company generally does not provide customers with any return rights.

In cases where the Company can ascertain the fair value of all the elements, and certain elements of a sales arrangement are not delivered and accepted at the same time, the relative fair value of the undelivered element is deferred until that element is delivered and accepted by the customer. In multiple-element arrangements where the Company only has fair value of the undelivered elements, the residual method is applied. In order to recognize revenue associated with delivered elements, the following criteria must be met: (a) the delivered item(s) has value to the customer on a standalone basis; (b) there is objective and reliable evidence of the fair value of the undelivered item(s); and (c) delivery or performance of the undelivered item(s) is considered probable and is substantially in the control of the Company. If the arrangement does not meet all the above criteria, the entire amount of the sales contract is deferred until the above criteria have been met or all elements have been delivered to the customer. Objective and reliable evidence of the fair value of an element is based on the amounts for which the Company sells equivalent products or services on a standalone basis.

Cash and Cash Equivalents The Company considers all highly liquid investments with original maturities of three months or less, when purchased, to be cash equivalents.

Fair Value of Financial Instruments Financial instruments include cash and cash equivalents, accounts receivable, accounts payable and debt obligations. 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

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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 however, the financial conditions of customers 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 standard 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 off. 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 depreciation and amortization on the cash flow statement. 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 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

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 useful lives while goodwill and indefinite lived assets are not amortized but tested annually for impairment. The Company s impairment review process is completed as of the last day of November of each year or whenever events or circumstances occur which indicate that an impairment might have occurred. The Company follows the two-step approach to determining whether and by how much goodwill has been impaired. The first step requires a comparison of the fair value of Nanometrics reporting units to its net book value. If the fair value is greater, 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. During 2008, the company wrote off the entire Goodwill of $54.0 million. See Note 6, Goodwill and Long-Lived Asset Impairment.

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 6, Goodwill and Long-Lived Asset Impairment.

Restructuring Charge The Company records estimated expenses for severance and other costs as incurred as restructuring plans are executed. Costs associated with restructuring activities have been recognized when they are incurred rather than the date of a commitment to an exit or disposal plan. A liability for post-employment benefits is

recorded when payment is probable, the amount is reasonably estimable, and the obligation relates to rights that have vested or accumulated. Given the significance and complexity of restructuring activities, and the timing of the execution of such activities, the restructuring process involves periodic reassessments of the estimates made at the time the original decisions were made, including evaluating market conditions for expected disposals of assets and vacancy of space. Although the Company believes that these estimates accurately reflect the costs of the restructuring programs, actual results may vary or differ, thereby requiring us to record additional provisions or reverse a portion of such provisions.

Income Tax Assets and Liabilities The Company accounts for income taxes whereby 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 must be 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 periodically 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.

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Accumulated Other Comprehensive Income (Loss) The composition of accumulated other comprehensive income (loss) is as follows:

	Years Ended		
	Foreign Currency Translations	Defined Benefit Pension Plans	Accumulated Other Comprehensive Income (Loss)
Balance as of December 28, 2008	$ (347)	$ (188)	$ (535)
Current period change	1,798	110	1,908
Balance as of January 2, 2010	1,451	(78)	1,373
Current period change	750	(51)	699
Balance as of January 1, 2011	$ 2,201	$ (129)	$ 2,072

The items above, did not impact the Company s income tax provision.

Product Warranties The Company sells the majority of its products with a 12 month 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 us 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.

Guarantees In addition to product warranties, from time to time, in the normal course of business, the Company indemnifies certain customers with whom it enters into a contractual relationship. The Company has agreed to hold the other party harmless against third party claims that its products, when used for their intended purpose(s), infringe the intellectual property rights of such third party or other claims made against certain parties. 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 the estimated fair value of these agreements is minimal. Accordingly, no liabilities have been recorded for these obligations on the balance sheets as of January 1, 2011 and January 2, 2010.

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

Advertising Costs The Company expenses advertising costs as incurred. Advertising costs were $0.1 million in 2010, these costs were immaterial in 2009, and were $0.1 million in 2008, and did not include expenses related to trade shows.

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 (SAB) 107(SAB 107). The expected volatility is based on the historical volatility of the Company s stock price.

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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 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 2010, therefore, the potential dilutive effect of stock options was considered to calculate the diluted income per share. During fiscal years 2009 and 2008, the Company incurred net losses, therefore, diluted net loss per share excludes common equivalent shares outstanding, as their effect is anti-dilutive. The total number of common equivalent shares outstanding during 2010, 2009 and 2008 was 0.7 million, 2.4 million and 3.0 million, respectively. The total number of common equivalent shares includes stock options with exercise prices in excess of the fair market value of our common stock, which are always excluded from diluted weighted average shares outstanding, as their effect is anti-dilutive. The reconciliation of the share denominator used in the basic and diluted net income per share computations is as follows (in thousands):

	Years Ended		
	January 1, 2011	**January 2, 2010**	**December 27, 2008**
Weighted average shares outstanding shares used in basic net income per share computation	21,855	18,639	18,546
Dilutive effect of stock options, using the treasury stock method	1,143		
Shares used in diluted net income per share computation	22,998	18,639	18,546

Certain Significant Risks and Uncertainties Financial instruments which potentially subject the Company to concentration of credit risk consist of cash and cash equivalents, and accounts receivable. See also Note 7, Sale of Accounts Receivable.

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Cash and cash equivalent deposits with financial institutions may, at times, exceed federally insured limits; however, the Company has not experienced any losses on such accounts. The Company maintains its cash and cash equivalents in deemed deposit accounts and money market accounts with large financial institutions.

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 2010, 2009 and 2008 consisted of 61%, 60% and 43%, 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 subassemblies; disruption of manufacturing facilities; and its ability to attract and retain employees necessary to support its growth.

Certain components and subassemblies 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 subassemblies used in its products or its inability to procure these components or subassemblies from alternate sources on acceptable terms could have a material adverse effect on its business, financial condition and results of operations.

Recently Issued Accounting Pronouncements

In January 2010, the FASB issued Accounting Standards Update (ASU) 2010-06, *Improving Disclosures about Fair Value Measurements*, which amends ASC 820 to add two new disclosures: (1) transfers in and out of Level 1 and 2 measurements and reasons for the transfers, and (2) a gross presentation of activity within the Level 3 roll forward. The ASU also includes clarifications to existing disclosure requirements on the level of disaggregation and disclosures regarding inputs and valuation techniques. The ASU is effective for interim and annual reporting periods beginning after December 15, 2009, except for the separate disclosures about purchases, sales, issuances, and settlements in the roll forward of activity in Level 3 fair value measurements. Those disclosures are effective for fiscal years beginning after December 15, 2010, and for interim periods within those fiscal years. In the period of initial adoption, entities will not be required to provide the amended disclosures for any previous periods presented for comparative purposes. However, comparative disclosures are required for periods after initial adoption. The adoption of the initial disclosure requirements included in this pronouncement, did not have a material impact on the consolidated financial statements of the Company.

In September 2009, the FASB ratified ASU 2009 -13 (ASU 2009-13) previously Emerging Issues Task Force (EITF) Issue No. 08-1, *Revenue Arrangements with Multiple Deliverables* (ASC 605-25) which provides principles and application guidance on whether multiple deliverables exist, how the arrangement should be separated, and how the consideration should be allocated. It also requires an entity to allocate revenue in an arrangement using estimated selling prices of deliverables if a vendor does not have vendor-specific objective evidence or third-party evidence of the selling price. The guidance eliminates the use of the residual method, requires entities to allocate revenue using relative pricing and significantly expands the disclosure requirements for multiple-deliverable revenue arrangements.

Also in September 2009, the FASB ratified ASU 2009-14 (previously EITF Issue No. 09-3, *Certain Revenue Arrangement That Include Software Elements).* ASU 2009-14 modifies the scope of software revenue recognition to remove tangible products from the scope of the software revenue guidance if the products contain both software and non-software components that function together to deliver a product s essential functionality, and provides guidance on determining whether software deliverables in an arrangement that includes a tangible product are within the scope of the software revenue guidance.

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The new standards are effective for revenue recognition arrangements that began or are changed in fiscal years starting after June 15, 2010, and early adoption is permitted. The Company is currently evaluating the impact of these amendments on its revenue recognition policies, as well as the impact on its financial statements.

In April 2009, the FASB issued FSP SFAS No. 141(R)-1, *Accounting for Assets Acquired and Liabilities Assumed in a Business Combination That Arise from Contingencies*, as codified by ASC 805 *Business Combination* (ASC 805). This standard amends the provisions related to the initial recognition and measurement, subsequent measurement and disclosure of assets and liabilities arising from acquired contingencies in a business combination, thereby requiring that such contingencies be recognized at fair value on the acquisition date if fair value can be reasonably estimated during the allocation period. Otherwise, entities would typically account for the acquired contingencies in accordance with SFAS No. 5, *Accounting for Contingencies,* as codified by ASC 450 *Contingencies*. This standard applies prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008, or the first quarter of 2009. On June 17, 2009, the Company completed a business combination with Zygo Corporation as discussed in Note 3, which is accounted for in accordance with ASC 805.

Note 2. Fair Value Measurements and Disclosures

Fair value is defined as the price that would be received to sell 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.

Fair Value Hierarchy

The Company determines the fair values of its financial instruments based on the fair value hierarchy established in ASC 820, 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 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 our discounted present value analysis of future cash flows, which reflects our 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 table presents the Company s fair value measurements that are measured at the estimated fair value, on a recurring basis, categorized in accordance with the fair value hierarchy (in thousands):

As of January 1, 2011	**Quoted Prices in Active Markets for Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**	**Total**
Cash and cash equivalents (all short term):				
Cash	$ 14,750	$	$	$ 14,750
Money market account	51,710			51,710
Total cash and cash equivalents	66,460			66,460
Total financial assets	$ 66,460	$	$	$ 66,460

Fair value of deferred payments to Zygo Corporation related to acquisition	$	$	$	2,652	$	2,652
Fair value of GE loan				9,869		9,869
Total financial liabilities	$	$	$	12,521	$	12,521

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As of January 2, 2010	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Cash and cash equivalents (all short term):				
Cash	$ 8,609	$	$	$ 8,609
Money market account	34,917			34,917
Total cash and cash equivalents	43,526			43,526
Total financial assets	$ 43,526	$	$	$ 43,526
Fair value of deferred payments to Zygo Corporation related to acquisition	$	$	$ 5,688	$ 5,688
Fair value of GE loan			11,953	11,953
Total financial liabilities	$	$	$ 17,641	$ 17,641

Changes in the Company s Level 3 liabilities for fiscal 2010 were as follows (in thousands):

	Level 3
Fair value at December 27, 2008	$
Fair value of deferred and contingent payment related to Zygo acquisition	5,092
Change in fair value included in earnings	596
Fair value of Level 3 liability at January 2, 2010	5,688
Payments made to Zygo Corporation	(3,503)
Change in fair value included in earnings	467
Fair value at January 1, 2011	$ 2,652

As of January 1, 2011, the Company has a liability of $2.7 million resulting from the acquisition of certain assets from Zygo Corporation (Zygo) which is measured at fair value on a recurring basis. Of that amount, $0.8 million is a current liability and $1.9 million is a long-term liability. The fair value of this liability was determined using level 3 inputs. See Note 3 for discussion of assumptions used to measure the fair value of the Zygo liability.

As of January 2, 2010, the Company had assets held for sale of $0.2 million related to the Company s South Korean manufacturing facility. The assets primarily included semiconductor equipment and buildings. The fair value of these assets was determined based on level 3 inputs, including, a third party appraisal. Losses recognized in fiscal year 2009 due to fair value measurements using level 3 inputs was $1.9 million. These assets were subsequently sold in the second quarter of year 2010 for a gain of $0.2 million. The Company had no assets held for sale as of January 1, 2011.

	Year ended January 1, 2010	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Gains (Losses)
Assets held for sale	$ 220	$	$	$ 220	$ (1,899)

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Other financial instruments include cash and cash equivalents, accounts receivable, accounts payable and debt obligations. 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.

Note 3. Acquisitions

There were no business acquisitions made by the Company during the fiscal year 2010.

On June 17, 2009 (acquisition date), Nanometrics announced that it had purchased inventory and certain other assets of Zygo Corporation (Zygo) and that the two companies had entered into a supply agreement. The supply agreement is an exclusive Original Equipment Manufacturer (OEM) arrangement in which Zygo will provide interferometer sensors to Nanometrics for incorporation into the Unifire line of products as well as the Nanometrics family of automated metrology systems. The arrangement is structured as an asset transfer and exclusive OEM supply agreement aimed at wafer-based markets. Nanometrics will assume all inventory and customer sales and support responsibilities and Zygo will provide measurement sensors for integration by Nanometrics. By completing this acquisition, Nanometrics anticipates expanding its served markets to include the high end of dimensional control metrology for the rapidly-growing back-end-of-line packaging market, while also enhancing our product offerings to front-end-of-line metrology customers. In addition to the applications currently addressed by Nanometrics and Zygo products, the business partnership allows for the joint development of additional technology solutions targeted at the semiconductor and related industries. This transaction met the conditions of a business combination as defined in ASC 805, and as such is accounted for under ASC 805. The results from the Unifire line of business were included in the Company s condensed consolidated statements of operations from the acquisition date.

The following table summarizes the fair value of consideration recorded and the fair value of acquired assets (in thousands):

	Amounts
Assets acquired:	
Tangible assets:	
Inventories raw materials	$ 2,014
Property, plant and equipment machinery and equipment	1,378
Total tangible assets acquired	3,392
Intangible assets:	
Developed technology	1,362
Customer relationships	338
Total intangible assets acquired	1,700
Total assets acquired	$ 5,092

The fair value of the purchase consideration at the time of the acquisition was $5.1 million, which consisted of deferred payments to Zygo for inventory and fixed assets, as well as future royalty and sustaining engineering support fees. The future royalty and sustaining engineering support fees are considered contingent consideration. On the acquisition date, the consideration was recorded as a liability on the Company s consolidated balance sheet at January 2, 2010, with $3.1 million being recorded as a current liability and $2.0 million being recorded as a long term liability.

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The Company was required to make payments to Zygo after each sale of the Company s product which incorporates inventory acquired from Zygo. If the Company did not sell sufficient products that incorporate the acquired inventory from Zygo, within one year from the acquisition date, the Company was required to remit the remaining unpaid portion relating to inventory and fixed assets at that time. The purchase agreement also stipulated that if the Company received greater than $5.0 million in a financing transaction, 20% of the financing proceeds, not to exceed $2.0 million, must be paid to Zygo for any unpaid portion of the amounts related to inventory and fixed assets. In December 2009, the Company completed a common stock offering with net proceeds of $23.3 million, therefore, $2.0 million became immediately due and payable to Zygo. The $2.0 million payment was made to Zygo on January 7, 2010. In March 2010, the Company sold products that incorporate the acquired inventory from Zygo, at levels sufficient to trigger the Company s payment obligations under the purchase agreement, and therefore, the remaining unpaid portion relating to inventory and fixed assets of $1.4 million became due and was paid by the Company to Zygo on April 15, 2010.

In addition, the Company agreed to pay Zygo a royalty based on net revenues of approved products and the expected sustaining engineering payments based on volumes of heads purchased from Zygo starting in 2010 and over a 10 year period. Our payments to Zygo Corporation over the next 10 years may be up to $6.8 million depending on the numbers of tools sold. For the year ended January 1, 2011, the Company made royalty and sustaining engineering payments of $0.1 million to Zygo. The fair value of the future royalty and sustaining engineering support fees was determined using a relief from royalty method based on the following: (a) the amount of the acquired assets that the business will generate, and (b) a discount rate of 20 percent, which was utilized to adjust the royalty and sustaining engineering payments to their present value, based on the consideration of both a weighted average cost of capital calculation and venture capital rates.

The fair value of inventory acquired from Zygo, which consisted of raw materials, was $2.0 million. Recent purchases by the Company of raw material were considered a reasonable proxy for fair value. The fair value of demonstration equipment was $1.4 million as determined by considering the purchase date and recent usage of the products. Fair value of developed technology of $1.4 million and customer relationships of $0.3 million were determined by a similar methodology to the methodology used above for calculating contingent consideration, with the following assumptions of (a) royalty rate of 3 percent, and (b) discount rate of 30 percent, and will be amortized over a period of 10 years on a straight-line basis and over a two years on an accelerated basis, respectively. Amortization expense of $0.3 million and $0.2 million was recorded for the acquired intangible assets from the Zygo transaction in fiscal years 2010 and 2009, respectively.

The acquired Zygo business contributed no revenues and a net loss of $1.8 million to the consolidated results of operations for the period from June 17, 2009 to January 2, 2010. The following unaudited pro forma summary presents consolidated information of Nanometrics as if the business combination had occurred at the beginning of fiscal year 2008 (in thousands):

	Pro Forma Year Ended	
	January 2, 2010 (unaudited)	December 27, 2008 (unaudited)
Net revenues	$ 78,864	$ 105,118
Net income (loss)	(20,095)	(91,797)
Net loss per share:		
Basic	$ (1.08)	$ (4.95)
Diluted	$ (1.08)	$ (4.95)

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Note 4. Asset Held for Sale

In May 2009, the Company decided to close the Pyeongtek, South Korea manufacturing facility due to the prevailing industry and economic conditions facing the semiconductor industry at that time. The premises were vacated prior to the end of the second quarter 2009. The facility in South Korea met all the requirements as long-lived assets held for sale and the Company ceased recording depreciation on the facility. The fair value of the South Korean manufacturing facility was determined using a cost approach and a sale comparison approach. The cost approach uses the characteristics of the facility to determine the cost of replacement if the facility were new, adjusted for depreciation to date considering the age of the facility. The sale comparison approach considers market comparable sales activity. An average of the two approaches was used to determine the facility fair value of approximately $0.2 million, which included an estimate for selling costs at 10% of the building fair value. An impairment loss of $1.9 million was recorded on the South Korean facility for the second quarter of 2009. On April 29, 2010, the sale of the property was completed and a gain on the sale of $0.2 million was recorded in the second quarter of 2010.

Note 5. Stock-Based Compensation

The Company measured and recognized compensation expense for all share-based payment awards made to employees and directors including employee stock options 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 January 1, 2011, January 2, 2010 and December 27, 2008 is based on awards ultimately 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 rate in 2010, 2009 and 2008 of 8.6%, 19.5% and 19.7%, respectively, was 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 classified as financing cash flows. The Company recognized $0.8 million of excess tax benefit in the fiscal year 2010, there were no such tax benefits during fiscal 2009 and 2008.

Valuation and Expense Information

The fair value of stock-based awards to employees is calculated using the Black-Scholes option pricing model, even though this model was developed to estimate the fair value of freely tradable, fully transferable options without vesting restrictions, which differ significantly from the Company s stock options. The Black-Scholes model requires subjective assumptions, including future stock price volatility and expected time to exercise, which greatly affect the calculated values. The expected term of options granted was calculated using the simplified method allowed by the SAB 107. The risk-free rate is based on the U.S Treasury rates in effect during the corresponding period of grant. The expected volatility is based on the historical volatility of Nanometrics 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 2010	**Fiscal Year 2009**	**Fiscal Year 2008**
Stock Options:			
Expected life	4.5 years	4.1 years	4.3 years
Volatility	74.2%	67.6%	56.9%
Risk free interest rate	2.04%	2.08%	2.22%
Dividends			
Employee Stock Purchase Plan:			
Expected life	0.5 years	0.5 years	0.5 years
Volatility	80.3%	99.1%	87.7%

Risk free interest rate	0.20%	0.33%	1.02%
Dividends			

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The weighted average fair value per share of the stock options awarded in fiscal years 2010, 2009 and 2008 is $6.42, $2.84 and $3.04, respectively.

The following table summarizes stock-based compensation expense for all share-based payment awards made to the Company s employees and directors pursuant to the Employee Stock Purchases was allocated as follows (in thousands):

	Fiscal Year 2010	Fiscal Year 2009	Fiscal Year 2008
Cost of products	$ 126	$ 34	$ 310
Cost of service	206	180	363
Research and development	514	495	696
Selling	596	472	751
General and administrative	1,508	873	1,761
Total stock-based compensation expense related to employee stock options and employee stock purchases	$ 2,950	$ 2,054	$ 3,881

A summary of activity under the Company s stock option plans during 2010 is as follows:

	Shares Available for Grant (Options and RSUs)	Number of Shares Outstanding (Options)	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in Years)	Aggregate Intrinsic Value (in Thousands)
Options					
Outstanding at January 2, 2010	1,773,229	2,953,294	$ 5.95		
Exercised		(867,397)	5.39		
Granted	(805,968)	805,968	10.92		
RSU allocation	(73,232)				
Canceled	128,179	(128,179)	8.88		
Outstanding at January 1, 2011	1,022,208	2,763,686	$ 7.43	5.2	$ 15,308
Exercisable at January 1, 2011		1,329,705	$ 7.05	4.6	$ 7,993

The Company granted 73,232 and 62,000 Restricted Stock Units (RSU) during the year-end January 1, 2011 and January 2, 2010, 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 RSU	Weighted Average Fair Value
Outstanding RSU as of January 2, 2010	83,330	$ 8.74
Granted	73,232	$ 10.70
Released	(73,255)	$ 9.95
Cancelled		
Outstanding RSU as of January 1, 2011	83,307	$ 9.98

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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 for employees employed for less than one year vest one-third (1/3rd) of the shares subject to the option on the first anniversary of the grant date, and vest one thirty sixth (1/36th) 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 (1/36th) 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.

The aggregate intrinsic value in the preceding table represents the total pretax intrinsic value, based on the Company s closing stock price of $12.83 as of January 1, 2011, 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 2010, 2009 and 2008 was $6.2 million, $2.2 million, and $0.1 million, respectively. The fair value of options vested during 2010, 2009 and 2008 was $2.8 million, $3.4 million and $6.3 million, respectively.

The following table summarizes significant ranges of outstanding and exercisable options as of January 1, 2011.

	Options Outstanding			Options Exercisable	
Exercise Prices	Number Outstanding	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
$0.49 $0.49	757	0.27	$ 0.49	757	$ 0.49
$0.93 $0.93	390,990	4.92	$ 0.93	199,153	$ 0.93
$0.98 $2.38	277,816	4.94	$ 1.49	121,520	$ 1.50
$2.78 $6.80	281,119	4.01	$ 5.68	174,205	$ 5.91
$6.83 $7.47	307,975	5.91	$ 7.35	261,744	$ 7.33
$7.49 $8.89	398,392	4.37	$ 8.10	255,410	$ 8.42
$9.07 $10.37	202,318	4.75	$ 9.57	97,010	$ 9.48
$10.46 $10.46	349,109	6.30	$ 10.46	46,500	$ 10.46
$10.57 $11.82	282,968	6.49	$ 11.36	13,354	$ 11.34
$12.03 $20.14	272,242	5.15	$ 14.23	160,052	$ 14.69
$0.49 $20.14	2,763,686	5.20	$ 7.43	1,329,705	$ 7.05

As of January 1, 2011 the total unrecognized compensation costs related to unvested stock options was $5.0 million which is expected to be recognized as an expense over the weighted average remaining amortization period of 2.3 years.

In September 2009, the Company completed an offer to exchange certain employee stock options under Nanometrics Option Exchange Program (the Option Exchange Program). Under the Option Exchange Program, certain previously granted options were exchanged by eligible option holders for new options with a lower exercise price using the following exchange ratios: a) 2 replacement options were provided for every 3 options surrendered with an original exercise price less than or equal to $10.00, and b) 1 replacement option was provided for every 2 options surrendered with an original exercise price greater than $10.00.

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As a result of the Option Exchange Program, a total of 448,945 options to purchase shares of common stock were tendered for exchange, and 237,838 options to purchase shares of common stock were issued. A total of 103 employees participated in the Option Exchange Program. Options granted pursuant to the Option Exchange Program have an exercise price of $7.50 based on the NASDAQ closing price of the Company s common stock on September 3, 2009. For options granted pursuant to the Option Exchange Program, one third vested immediately on the re-grant date, and the remaining two thirds will vest on a monthly basis beginning on the 13th month anniversary through the 36th month anniversary provided that the individual remains employed by the Company during that period. The incremental stock based compensation from the Option Exchange Program was $0.2 million which is being recorded ratably over the requisite service period of three years.

Note 6. Goodwill and Long-Lived Asset Impairment

Goodwill represents the excess of the purchase price paid over the fair value of tangible and identifiable intangible net assets acquired in a business combination. Goodwill is reviewed annually or whenever events or circumstances occur which indicate that goodwill might be impaired. A two-step approach is provided to determining whether and by how much goodwill has been impaired. The first step requires a comparison of the fair value of the Company s reporting unitto its net book value. If the fair value is greater, 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. The process of evaluating the potential impairment of goodwill is highly subjective and requires significant judgment. Prior to performing step one of the goodwill impairment testing process for a reporting unit, if there is reason to believe that other non-goodwill related intangible assets (finite or indefinite lived) and/or long-lived assets may be impaired, these other intangible assets and long-lived assets must first be tested for impairment. Assets require a recoverability test whereby the gross undiscounted cash flows are determined specific to the asset. If the sum of gross undiscounted cash flows for the fixed-life intangible asset or long-lived asset exceeds the carrying value of that asset, the test results in no impairment to the asset. If not, then the fair value of the asset must be determined and the impairment is measured by the differential between the fair value and the carrying value. For non-goodwill related indefinite-lived assets, a fair value determination is made. If the carrying value of the asset exceeds the fair value, then impairment occurs. The carrying values of these assets are impaired as necessary to provide the appropriate carrying value for the goodwill impairment calculation.

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 the 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 January 1, 2011.

Due to the decline in its forecasted revenues for certain product lines relating to specific intangible assets acquired in the 2006 acquisitions of Accent Optical Technologies, Inc. and Solaris, Inc., as well as the weakening conditions in the semiconductor equipment market, the Company determined that the net book value exceeded the undiscounted future cash flows for certain intangible assets. As a result of this analysis, in the second and third quarters of 2008 the Company recorded $13.1 million in impairment charges for intangible assets, of which $3.7 million was developed technology, $7.5 million was customer relationships, $1.6 million was brand names and $0.3 million was trade mark.

The Company also performed impairment tests for other long-lived assets such as property, plant and equipment during 2008. The Company performed an impairment analysis on its long-lived assets associated with its machine shop and plating facility, which was subcontracted in 2007, due to the significant reduction in forecasted future cash flows resulting from the operational limitations of the facility. Due to these reduced forecasts, the Company determined that the net book value exceeded the undiscounted future cash flows. As a result of this analysis, an impairment charge of $1.5 million was recorded in 2008 to reduce those assets to fair value.

In 2008, in estimating the fair value of the Company, the Company made estimates and judgments about future revenues and cash flows for each reporting unit. The Company s estimates of market segment growth, 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 it uses to manage the underlying businesses. The Company also considered its market capitalization on the dates of its impairment tests in determining the fair

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value of the respective businesses. The Company concluded that events had occurred and circumstances had changed during the third quarter of 2008 which might indicate the existence of impairment indicators including a significant decline in the Company s stock price and continued deterioration in the semiconductor equipment market and the related impact on revenue forecasts of each reporting unit. Consistent with the Company s approach in its annual impairment testing, in assessing the fair value of the reporting unit.

At September 27, 2008, the Company determined that the fair value of its reporting units was less than the net book value of the net assets of each reporting unit. The Company determined the implied fair value of the goodwill and compared it to the carrying value of the goodwill. With the assistance of a third party valuation firm, the Company allocated the fair value of the reporting units 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 units 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. The Company s analysis resulted in no implied fair value of goodwill, and therefore, the Company recognized an impairment charge of $54.0 million in the third quarter of 2008, representing a write-off of the entire amount of the Company s previously recorded goodwill including goodwill from the Tevet acquisition which was a part of the impaired reporting units.

During the fiscal year 2010, the Company recorded $0.5 million of impairment related to certain software implementation projects that were abandoned, and in the fiscal year 2009, the Company recorded $1.9 million impairment to its manufacturing facility in South Korea.

Note 7. Sale of 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 sheet as the criteria for sale treatment had been met. After a transfer of financial assets, an entity stops recognizing the financial assets when the 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 1.325% to 1.675% based on the anticipated length of time between the date the sale is consummated and the expected collection date of the receivables sold. In 2010, 2009 and 2008 there were no material gains or losses on the sale of such receivables. In 2010 and 2009, the Company sold $7.6 million and $6.5 million, respectively, of receivables under the terms of the agreement. There were no amounts due from the acquiring party financial institution at January 1, 2011 and January 2, 2010.

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Note 8. Inventories

Inventories consist of the following (in thousands):

	At	
	January 1, 2011	January 2, 2010
Raw materials and sub-assemblies	$ 22,352	$ 19,006
Work in process	10,295	4,286
Finished goods	10,521	8,180
Total inventories	$ 43,168	$ 31,472

Note 9. Property, Plant and Equipment

Property, plant and equipment consist of the following (in thousands):

	At	
	January 1, 2011	January 2, 2010
Land	$ 15,570	$ 15,583
Building and improvements	18,829	18,575
Machinery and equipment	11,432	14,424
Furniture and fixtures	2,161	2,295
Capital in progress	2,669	1,850
	50,661	52,727
Accumulated depreciation and amortization	(15,475)	(16,362)
Total property, plant and equipment, net	$ 35,186	$ 36,365

Depreciation expense was $4.4 million, $4.6 million and $4.9 million for 2010, 2009 and 2008, respectively. The amounts associated with capital in progress for 2010 and 2009 of $2.7 million and $1.9 million, respectively, were related to machinery and equipment projects.

Note 10. Intangible Assets

On June 17, 2009, Nanometrics announced that it had purchased inventory and certain other assets of Zygo Corporation and that the two companies have entered into a supply agreement. As a result, the Company recorded $1.4 million of developed technology and $0.3 million of customer relationships, during second quarter period of 2009. The Company will amortize the developed technology on a straight line basis over a period of ten years and the customer relationships on an accelerated basis over a period of two years from the date of acquisition.

Intangible assets with an indefinite life are evaluated annually for impairment or whenever events or circumstances occur which indicate that those assets might be impaired. As a result of the Company s acquisition of Soluris Inc. during 2006, the Company acquired a trademark with a value of $0.4 million with an indefinite life. During 2008, the Company determined the trademark no longer had an indefinite life, a remaining life of five years was assigned, and the Company began amortizing the asset. Also, during 2008, the Company added $1.5 million of finite-lived intangible assets consisting of developed technology of $1.3 million and backlog of $0.2 million through its acquisition of Tevet.

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Finite-lived intangible assets are recorded at cost, less accumulated amortization. Finite-lived intangible assets as of January 2, 2010 and December 27, 2008 consist of the following (in thousands):

	Adjusted basis as of January 2, 2010	Additions during 2010 at cost	Adjusted basis as of January 1, 2011	Accumulated amortization as of January 1, 2011	Net carrying amount as of January 1, 2011
Developed technology	$ 8,681	$	$ 8,681	$ (4,794)	$ 3,887
Customer relationships	8,521		8,521	(7,469)	1,052
Brand names	1,927		1,927	(1,376)	551
Patented technology	1,790	462	2,252	(1,790)	462
Trademark	80		80	(60)	20
Total	$ 20,999	$ 462	$ 21,461	$ (15,489)	$ 5,972

	Original amount	Adjusted basis as of December 27, 2008	Additions during 2009 at cost	Adjusted basis as of January 2, 2010	Accumulated amortization as of January 2, 2010	Net carrying amount as of January 2, 2010
Developed technology	$ 9,800	$ 7,319	$ 1,362	$ 8,681	$ (3,934)	$ 4,747
Customer relationships	15,700	8,183	338	8,521	(6,924)	1,597
Brand names	3,600	1,927		1,927	(1,232)	695
Patented technology	1,790	1,790		1,790	(1,790)	
Trademark	400	80		80	(52)	28
Total	$ 31,290	$ 19,299	$ 1,700	$ 20,999	$ (13,932)	$ 7,067

The amortization of finite-lived intangibles is computed using the straight-line method except for customer relationships which is computed using an accelerated method. Estimated lives of finite-lived intangibles range from five to ten years. Total amortization expense was $1.5 million, $1.5 million and $3.5 million for fiscal 2010, 2009 and 2008, respectively.

The estimated future amortization expense as of January 1, 2011 is as follows (in thousands):

Fiscal Years	Amounts
2011	$ 1,426
2012	1,249
2013	1,091
2014	732
2015	660
Thereafter	814
Total amortization	$ 5,972

Note 11. Other Current Liabilities

Other current liabilities consist of the following (in thousands):

	At	
	January 1, 2011	January 2, 2010
Accrued warranty	$ 3,129	$ 1,200
Accrued professional services	722	1,021
Customer deposits	397	1,601
Fair value of deferred payments to Zygo Corporation related to acquisition	750	3,655
Other	2,295	1,475
Total other current liabilities	$ 7,293	$ 8,952

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A reconciliation of the changes to the Company s warranty accrual for fiscal years 2010 and 2009 is as follows (in thousands):

	Years Ended	
	January 1, 2011	January 2, 2010
Balance as of beginning of period	$ 1,200	$ 2,075
Accruals for warranties issued during the period	5,008	1,429
Aggregate changes in liabilities relating to existing warranties	(238)	10
Settlements during the period	(2,841)	(2,314)
Balance as of end of period	$ 3,129	$ 1,200

Note 12. Line of Credit and Debt Obligations

Debt obligations consist of the following (in thousands):

	January 1, 2011	January 2, 2010
Line of Credit		
Balance on line of credit	$	$
Debt Obligations		
Milpitas building mortgage	10,039	13,082
Total debt obligations	10,039	13,082
Current portion of debt obligations	(572)	(343)
Long-term debt obligations	$ 9,467	$ 12,739

In February 2007, the Company entered into a two-year agreement for a revolving line of credit facility in a maximum principal amount of $15.0 million. On April 30, 2009, Nanometrics re-negotiated its revolving line of credit facility to extend the maturity date of the facility by an additional two years, to April 30, 2011. On June 15, 2009, the Company amended the financial covenants governing the credit facility to reduce the net tangible net worth requirements, effective as of June 27, 2009. On April 13, 2010, the Company amended the revolving line of credit facility to (i) increase the maximum principal amount available there under from $15.0 million to $20.0 million, (ii) extend the maturity date of such facility by one year to April 30, 2012, and (iii) decrease the unused revolving line commitment fee from 0.25% per annum to 0.1875% per annum.

The instrument governing the facility includes certain financial covenants regarding net 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 5.75% per annum. The maximum borrowing allowed on the line of credit is $20.0 million. Borrowing is limited to the lesser of (a) $7.5 million plus the borrowing base or (b) $20.0 million. As of January 1, 2011, the Company was not in breach of any restrictive covenants in connection with its line of credit and debt obligations. There are no outstanding amounts drawn on this facility as of January 1, 2011. Although the Company has no current plans to request advances under this credit facility, it may use the proceeds of any future borrowing for general corporate purposes, future acquisitions or expansion of the Company s business.

In July 2008, the Company entered into a mortgage agreement with General Electric Commercial Finance pursuant to which it borrowed $13.5 million. The mortgage initially bears interest at the rate of 7.18% per annum, which rate will be reset in August 2013 to 3.03% over the then weekly average yield of five-year U.S. Dollar Interest Rate Swaps as published by the Federal Reserve. Monthly principal and interest payments are based on a twenty year amortization for the first sixty months and fifteen year amortization thereafter. The remaining principal balance of the mortgage and any accrued but unpaid interest will be due on August 1, 2018. The mortgage is secured, in part, by a lien on and security interest in the building and land comprised of the Company s principal offices in Milpitas, California.

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According to the terms of the loan agreement, the Company can make pre-payments of up to 20% of the outstanding principal balance without incurring any penalty. During the year 2010, in addition to the monthly principal and interest payments due under the agreement, the Company made a $2.6 million pre-payment towards the principal amount of the loan.

At January 1, 2011, future annual maturities of all debt obligations were as follows (in thousands):

	Amounts
2011	$ 1,283
2012	1,283
2013	1,087
2014	811
2015	811
Thereafter	8,430
Total obligations	13,705
(less) Interest	(3,666)
Total loan amount	$ 10,039

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Note 13. Commitments and Contingencies

The Company leases facilities and certain equipment under non-cancellable operating leases. Rent expense, which is recorded on a straight-line basis over the term of the respective lease, for 2010, 2009 and 2008, was approximately $1.4 million, $1.4 million and $1.4 million, respectively. Future minimum lease payments under its operating leases are as follows (in thousands):

	Operating Leases
2011	$ 1,537
2012	1,134
2013	516
2014	384
2015	236
Thereafter	431
Total	$ 4,238

In August 2005, KLA-Tencor Corporation (KLA), filed a complaint against the Company in the United States District Court for the Northern District of California. The complaint alleges that certain of the Company s products infringe two of KLA s patents. On January 30, 2006, KLA added a third patent to its complaint. The complaint seeks a preliminary and permanent injunction against the sale of these products as well as the recovery of monetary damages and attorneys fees. As part of its defense, the Company has filed requests for re-examinations of the allegedly infringed KLA patents with the U.S. Patent & Trademark Office (PTO). That is, the Company has requested that the PTO review the KLA patents to determine whether or not the patents should remain enforceable as written.

In March 2006, the Court stayed the patent litigation case until the re-examinations are completed. On November 4, 2008, the PTO issued an Ex Parte Reexamination Certificate (indicating completion of the reexamination process) on one of the three patents-in-suit. On December 8, 2009, the PTO issued an Ex Parte Reexamination Certificate for another of the KLA patents-in-suit. On September 21, 2009, while the reexamination of the third patent-in-suit was still pending, the Company filed a second request for re-examination relating to the third patent. On March 30, 2010, the PTO issued an Ex Parte Reexamination Certificate as to the first reexamination of the third patent. The second reexamination of the third patent remains pending, and the litigation remains stayed. In all four of the reexamination proceedings, the PTO has issued Office Actions rejecting numerous claims of KLA s patents and KLA has amended the claims in response. The Company believes that it has meritorious defenses to the claims and plans to vigorously defend these lawsuits.

Note 14. 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.

During the fiscal year 2010, the Company repurchased and retired 161,492 shares of its common stock for a total consideration of $2.1 million, including 96,492 shared that were repurchased for $1.3 million and retired under a plan approved by its Board of Directors in the year 2007, and repurchased and retired 65,000 shares for $0.8 million under the 2010 plan approved by its Board of Directors.

In December 2009, the Company completed a public offering of its common stock resulting in the issuance of 2,307,152 shares at net proceeds of $23.3 million.

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Stock Option Plans

The Nanometrics option plans are as follows:

Plan Name	Participants	Shares Authorized
2005 Equity Incentive Plan	Employees, consultants and directors	2,692,594
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
1991 Stock Option Plan	Employees and consultants	3,000,000
Accent Optical Technologies, Inc. Stock Incentive Plan	Employees and consultants	205,003

See Note 5 above for information on option activity in 2010.

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 limitation. At the end of the fiscal year ended January 1, 2011 Nanometrics had 0.9 million shares remaining for issuance under the ESPP. Shares issued under the ESPP were 56,326 shares, 352,356 shares, and 267,649 shares in 2010, 2009 and 2008 at a weighted average price of $8.88, $1.71 and $2.26, respectively. Of the ESPP purchases, 69,515 shares will be issued subsequent to end of fiscal year 2010.

Note 15. Restructuring Charge

In the first and second quarters of 2009, the Company reduced the global workforce by 51 and 25 employees, respectively, and recorded a restructuring charge of $0.7 million and $0.4 million in each respective quarter. Twelve (12) of the employees terminated in the second quarter of 2009 were in connection with the South Korea manufacturing facility closure.

	Severance and Other Benefits	Total
Reserve balance at December 27, 2008	$ 80	$ 80
Restructuring charges during 2009	1,134	1,134
Cash paid	(1,214)	(1,214)
Reserve balance at January 2, 2010	$	$

During the first and third quarters of 2008, the Company reduced its global work force by approximately 30 and 34 employees, respectively. This reduction affected employees in each of the Company s locations worldwide and was aimed at reducing its operating expenses.

	Severance and Other Benefits	Other Charges	Total
Reserve balance at December 29, 2007	$	$	$
Restructuring charges during 2008	1,441	84	1,525
Cash paid	(1,361)	(84)	(1,445)
Reserve balance at December 27, 2008	$ 80	$	$ 80

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Note 16. Defined Benefit Pension Plan

Nanometrics sponsors a statutory defined benefit pension plan (the Benefit Plan) in Taiwan for its local employees. The funded status of the Benefit Plan was as follows for the fiscal years ended January 1, 2011, January 2, 2010 and December 27, 2008 (in thousands):

Change in fair value of plan assets

	2010	2009	2008
Fair value of plan assets at beginning of year	$ 95	$ 78	$ 55
Actual return on plan assets	9	4	2
Employer contributions	13	13	21
Fair value of plan assets at end of year	$ 117	$ 95	$ 78

Change in projected benefit obligations

	2010	2009	2008
Projected benefit obligation at the beginning of the year	$ 297	$ 560	$ 808
Interest cost	7	14	18
Actuarial gain/loss	94	(88)	(15)
Effects due to curtailment		(189)	(251)
Benefit obligation	$ 398	$ 297	$ 560
Funding deficiency	$ 281	$ 202	$ 482

The funding deficiency is reflected in other long-term liabilities on the balance sheet at January 1, 2011 and January 2, 2010, respectively. The accumulated benefit obligation as of January 1, 2011, January 2, 2010 and December 27, 2008 was $0.3 million, $0.2 million and $0.4 million, respectively.

The Company s Pension Benefit Plan reflects a net loss of $0.1 million, a net gain of $0.1 million and a net gain of $0.2 million for the years ended January 1, 2011, January 2, 2010 and December 27, 2008, respectively. These have been included under other comprehensive income.

Pension Benefit Expense

Nanometrics net pension benefit cost (gain) were as follows for the years ended January 1, 2011, January 2, 2010, and December 27, 2008 (in thousands):

	2010	2009	2008
Interest cost	$ 7	$ 14	$ 18
Amortization of transition obligation	11	17	18
Amortization of net loss	(4)	(2)	(2)
Expected return on plan assets	(2)	(2)	(2)
Curtailment or settlement (gain) loss		(153)	(146)
Net pension benefit cost (gain) for the year	$ 12	$ (126)	$ (114)

The weighted average assumptions used to calculate net benefit cost and obligations were as follows for the fiscal years ended January 1, 2011, January 2, 2010 and December 27, 2008 were:

	2010	2009	2008
Average increase in compensation levels	1.5%	1.5%	2.0%
Discount rate	2.0%	2.3%	2.5%
Expected long-term returns on the assets	2.0%	2.0%	2.5%

As required by the law, the Company s plan assets are deposited in Trust of Bank of Taiwan in the form of cash, where Trust of Bank of Taiwan is the assigned trustee for statutory retirement benefits. The expected long-term rate of return of assets for the plan reflects the expected returns for the bank accounts held with the government of Taiwan in which the plan invests.

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Note 17. Income Taxes

Income Tax Assets and Liabilities The Company accounts for income taxes whereby 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 must be reduced by a valuation allowance to the extent that management concludes that it is more likely than not that a portion of the deferred tax asset will not 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 (benefit) for income taxes consists of the following (in thousands):

	Years Ended		
	January 1, 2011	January 2, 2010	December 27, 2008
Domestic	$ 37,640	$ (14,111)	$ (69,860)
Foreign	3,049	(2,780)	(12,430)
Income (loss) before income taxes	$ 40,689	$ (16,891)	$ (82,290)

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

	Years Ended		
	January 1, 2011	January 2, 2010	December 27, 2008
Current:			
Federal	$ 2,031	$ (75)	$ (127)
State	659	6	72
Foreign	55	(111)	1,238
	2,745	(180)	1,183
Deferred:			
Federal	(14,266)		(238)
State	(459)		
Foreign	(3,279)	(406)	(509)
	(18,004)	(406)	(747)
Provision (benefit) for income taxes	$ (15,259)	$ (586)	$ 436

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

	At	
	January 1, 2011	**January 2, 2010**
Deferred tax assets/(liabilities) - current:		
Reserves and accruals not currently deductible	$ 9,625	$ 7,079
Deferred revenue	338	127
Other	592	554
Total net deferred tax assets/(liabilities) - current	10,555	7,760
Valuation allowance	(911)	(7,515)
Total net deferred tax assets/(liabilities) current	$ 9,644	$ 245
Deferred tax assets (liabilities) noncurrent:		
Reserves and accruals	$	$ 188
Goodwill	825	354
Shared based compensation	2,411	1,902
Tax credit carry-forwards	2,819	8,180
Net operating losses	7,220	19,209
Depreciation and amortization	2,477	2,392
Other	(405)	17
Total net deferred tax assets (liabilities) - noncurrent	15,347	32,242
Valuation allowance	(6,091)	(31,630)
Total net deferred tax assets/(liabilities) - noncurrent	$ 9,256	$ 612

As of January 1, 2011, the Company had net operating loss carryforwards of $25.7 million in California and $23.8 million in foreign countries, which begin to expire in 2013 and 2012, respectively. A total of $1.6 million of the California net operating loss carryforward and $0.7 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 January 1, 2011, the Company realized excess benefits as a result of stock option exercises in the amount of $0.8 million, and was appropriately recorded to additional paid-in-capital.

As of January 1, 2011, the Company had available for carryforward research and experimental tax credits, minimum tax credits and foreign tax credits for federal income tax purposes of $3.3 million, $0.3 million, and $0.4 million, respectively. Federal credit carryforwards will begin to expire in 2020. A total of $1.1 million and $0.4 million of the federal research and experimental tax credits and foreign tax credits, respectively, are related to excess tax benefits as a result of stock option exercises and therefore will be recorded to additional paid-in-captial in the period that they become realized.

As of January 1, 2011, the Company had available for carryforward state research and experimental tax credits and other credits of $2 million. State research and experimental tax credits carryforward indefinitely. A total of $0.2 million of the state research and experimental tax credits are related to excess tax benefits as a result of stock option exercises and therefore will be recorded to additional paid-in-captial in the period that they become realized.

During the years ended January 1, 2011 and January 2, 2010 the valuation allowance decreased by $32.1 million and increased by $4.2 million, respectively. Due to improvements in the Company s operations and industry s forecast and after considering all positive and negative evidence, the Company now believes it is more likely than not that the Company will utilize certain deferred tax assets. As a result, the Company released $18.2 million of its income tax valuation allowance. The valuation allowance decreased in 2010 due to the release of valuation allowance against federal, state, and foreign deferred assets predominately in the U.S. and Japan as the Company expects to realize its net operating loss and tax credits carryforwards.

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Changes in tax laws and tax rates could affect our recorded deferred tax assets and liabilities in the future. Our tax liabilities involve dealing with uncertainties in the application of complex tax laws and regulations in a multitude of jurisdictions across our 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 before income taxes and the provision (benefit) for income taxes consist of the following (in thousands):

	Years Ended		
	January 1, 2011	**January 2, 2010**	**December 27, 2008**
Income taxes computed at U.S. statutory rate	$ 14,241	$ (5,912)	$ (28,804)
State income taxes	2,080	6	72
Foreign tax rate differential	(3,512)	(229)	4,647
Change in valuation allowance	(28,825)	4,237	4,683
Tax credits	(952)	927	(83)
Goodwill impairment			18,294
ASC 740-10 Liabilities	1,793	(207)	457
Other, net	(84)	592	1,170
Provision (benefit) for income taxes	$ (15,259)	$ (586)	$ 436

Undistributed earnings that were not previously taxed amount to $0.3 million as of January 1, 2011.

In July 2006, the FASB issued FASB Interpretation No. 48, Accounting for Uncertainty in Income Taxes an interpretation of FASB Statement No. 109 which has subsequently been codified in ASC 740-10. ASC 740-10 prescribes a comprehensive framework for the financial statement recognition, measurement, presentation, and disclosure of uncertain income tax positions that the Company has taken or anticipates taking on a tax return, and includes guidance on de-recognition, classification, interest and penalties, accounting in interim periods, and transition rules. The Company adopted ASC 740-10 effective January 1, 2007.

We recognize tax liabilities for uncertain tax positions and adjust these liabilities when our 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 our 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 Company does not expect a material change in its unrecognized tax benefits within the next 12 months.

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.

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

	Rollforward Table (at Gross): As of		
	January 1, 2011	January 2, 2010	December 27, 2008
Unrecognized tax benefits beginning of the period	$ 1,032	$ 1,374	$ 343
Foreign Currency Movements	(15)		
Gross increases tax positions in prior period	1,971	15	835
Gross decreases tax positions in prior period		(345)	
Gross increases current-period tax positions	530	81	296
Settlements			
Lapse of statute of limitations	(148)	(93)	(100)
Unrecognized tax benefits end of the period	$ 3,370	$ 1,032	$ 1,374

The unrecognized tax benefits at January 1, 2011 will impact the effective tax rate if the company elected to recognize these tax benefits. The Company accrues interest and penalties related to unrecognized tax benefits in its provision for income taxes. The total amount of penalties and interest is not material as of January 1, 2011, January 2, 2010 and December 27, 2008. 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 US and various states including California, and foreign jurisdictions including Korea, Japan and United Kingdom. Due to tax attribute carry-forwards, the Company is subject to examination for tax years 2004 forward for U.S. tax purposes. The Company was also subject to examination in various states for tax years 2004 forward. The Company is subject to examination for tax years 2004 forward for various foreign jurisdictions.

Note 18. Major Customers

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

	Years Ended		
	January 1, 2011	January 2, 2010	December 27, 2008
Samsung Electronics Co. Ltd.	23.0%	33.4%	16.1%
Intel Corporation	16.4%	10.4%	***
Hynix Semiconductor, Inc.	12.8%	***	***
Toshiba Semiconductor	***	***	11.0%

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

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

	At	
	January 1, 2011	January 2, 2010
Samsung Electronics Co. Ltd.	19.2%	30.5%
Intel Corporation	***	16.1%
Hynix Semiconductor, Inc.	***	12.7%

*** The customer accounted for less than 10% of accounts receivable during the period.

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Note 19. Product, Segment and Geographic Information

The Company has one operating segment, which is the sale, design, manufacture, marketing and support of thin film, optical critical dimension and overlay dimension metrology 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 January 1, 2011, January 2, 2010 and December 27, 2008, the Company recorded revenue from customers primarily in the United States, Asia and Europe. The following table summarizes total net revenues and long-lived assets (excluding intangible assets) attributed to significant countries (in thousands):

	Years Ended		
	January 1, 2011	January 2, 2010	December 27, 2008
Total net revenues:			
United States	$ 65,099	$ 22,755	$ 30,102
South Korea	54,156	29,992	20,944
Japan	19,776	11,293	28,572
China	17,532	3,157	7,470
Taiwan	15,990	3,615	5,871
Europe	7,119	3,868	5,315
All other	8,393	2,027	3,827
Total net revenues*	$ 188,065	$ 76,707	$ 102,101

* Net revenues are attributed to countries based on the customer s deployment and service locations of systems.

	At	
	January 1, 2011	January 2, 2010
Long-lived tangible assets:		
United States	$ 33,377	$ 34,252
Europe	915	1,450
South Korea	1,229	1,148
Japan	518	819
Taiwan	60	66
China	28	12
All other	294	177
Total long-lived assets	$ 36,421	$ 37,924

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 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		
	January 1, 2011	January 2, 2010	December 27, 2008
Automated Systems	$ 110,955	$ 36,554	$ 40,623

Integrated Systems	17,437	2,767	15,964
Materials Characterization	26,156	9,832	19,009
Total product revenues	$ 154,548	$ 49,153	$ 75,596

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SUPPLEMENTAL FINANCIAL INFORMATION

Selected Quarterly Financial Results (Unaudited)

The following table sets forth selected consolidated quarterly results of operations for the year ended January 1, 2011, January 2, 2010 and December 27, 2008 (in thousands, except per share amounts):

	Quarters Ended			
	Jan. 1, 2011	**Oct. 2, 2010**	**July 3, 2010**	**Apr. 3, 2010**
Total net revenues	$ 46,130	$ 53,935	$ 50,835	$ 37,165
Gross profit	24,303	29,397	28,006	20,547
Income (loss) from operations	8,668	13,818	12,892	5,946
Net income (loss)	26,129	12,327	11,567	5,925
Net income (loss) per share:				
Basic	$ 1.18	$ 0.56	$ 0.53	$ 0.28
Diluted	$ 1.12	$ 0.53	$ 0.51	$ 0.26
Shares used in per share computations:				
Basic	22,235	21,978	21,672	21,537
Diluted	23,323	23,168	22,847	22,655

	Quarters Ended			
	Jan. 2, 2010	**Sept. 26, 2009**	**June 27, 2009**	**March 28, 2009**
Total net revenues	$ 26,319	$ 25,814	$ 14,517	$ 10,057
Gross profit	13,335	13,933	6,007	2,846
Income (loss) from operations	665	1,489	(6,475)	(9,038)
Net income (loss)	(282)	1,571	(6,965)	(10,628)
Net income (loss) per share:				
Basic	$ (0.01)	$ 0.08	$ (0.38)	$ (0.58)
Diluted	$ (0.01)	$ 0.08	$ (0.38)	$ (0.58)
Shares used in per share computations:				
Basic	19,017	18,598	18,526	18,415
Diluted	19,017	19,398	18,526	18,415

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Attached as exhibits, to this Annual Report, are certifications of the Chief Executive Officer (CEO) and the Chief Financial Officer (CFO) required in accordance with Rule 13a-14 of the Securities Exchange Act of 1934, as amended (the Exchange Act). This Controls and Procedures section includes the information concerning the controls evaluation referred to in the certifications and it should be read in conjunction with the certifications for a more complete understanding of the topics presented.

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 CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure. Our management, with participation of our CEO and CFO, has evaluated the effectiveness of the Company s disclosure controls and procedures as of the end of the fiscal year covered by this Annual Report on Form 10-K.

As described below under Report of Management on Internal Control over Financial Reporting , 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 Securities and Exchange Commission 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.

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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 January 1, 2011. In making this assessment, we used the criteria established in the framework on *Internal Control Integrated Framework* 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 January 1, 2011.

The effectiveness of our internal control over financial reporting as of January 1, 2011 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 January 1, 2011, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

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PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item concerning our directors, compliance with Section 16 of the Securities and Exchange Act of 1934, our code of ethics that applies to our principal executive officer, principal financial officer and principal accounting officer and our Audit Committee is incorporated by reference to the information set forth in the sections entitled Proposal One Election of Directors, Section 16(a) Beneficial Ownership Reporting Compliance and Corporate Governance in our Proxy Statement for our 2011 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission not later than 120 days after the end of our fiscal year (the Proxy Statement). Information regarding the Registrant s executive officers is set forth at the end of Part I of this Annual Report on Form 10-K under the caption Executive Officers of the Registrant.

ITEM 11. EXECUTIVE COMPENSATION

Information required by this Item is incorporated by reference to the information set forth under the caption Executive Compensation in the Proxy Statement.

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

Information required by this Item is incorporated by reference to the information set forth under the sections entitled Security Ownership of Beneficial Owners and Management and Equity Compensation Plan Information in the Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

Information required by this Item is incorporated by reference to the information set forth under the caption Certain Relationships and Related Transactions and Corporate Governance in the Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item is incorporated by reference to the section entitled Ratification of Appointment of Independent Registered Public Accounting Firm Accounting Fees in the Proxy Statement.

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PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULE

(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 on Item 8 on page 34 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
(a) II Valuation and Qualifying Accounts as of and for the year ended January 1, 2011	83
(b) II Valuation and Qualifying Accounts as of January 2, 2010 and December 27, 2008 and for the years then ended	83

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 74 of this Annual Report on Form 10-K.

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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: March 11, 2011

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 in the capacities and on the dates indicated.

Signature	Title	Date
/s/ TIMOTHY J. STULTZ	President, Chief Executive Officer and Director	March 11, 2011
Timothy J. Stultz	(Principal Executive Officer)	
/s/ JAMES P. MONIZ	Chief Financial Officer	March 11, 2011
James P. Moniz	(Principal Financial Officer and Principal Accounting Officer)	
/s/ BRUCE C. RHINE	Chairman of the Board of Directors	March 11, 2011
Bruce C. Rhine		
/s/ HOWARD A. BAIN III	Director	March 11, 2011
Howard A. Bain III		
/s/ J. THOMAS BENTLEY	Director	March 11, 2011
J. Thomas Bentley		
/s/ NORMAN COATES	Director	March 11, 2011
Norman Coates		
/s/ WILLIAM G. OLDHAM	Director	March 11, 2011
William G. Oldham		

/s/ STEPHEN J. SMITH	Director	March 11, 2011
Stephen J. Smith		

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EXHIBIT INDEX

Exhibit No.	Description
3.(i)	**Certificate of Incorporation**
3.1(1)	Certificate of Incorporation of the Registrant
3.(ii)	**Bylaws**
3.2(1)	Bylaws of the Registrant
4	**Instruments Defining the Rights of Security Holders, Including Indentures**
4.1(2)	Form of Common Stock Certificate
10	**Material Contracts**
	Management Contracts, Compensatory Plans, Contracts or Arrangements
10.1(3)	Form of Indemnification Agreement between the Registrant and each of its directors and executive officers
10.2(4)	Registrant s 1991 Stock Option Plan, as amended effective May 15, 1997, and form of Stock Option Agreement
10.3(5)	Registrant s 2000 Employee Stock Option Plan and form of Stock Option Agreement
10.4(6)	Registrant s 2000 Director Stock Option Plan and form of Stock Option Agreement
10.5(7)	Registrant s 2002 Non-statutory Stock Option Plan and form of Stock Option Agreement
10.6(8)	Registrant s Amended and Restated 2003 Employee Stock Purchase Plan
10.7(9)	Registrant s Amended and Restated 2003 Employee Stock Purchase Plan form of Subscription Agreement
10.8(8)	Registrant s Amended and Restated 2005 Equity Incentive Plan
10.9(6)	Registrant s Amended and Restated 2005 Equity Incentive Plan forms of Stock Option and Restricted Stock Unit Agreements
10.10(10)	2010 Executive Performance Bonus Plan
10.11(11)	Form of Offer Letter to Timothy J. Stultz
10.12(11)	Form of Executive Severance Agreement between the Registrant and Timothy J. Stultz
10.13(10)	Amended and Restated Executive Severance Agreement between the Registrant and Timothy J. Stultz, dated February 23, 2010
10.14(11)	Form of Relocation Agreement between the Registrant and Timothy J. Stultz
10.15(12)	Form of Executive Severance Agreement between the Registrant and Bruce A. Crawford
10.16(10)	Amended and Restated Executive Severance Agreement between the Registrant and Bruce A. Crawford, dated February 23, 2010
10.17(13)	Form of Offer Letter to James P. Moniz
10.18(13)	Form of Executive Severance Agreement between the Registrant and James P. Moniz
10.19(10)	Amended and Restated Employment Agreement between the Registrant and James P. Moniz, dated February 23, 2010
10.20	Form of Offer Letter to Ronald W. Kisling
10.21	Employment Agreement between Registrant and Ronald W. Kisling, dated February 28, 2011
	All Other Material Contracts
10.22(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.
10.23(13)	Notice of Extension of the Maturity Date of the Loan and Security Agreement, dated as of February 14, 2009

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10.24(14)	First Amendment to the Loan and Security Agreement dated September 14, 2007
10.25(14)	Second Amendment to the Loan and Security Agreement dated May 11, 2009, with an effective date of April 29, 2009
10.26(15)	Third Amendment to the Loan and Security Agreement dated June 15, 2009
10.27(16)	Fourth Amendment to the Loan and Security Agreement dated April 13, 2010
10.28(17)	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
10.29(15)	Asset Transfer Agreement by and between Zygo Corporation and the Registrant, dated June 17, 2009
10.30(15)	Supply Agreement by and between Zygo Corporation and the Registrant dated June 17, 2009
14	**Code of Ethics**
14.1(18)	Registrant s Code of Business Conduct and Ethics
21.1	**Subsidiaries**
21.1	Subsidiaries of the Registrant
23	**Consents of Experts and Counsel**
23.1	Consent of PricewaterhouseCoopers LLP Independent Registered Public Accounting Firm
23.2	Consent of BDO USA, LLP (formerly known as BDO Siedman, LLP), Independent Registered Public Accounting Firm
31	**Rule 13a-14(a)/15d-14(a) Certifications**
31.1(19)	Certification of Timothy J. Stultz, principal executive officer of the Registrant, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2(19)	Certification of James P. Moniz, 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(20)	Certification of Timothy J. Stultz, principal executive officer of the Registrant, and James P. Moniz, principal financial officer and principal accounting officer of the Registrant pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

(1) Incorporated by reference to exhibits filed with the Registrant s Current Report on Form 8-K filed October 5, 2006.
(2) Incorporated by reference to Exhibit 4.1 filed with the Registrant s Quarterly Report on Form 10-Q filed November 9, 2006.
(3) Incorporated by reference to Exhibit 10.1 filed with the Registrant s Annual Report on Form 10-K filed March 15, 2007.
(4) Incorporated by reference to Exhibit 4.1 filed with the Registrant s Registration Statement on Form S-8 (File No. 333-33583) filed on August 14, 1997.
(5) 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.
(6) Incorporated by reference to exhibits filed with the Registrant s Annual Report on Form 10-K filed March 13, 2008.
(7) Incorporated by reference to exhibits filed with the Registrant s Quarterly Report on Form 10-Q filed May 10, 2007.
(8) Incorporated by reference to the appendices filed with the Registrant s definitive proxy statement on Schedule 14A filed April 21, 2009.
(9) 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.

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(10) Incorporated by reference to exhibits filed with the Registrant s Annual Report on Form 10-K filed on March 26, 2010.
(11) Incorporated by reference to exhibits filed with the Registrant s Current Report on Form 8-K filed August 8, 2007.
(12) Incorporated by reference to Exhibit 10.1 filed with the Registrant s Quarterly Report on Form 10-Q filed November 8, 2007.
(13) Incorporated by reference to exhibits filed with the Registrant s Annual Report on Form 10-K filed on March 27, 2009.
(14) Incorporated by reference to exhibits filed with the Registrant s Quarterly Report on Form 10-Q filed May 12, 2009.
(15) Incorporated by reference to exhibits filed with the Registrant s Quarterly Report on Form 10-Q filed August 11, 2009.
(16) Incorporated by reference to Exhibit 99.1 filed with the Registrant s Current Report on Form 8-K filed April 13, 2010.
(17) Incorporated by reference to Exhibit 10.2 filed with the Registrant s Quarterly Report on Form 10-Q filed November 6, 2008.
(18) Incorporated by reference to Exhibit 14 filed with the Registrant s Annual Report on Form 10-K filed April 1, 2004.
(19) Filed herewith.
(20) Furnished herewith.

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SCHEDULE II

NANOMETRICS INCORPORATED

(a) 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
January 1, 2011	$ 241	$ (131)	$ 47	$ 63

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
January 1, 2011	$ 39,145	$ (32,143)	$	$ 7,002

(b) 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
January 2, 2010	$ 309	$ 381	$ 449	$ 241
December 27, 2008	$ 323		$ 14	$ 309

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
January 2, 2010	$ 34,902	$ 4,243	$	$ 39,145
December 27, 2008	$ 40,282	(5,380)	$	$ 34,902

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