

PHOTRONICS INC  
Form 10-Q  
June 03, 2016

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

FORM 10-Q

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

For the quarterly period ended May 1, 2016

OR

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

For the transition period from \_\_\_ to \_\_\_

Commission file number 0-15451

PHOTRONICS, INC.  
(Exact name of registrant as specified in its charter)

Connecticut 06-0854886  
(State or other jurisdiction of incorporation or organization) (IRS Employer Identification No.)

15 Secor Road, Brookfield, Connecticut 06804  
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code (203) 775-9000

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter periods that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes No

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

Large Accelerated Filer Accelerated Filer Non-Accelerated Filer Smaller Reporting Company

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Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes    No

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Class	Outstanding at May 27, 2016
Common Stock, \$0.01 par value	68,139,720 Shares

## Forward-Looking Statements

The Private Securities Litigation Reform Act of 1995 provides a "safe harbor" for forward-looking statements made by or on behalf of Photronics, Inc. ("Photronics" or the "Company" or "we"). These statements are based on management's beliefs, as well as assumptions made by, and information currently available to, management. Forward-looking statements may be identified by words like "expect," "anticipate," "believe," "plan," "project," "could," "estimate," "intend," "may," "will" and similar expressions, or the negative of such terms, or other comparable terminology. All forward-looking statements involve risks and uncertainties that are difficult to predict. In particular, any statement contained in this quarterly report on Form 10-Q or in other documents filed with the Securities and Exchange Commission, in press releases or in the Company's communications and discussions with investors and analysts in the normal course of business through meetings, phone calls, or conference calls regarding, among other things, the consummation and benefits of transactions and acquisitions, expectations with respect to future sales, financial performance, operating efficiencies, or product expansion, are subject to known and unknown risks, uncertainties, and contingencies, many of which are beyond the control of the Company. Various factors may cause actual results, performance, or achievements to differ materially from anticipated results, performance, or achievements expressed or implied by forward-looking statements. Factors that might affect forward-looking statements include, but are not limited to, overall economic and business conditions; economic and political conditions in international markets; the demand for the Company's products; competitive factors in the industries and geographic markets in which the Company competes; federal, state and international tax requirements (including tax rate changes, new tax laws and revised tax law interpretations); interest rate and other capital market conditions, including changes in the market price of the Company's securities; foreign currency exchange rate fluctuations; changes in technology; the timing, impact, and other uncertainties relating to transactions and acquisitions, divestitures and joint ventures as well as decisions the Company may make in the future regarding the Company's business, capital and organizational structure and other matters; the seasonal and cyclical nature of the semiconductor and flat panel display industries; management changes; damage or destruction to the Company's facilities, or the facilities of its customers or suppliers, by natural disasters, labor strikes, political unrest, or terrorist activity; the ability of the Company to (i) place new equipment in service on a timely basis; (ii) obtain additional financing; (iii) achieve anticipated synergies and cost savings; (iv) fully utilize its tools; (v) achieve desired yields, pricing, product mix, and market acceptance of its products and (vi) obtain necessary export licenses. Any forward-looking statements should be considered in light of these factors. Accordingly, there is no assurance that the Company's expectations will be realized. The Company does not assume responsibility for the accuracy and completeness of the forward-looking statements and does not assume an obligation to provide revisions to any forward-looking statements, except as otherwise required by securities and other applicable laws.

PHOTRONICS, INC.  
AND SUBSIDIARIES

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## PART I. FINANCIAL INFORMATION

## Item 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

## PHOTRONICS, INC. AND SUBSIDIARIES

## Condensed Consolidated Balance Sheets

(in thousands, except per share amounts)

(unaudited)

	May 1, 2016	November 1, 2015
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 193,978	\$ 205,867
Accounts receivable, net of allowance of \$3,296 in 2016 and \$3,301 in 2015	104,330	110,056
Inventories	24,510	24,157
Other current assets	24,409	24,034
<b>Total current assets</b>	<b>347,227</b>	<b>364,114</b>
Property, plant and equipment, net	523,669	547,284
Investment in joint venture	92,911	93,021
Intangible assets, net	22,071	24,616
Deferred income taxes	11,870	11,908
Other assets	4,160	4,612
<b>Total assets</b>	<b>\$ 1,001,908</b>	<b>\$ 1,045,555</b>
<b>LIABILITIES AND EQUITY</b>		
Current liabilities:		
Current portion of long-term borrowings	\$ 5,806	\$ 65,495
Accounts payable	65,697	87,983
Accrued liabilities	42,614	39,214
<b>Total current liabilities</b>	<b>114,117</b>	<b>192,692</b>
Long-term borrowings	64,419	67,120
Other liabilities	20,600	23,677
<b>Total liabilities</b>	<b>199,136</b>	<b>283,489</b>
Commitments and contingencies		
Equity:		
Preferred stock, \$0.01 par value, 2,000 shares authorized, none issued and outstanding	-	-
Common stock, \$0.01 par value, 150,000 shares authorized, 67,943 shares issued and outstanding at May 1, 2016 and 66,602 shares issued and outstanding at November 1,	679	666

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2015		
Additional paid-in capital	538,535	526,402
Retained earnings	162,916	130,060
Accumulated other comprehensive loss	(8,846 )	(10,573 )
Total Photronics, Inc. shareholders' equity	693,284	646,555
Noncontrolling interests	109,488	115,511
Total equity	802,772	762,066
Total liabilities and equity	\$1,001,908	\$ 1,045,555

See accompanying notes to condensed consolidated financial statements.

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PHOTRONICS, INC. AND SUBSIDIARIES  
Condensed Consolidated Statements of Income  
(in thousands, except per share amounts)  
(unaudited)

	Three Months Ended		Six Months Ended	
	May 1, 2016	May 3, 2015	May 1, 2016	May 3, 2015
Net sales	\$ 122,923	\$ 127,309	\$ 252,879	\$ 250,814
Costs and expenses:				
Cost of sales	(91,636 )	(94,214 )	(186,156 )	(189,535 )
Selling, general and administrative	(11,024 )	(12,421 )	(23,222 )	(24,365 )
Research and development	(5,447 )	(5,809 )	(11,148 )	(10,490 )
Operating income	14,816	14,865	32,353	26,424
Other income (expense):				
Gain on sale of investment	-	-	8,785	-
Interest expense	(964 )	(1,233 )	(2,138 )	(2,603 )
Interest and other income (expense), net	(2,025 )	(224 )	27	(137 )
Income before income tax benefit (provision)	11,827	13,408	39,027	23,684
Income tax benefit (provision)	2,326	(1,252 )	(1,374 )	(4,386 )
Net income	14,153	12,156	37,653	19,298
Net income attributable to noncontrolling interests	(2,299 )	(2,096 )	(4,797 )	(5,401 )
Net income attributable to Photronics, Inc. shareholders	\$ 11,854	\$ 10,060	\$ 32,856	\$ 13,897
Earnings per share:				
Basic	\$0.18	\$0.15	\$0.49	\$0.21
Diluted	\$0.16	\$0.14	\$0.44	\$0.21
Weighted-average number of common shares outstanding:				
Basic	67,372	66,230	67,090	66,148
Diluted	77,516	78,228	78,326	72,624

See accompanying notes to condensed consolidated financial statements.





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## PHOTRONICS, INC. AND SUBSIDIARIES

## Condensed Consolidated Statements of Comprehensive Income

(in thousands)

(unaudited)

	Three Months Ended		Six Months Ended	
	May 1, 2016	May 3, 2015	May 1, 2016	May 3, 2015
Net income	\$ 14,153	\$ 12,156	\$ 37,653	\$ 19,298
Other comprehensive income (loss), net of tax of \$0:				
Foreign currency translation adjustments	23,811	12,507	2,735	(7,568 )
Amortization of cash flow hedge	32	32	64	64
Net current period other comprehensive income (loss)	23,843	12,539	2,799	(7,504 )
Comprehensive income	37,996	24,695	40,452	11,794
Less: comprehensive income attributable to noncontrolling interests	6,983	5,392	5,870	4,833
Comprehensive income attributable to Photronics, Inc. shareholders	\$ 31,013	\$ 19,303	\$ 34,582	\$ 6,961

See accompanying notes to condensed consolidated financial statements.

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PHOTRONICS, INC. AND SUBSIDIARIES  
Condensed Consolidated Statements of Cash Flows  
(in thousands)  
(unaudited)

	Six Months Ended	
	May 1, 2016	May 3, 2015
Cash flows from operating activities:		
Net income	\$37,653	\$19,298
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	40,832	40,318
Gain on sale of investment	(8,785 )	-
Changes in assets and liabilities:		
Accounts receivable	6,499	(4,244 )
Inventories	(256 )	(985 )
Other current assets	3,095	7
Accounts payable, accrued liabilities and other	(13,899 )	3,513
Net cash provided by operating activities	65,139	57,907
Cash flows from investing activities:		
Purchases of property, plant and equipment	(34,928 )	(67,935 )
Proceeds from sale of investment	8,785	-
Other	193	(218 )
Net cash used in investing activities	(25,950 )	(68,153 )
Cash flows from financing activities:		
Repayments of long-term borrowings	(54,951 )	(4,751 )
Proceeds from share-based arrangements	3,046	1,195
Other	(19 )	(76 )
Net cash used in financing activities	(51,924 )	(3,632 )
Effect of exchange rate changes on cash and cash equivalents	846	(3,001 )
Net decrease in cash and cash equivalents	(11,889 )	(16,879 )
Cash and cash equivalents at beginning of period	205,867	192,929
Cash and cash equivalents at end of period	\$193,978	\$176,050
Supplemental disclosure of noncash information:		
Accrual for property, plant and equipment purchased during the period	\$3,297	\$49,082
Subsidiary dividend payable	11,901	-

See accompanying notes to condensed consolidated financial statements.



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## PHOTRONICS, INC. AND SUBSIDIARIES

## Notes to Condensed Consolidated Financial Statements

Three Months and Six Months Ended May 1, 2016 and May 3, 2015

(unaudited)

(in thousands, except share amounts)

## NOTE 1 - BASIS OF FINANCIAL STATEMENT PRESENTATION

Photronics, Inc. and its subsidiaries ("Photronics" or "the Company") is one of the world's leading manufacturers of photomasks, which are high precision photographic quartz plates containing microscopic images of electronic circuits. Photomasks are a key element in the manufacture of semiconductors and flat panel displays ("FPDs"), and are used as masters to transfer circuit patterns onto semiconductor wafers and flat panel substrates during the fabrication of integrated circuits ("ICs") and a variety of FPDs and, to a lesser extent, other types of electrical and optical components. The Company currently operates principally from nine manufacturing facilities, two of which are located in Europe, three in Taiwan, one in Korea, and three in the United States.

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by accounting principles generally accepted in the United States of America for annual financial statements. In the opinion of management, adjustments, all of which are of a normal recurring nature, considered necessary for a fair presentation have been included. The Company is typically impacted during its first fiscal quarter by the North American and European holiday periods, as some customers reduce their effective workdays and orders during these periods. Additionally, the Company can be impacted during its first or second quarter by the Asian New Year holiday period, which may also reduce customer orders. Operating results for the interim period are not necessarily indicative of the results that may be expected for the fiscal year ending October 30, 2016. For further information, refer to the consolidated financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended November 1, 2015.

## NOTE 2 - CHANGES IN EQUITY

The following tables set forth the Company's consolidated changes in equity for the three and six month periods ended May 1, 2016 and May 3, 2015:

	Three Months Ended May 1, 2016						
	Photronics, Inc. Shareholders						
	Common Stock	Additional	Retained	Accumulated	Non-	Total	
	Shares	Amount	Paid-in Capital	Earnings	Other Comprehensive Loss	controlling Interests	Equity
Balance at January 31, 2016	67,081	\$ 671	\$ 529,337	\$ 151,062	\$ (28,005	) \$ 114,398	\$ 767,463
Net income	-	-	-	11,854	-	2,299	14,153
Other comprehensive income	-	-	-	-	19,159	4,684	23,843
Sale of common stock through employee stock option and purchase plans	130	1	799	-	-	-	800
Restricted stock awards vesting and expense	15	-	313	-	-	-	313

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Share-based compensation expense	-	-	663	-	-	-	663
Conversion of debt to common stock	717	7	7,431	-	-	-	7,438
Repurchase of common stock of subsidiary	-	-	(8	)	-	-	8
Subsidiary dividend payable	-	-	-	-	-	(11,901	) (11,901)
Balance at May 1, 2016	67,943	\$ 679	\$538,535	\$162,916	\$ (8,846	) \$109,488	\$802,772

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Three Months Ended May 3, 2015 Photronics, Inc. Shareholders							
	Common Stock		Additional	Retained	Accumulated Other Comprehensive	Non-	Total
	Shares	Amount	Paid-in Capital	Earnings	Income	controlling Interests	Equity
Balance at February 1, 2015	66,209	\$ 662	\$ 521,580	\$ 89,272	\$ 5,595	\$ 110,936	\$ 728,045
Net income	-	-	-	10,060	-	2,096	12,156
Other comprehensive income	-	-	-	-	9,243	3,296	12,539
Sale of common stock through employee stock option and purchase plans	73	1	331	-	-	-	332
Restricted stock awards vesting and expense	16	-	260	-	-	-	260
Share-based compensation expense	-	-	702	-	-	(51 )	651
Balance at May 3, 2015	66,298	\$ 663	\$ 522,873	\$ 99,332	\$ 14,838	\$ 116,277	\$ 753,983
Six Months Ended May 1, 2016 Photronics, Inc. Shareholders							
	Common Stock		Additional	Retained	Accumulated Other Comprehensive	Non-	Total
	Shares	Amount	Paid-in Capital	Earnings	Loss	controlling Interests	Equity
Balance at November 1, 2015	66,602	\$ 666	\$ 526,401	\$ 130,060	\$ (10,572 )	\$ 115,511	\$ 762,066
Net income	-	-	-	32,856	-	4,797	37,653
Other comprehensive income	-	-	-	-	1,726	1,073	2,799
Sale of common stock through employee stock option and purchase plans	514	5	2,839	-	-	-	2,844
Restricted stock awards vesting and expense	110	1	563	-	-	-	564
Share-based compensation expense	-	-	1,309	-	-	-	1,309
Conversion of debt to common stock	717	7	7,431	-	-	-	7,438
Repurchase of common stock of subsidiary	-	-	(8 )	-	-	8	-
Subsidiary dividend payable	-	-	-	-	-	(11,901 )	(11,901 )
Balance at May 1, 2016	67,943	\$ 679	\$ 538,535	\$ 162,916	\$ (8,846 )	\$ 109,488	\$ 802,772

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Six Months Ended May 3, 2015  
Photronics, Inc. Shareholders

	Common Stock	Additional		Accumulated	Non-	Total	
	Shares	Amount	Paid-in Capital	Retained Earnings	Other Comprehensive Income	controlling Interests	Equity
Balance at November 2, 2014	65,930	\$ 659	\$520,182	\$85,435	\$ 21,774	\$ 111,444	\$739,494
Net income	-	-	-	13,897	-	5,401	19,298
Other comprehensive loss	-	-	-	-	(6,936)	(568)	(7,504)
Sale of common stock through employee stock option and purchase plans	239	3	856	-	-	-	859
Restricted stock awards vesting and expense	129	1	533	-	-	-	534
Share-based compensation expense	-	-	1,302	-	-	-	1,302
Balance at May 3, 2015	66,298	\$ 663	\$522,873	\$99,332	\$ 14,838	\$ 116,277	\$753,983

## NOTE 3 - PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consists of the following:

	May 1, 2016	November 1, 2015
Land	\$8,217	\$ 8,172
Buildings and improvements	121,655	121,472
Machinery and equipment	1,467,020	1,458,623
Leasehold improvements	19,002	18,856
Furniture, fixtures and office equipment	12,729	12,700
Construction in progress	14,199	6,657
	1,642,822	1,626,480
Less accumulated depreciation and amortization	1,119,153	1,079,196
	\$523,669	\$ 547,284

Equipment under capital leases are included in above property, plant and equipment as follows:

	May 1, 2016	November 1, 2015
Machinery and equipment	\$34,917	\$ 56,245
Less accumulated amortization	8,606	16,054
	\$26,311	\$ 40,191

Depreciation and amortization expense for property, plant and equipment was \$18.9 million and \$38.0 million for the three and six month periods ended May 1, 2016, respectively, and \$17.8 million and \$37.0 million for the three and six month periods ended May 3, 2015, respectively.



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NOTE 4 - JOINT VENTURE, TECHNOLOGY LICENSE AND OTHER AGREEMENTS WITH MICRON TECHNOLOGY, INC.

In May 2006, Photronics and Micron Technology, Inc. ("Micron") entered into the MP Mask joint venture ("MP Mask"), which developed and produced photomasks for leading-edge and advanced next generation semiconductors. At the time of the formation of the joint venture, the Company also entered into both an agreement to license photomask technology developed by Micron and certain supply agreements.

This joint venture was a variable interest entity ("VIE") (as that term is defined in the ASC) because all costs of the joint venture were passed on to the Company and Micron through purchase agreements they had entered into with the joint venture, and it was dependent upon the Company and Micron for any additional cash requirements. On a quarterly basis the Company reassessed whether its interest in MP Mask gave it a controlling financial interest in this VIE. The purpose of this quarterly reassessment was to identify the primary beneficiary (which is defined in the ASC as the entity that consolidates a VIE) of the VIE. As a result of the reassessment in the current quarter, the Company determined that Micron was still the primary beneficiary of the VIE, by virtue of its tie-breaking voting rights within MP Mask's Board of Managers, thereby having given it the power to direct the activities of MP Mask that most significantly impacted its economic performance, including its decision making authority in the ordinary course of business and its purchasing the majority of products produced by the VIE.

The Company utilized MP Mask for both high-end IC photomask production and research and development purposes. MP Mask charged its variable interest holders based on their actual usage of its facility. MP Mask separately charged for any research and development activities it engaged in at the requests of its owners. The Company recorded cost of sales of \$2.7 million and \$4.9 million and research and development expenses of \$0.2 million and \$0.5 million during the three and six month periods ended May 1, 2016. Cost of sales of \$2.2 million and \$3.4 million and research and development expenses of \$0.2 million and \$0.5 million were recorded during the three and six month periods ended May 3, 2015. As of May 1, 2016 and November 1, 2015, the Company owed MP Mask \$7.3 million and \$4.3 million, respectively, and had a receivable from Micron of \$4.9 million and \$6.4 million, respectively, both primarily related to the aforementioned supply agreements.

MP Mask was governed by a Board of Managers, appointed by Micron and the Company. Since MP Mask's inception, Micron, as a result of its majority ownership, had held majority voting power on the Board of Managers. The voting power held by each party was subject to change as ownership interests changed. Under the MP Mask joint venture operating agreement, the Company may have been required to make additional capital contributions to MP Mask up to the maximum amount defined in the operating agreement. However, had the Board of Managers determined that further additional funding was required, MP Mask would have pursued its own financing. If MP Mask was unable to obtain its own financing, it may have requested additional capital contributions from the Company. Should the Company have chosen not to make a requested contribution to MP Mask, its ownership percentage may have been reduced.

The Company's investment in the VIE, which represented its maximum exposure to loss, was \$92.9 million at May 1, 2016 and \$93.0 million at November 1, 2015. These amounts are reported in the Company's condensed consolidated balance sheets as "Investment in joint venture." The Company recorded a loss from its investment in the VIE of \$0.1 million in the six month period ended May 1, 2016, and recorded a loss from its investment in the VIE of \$0.1 million in the three and six month periods ended May 3, 2015.

On May 5, 2016, the Company sold its investment in MP Mask to Micron for \$93.1 million. On that same date a supply agreement commenced between the Company and Micron, which provides that the Company will be the majority outsourced supplier of Micron's photomasks and related services. The supply agreement has a one year term, subject to mutually agreeable renewals. In addition, the Company forevermore has the rights to use technology under the prior technology license agreement.



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## NOTE 5 - LONG-TERM BORROWINGS

Long-term borrowings consist of the following:

	May 1, 2016	November 1, 2015
3.25% convertible senior notes due in April 2016	\$-	\$ 57,500
3.25% convertible senior notes due in April 2019	57,500	57,500
2.77% capital lease obligation payable through July 2018	12,725	15,346
3.09% capital lease obligation payable through March 2016	-	2,269
	70,225	132,615
Less current portion	5,806	65,495
	\$64,419	\$ 67,120

In April 2016 \$57.5 million of the Company's senior convertible notes matured. The Company repaid \$50.1 million to noteholders and issued approximately 0.7 million shares to noteholders that elected to convert their notes to common stock. The notes were exchanged at the rate of approximately 96 shares per \$1,000 note principle, equivalent to a conversion rate of \$10.37 per share.

In January 2015 the Company privately exchanged \$57.5 million in aggregate principal amount of its 3.25% convertible senior notes with a maturity date of April 1, 2016, for new 3.25% convertible senior notes with an aggregate principal amount of \$57.5 million with a maturity date of April 1, 2019. The conversion rate of the new notes is the same as that of the exchanged notes, which were issued in March 2011 with a conversion rate of approximately 96 shares of common stock per \$1,000 note principal, equivalent to a conversion price of \$10.37 per share of common stock, and is subject to adjustment upon the occurrence of certain events, which are described in the indenture dated January 22, 2015. Noteholders may convert each \$1,000 principal amount of notes at any time prior to the close of business on the second scheduled trading day immediately preceding April 1, 2019, and the Company is not required to redeem the notes prior to their maturity date. Interest on the notes accrues in arrears, and is paid semiannually through the notes' maturity date.

The Company's credit facility, which expires in December 2018, has a \$50 million limit with an expansion capacity to \$75 million, and is secured by substantially all of the Company's assets located in the United States and common stock the Company owns in certain of its foreign subsidiaries. The credit facility precludes the Company from paying cash dividends, and is subject to a minimum interest coverage ratio, total leverage ratio and minimum unrestricted cash balance financial covenants, all of which the Company was in compliance with at May 1, 2016. The Company had no outstanding borrowings against the credit facility at May 1, 2016, and \$50 million was available for borrowing. The interest rate on the credit facility (1.73% at May 1, 2016) is based on the Company's total leverage ratio at LIBOR plus a spread, as defined in the credit facility.

In August 2013 a \$26.4 million principal amount, five year capital lease commenced to fund the purchase of a high-end lithography tool. Payments under the capital lease, which bears interest at 2.77%, are \$0.5 million per month through July 2018. Under the terms of the lease agreement, the Company must maintain the equipment in good working order, and is subject to a cross default with cross acceleration provision related to certain nonfinancial covenants incorporated in its credit facility. As of May 1, 2016, the total amount payable through the end of the lease

term was \$13.2 million, of which \$12.7 million represented principal and \$0.5 million represented interest.

In April 2011 the Company entered into a five year, \$21.2 million capital lease for manufacturing equipment. Payments under the lease, which bore interest at 3.09%, were \$0.4 million per month through March 2016. The lease agreement provided that the Company must maintain the equipment in good working order, and included a cross default with cross acceleration provision related to certain non-financial covenants incorporated in the Company's credit facility agreement. In March 2016 the Company paid the final installment on this lease and assumed ownership of the related equipment.

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## NOTE 6 - SHARE-BASED COMPENSATION

The Company has a share-based compensation plan (the "Plan"), under which options, restricted stock, restricted stock units, stock appreciation rights, performance stock, performance units, and other awards based on, or related to, shares of the Company's common stock may be granted from shares authorized but unissued or shares previously issued and reacquired by the Company. The maximum number of shares of common stock approved by the Company's shareholders to be issued under the Plan is nine million shares. Awards may be granted to officers, employees, directors, consultants, advisors, and independent contractors of the Company or its subsidiaries. In the event of a change in control (as defined in the Plan), the vesting of awards may be accelerated. The Plan, aspects of which are more fully described below, prohibits further awards from being issued under prior plans. Total share-based compensation costs for the three and six month periods ended May 1, 2016, were \$1.0 million and \$1.9 million, respectively, and \$0.9 million and \$1.8 million for the three and six month periods ended May 3, 2015, respectively. The Company received cash from option exercises of \$0.9 million and \$2.8 million for the three and six month periods ended May 1, 2016, respectively, and \$0.3 million and \$1.0 million for the three and six month periods ended May 3, 2015, respectively. No share-based compensation cost was capitalized as part of an asset and no related income tax benefits were recorded during the periods presented.

## Stock Options

Option awards generally vest in one to four years, and have a ten-year contractual term. All incentive and non-qualified stock option grants have an exercise price equal to the market value of the underlying common stock on the date of grant. The grant date fair values of options are based on closing prices of the Company's common stock on the dates of grant using the Black-Scholes option pricing model. Expected volatility is based on the historical volatility of the Company's stock. The Company uses historical option exercise behavior and employee termination data to estimate expected term, which represents the period of time that the options granted are expected to remain outstanding. The risk-free rate of return for the estimated term of the option is based on the U.S. Treasury yield curve in effect at the date of grant.

The weighted-average inputs and risk-free rate of return ranges used to calculate the grant date fair value of options issued during the three and six month periods ended May 1, 2016 and May 3, 2015, are presented in the following table.

	Three Months Ended		Six Months Ended	
	May 1, 2016	May 3, 2015	May 1, 2016	May 3, 2015
Volatility	39.8%	54.9%	49.5%	55.0%
Risk free rate of return	1.4%	1.3%	1.4-1.7%	1.3-1.6%
Dividend yield	0.0%	0.0%	0.0%	0.0%
Expected term	5.1 years	4.7 years	5.1 years	4.7 years

Information on outstanding and exercisable option awards as of May 1, 2016, is presented below.

Options	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual	Aggregate Intrinsic Value
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## Life

Outstanding at May 1, 2016	3,888,510	\$ 8.25	6.2 years	\$ 12,053
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Exercisable at May 1, 2016	2,324,435	\$ 7.33	4.5 years	\$ 9,671
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There were 23,000 share options granted during the three month period ended May 1, 2016, with a weighted-average grant date fair value of \$3.74 per share and 302,800 share options granted during the three month period ended May 3, 2015, with a weighted-average grant date fair value of \$3.84 per share. There were 602,250 share options granted during the six month period ended May 1, 2016, with a weighted-average grant date fair value of \$4.63 per share and 604,800 share options granted during the six month period ended May 3, 2015, with a weighted-average grant date fair value of \$3.86 per share. As of May 1, 2016, the total unrecognized compensation cost related to unvested option awards was approximately \$5.7 million. That cost is expected to be recognized over a weighted-average amortization period of 2.7 years.

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## Restricted Stock

The Company periodically grants restricted stock awards. The restrictions on these awards lapse over a service period that has ranged from less-than-one to four years. No restricted stock awards were granted during the three month period ended May 1, 2016, and 115,225 restricted stock awards were issued during the six month period ended May 1, 2016, with a weighted-average grant date fair value of \$12.13 per share. No restricted stock awards were granted during the three month period ended May 3, 2015, and 111,334 restricted stock awards were issued during the six month period ended May 3, 2015, with a weighted-average grant date fair value of \$8.23 per share. As of May 1, 2016, the total compensation cost not yet recognized related to unvested restricted stock awards was approximately \$1.7 million. That cost is expected to be recognized over a weighted-average amortization period of 2.2 years. As of May 1, 2016, there were 194,875 shares of restricted stock outstanding.

## NOTE 7 - INCOME TAXES

The effective tax rate differs from the U.S. statutory rate of 35% in the three and six month periods ended May 1, 2016 and May 3, 2015, primarily due to earnings being taxed at lower statutory rates in foreign jurisdictions, combined with the realization of certain tax benefits, as further noted below, in a foreign jurisdiction and the benefit of various investment credits in a foreign jurisdiction. Valuation allowances in jurisdictions with historic losses eliminate the effective rate impact of these jurisdictions.

As of May 1, 2016, and May 3, 2015, the Company determined that deferred tax assets of \$2.5 million and \$1.5 million, respectively, whose realization was previously not considered to be more likely than not, are realizable and, therefore, reduced their related valuation allowances. During the three month period ended May 1, 2016, the Company realized a \$2.4 million benefit, which resulted from the reversal of a previously recorded undistributed earnings tax liability in a foreign jurisdiction. As a result of a shareholder action to approve a dividend in this jurisdiction, the Company determined that it is no longer liable for this tax. In addition, during April 2016, \$0.7 million of withholding tax was incurred upon the completion of a foreign subsidiary share redemption which commenced in fiscal year 2015.

Unrecognized tax benefits related to uncertain tax positions were \$4.8 million at May 1, 2016, and \$4.1 million at November 1, 2015, all of which would favorably impact the Company's effective tax rate if recognized. Accrued interest and penalties related to unrecognized tax benefits was \$0.1 million at May 1, 2016 and November 1, 2015. As of May 1, 2016, the total amount of unrecognized tax benefits is not expected to significantly increase or decrease in the next twelve months.

PKLT, the Company's FPD manufacturing facility in Taiwan, has been accorded a tax holiday, which started in 2012 and expires in 2017. This tax holiday had no dollar or per share effect in the three and six month periods ended May 1, 2016 and May 3, 2015. PDMC, the Company's IC manufacturing facility in Taiwan was accorded a tax holiday that commenced in 2015 and expires in 2019. The Company realized tax benefits from this tax holiday of \$0.1 million in the three month periods ended May 1, 2016 and May 3, 2015 and \$0.2 million and \$0.1 million in the respective six month periods. The tax holiday had no per share effect in the three and six month periods ended May 1, 2016 and May 3, 2015.

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## NOTE 8 - EARNINGS PER SHARE

The calculation of basic and diluted earnings per share is presented below.

	Three Months Ended		Six Months Ended	
	May 1, 2016	May 3, 2015	May 1, 2016	May 3, 2015
Net income attributable to Photronics, Inc. shareholders	\$ 11,854	\$ 10,060	\$ 32,856	\$ 13,897
Effect of dilutive securities:				
Interest expense on convertible notes, net of related tax effects	875	1,071	1,946	1,071
Earnings for diluted earnings per share	\$ 12,729	\$ 11,131	\$ 34,802	\$ 14,968
Weighted-average common shares computations:				
Weighted-average common shares used for basic earnings per share	67,372	66,230	67,090	66,148
Effect of dilutive securities:				
Convertible notes	9,196	11,084	10,140	5,542
Share-based payment awards	948	914	1,096	934
Potentially dilutive common shares	10,144	11,998	11,236	6,476
Weighted-average common shares used for diluted earnings per share	77,516	78,228	78,326	72,624
Basic earnings per share	\$ 0.18	\$ 0.15	\$ 0.49	\$ 0.21
Diluted earnings per share	\$ 0.16	\$ 0.14	\$ 0.44	\$ 0.21

The table below shows the outstanding weighted-average share-based payment awards that were excluded from the calculation of diluted earnings per share because their exercise price exceeded the average market value of the common shares for the period, and convertible notes that, if converted, would have been antidilutive.

	Three Months Ended		Six Months Ended	
	May 1, 2016	May 3, 2015	May 1, 2016	May 3, 2015
Share-based payment awards	2,160	1,654	1,414	1,621
Convertible notes	-	-	-	5,542
Total potentially dilutive shares excluded	2,160	1,654	1,414	7,163



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## NOTE 9 - CHANGES IN ACCUMULATED OTHER COMPREHENSIVE INCOME BY COMPONENT

The following tables set forth the changes in the Company's accumulated other comprehensive income by component (net of tax of \$0) for the three and six month periods ended May 1, 2016 and May 3, 2015:

	Three Months Ended May 1, 2016			Total
	Foreign Currency Translation Adjustments	Amortization of Cash Flow Hedge	Other	
Balance at January 31, 2016	\$ (27,118 )	\$ (274 )	) \$ (613 )	\$ (28,005 )
Other comprehensive income (loss) before reclassifications	23,861	-	(50 )	23,811
Amounts reclassified from other comprehensive income	-	32	-	32
Net current period other comprehensive income (loss)	23,861	32	(50 )	23,843
Less: other comprehensive (income) loss attributable to noncontrolling interests	(4,709 )	-	25	(4,684 )
Balance at May 1, 2016	\$ (7,966 )	\$ (242 )	) \$ (638 )	\$ (8,846 )
	Three Months Ended May 3, 2015			Total
	Foreign Currency Translation Adjustments	Amortization of Cash Flow Hedge	Other	
Balance at February 1, 2015	\$ 6,424	\$ (402 )	) \$ (427 )	\$ 5,595
Other comprehensive income (loss) before reclassifications	12,532	-	(25 )	12,507
Amounts reclassified from other comprehensive income	-	32	-	32
Net current period other comprehensive income (loss)	12,532	32	(25 )	12,539
Less: other comprehensive income attributable to noncontrolling interests	(3,308 )	-	12	(3,296 )
Balance at May 3, 2015	\$ 15,648	\$ (370 )	) \$ (440 )	\$ 14,838

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	Six Months Ended May 1, 2016			
	Foreign		Other	Total
	Currency Translation Adjustment	Amortization of Cash Flow Hedge		
Balance at November 1, 2015	\$(9,634)	\$ (306 )	\$(633)	\$(10,573)
Other comprehensive income (loss) before reclassifications	2,746	-	(11 )	2,735
Amounts reclassified from other comprehensive income	-	64	-	64
Net current period other comprehensive income (loss)	2,746	64	(11 )	2,799
Less: other comprehensive (income) loss attributable to noncontrolling interests	(1,078)	-	6	(1,072 )
Balance at May 1, 2016	\$(7,966)	\$ (242 )	\$(638)	\$(8,846 )
	Six Months Ended May 3, 2015			
	Foreign		Other	Total
	Currency Translation Adjustment	Amortization of Cash Flow Hedge		
Balance at November 2, 2014	\$22,651	\$ (434 )	\$(443)	\$21,774
Other comprehensive income (loss) before reclassifications	(7,574 )	-	6	(7,568 )
Amounts reclassified from other comprehensive income	-	64	-	64
Net current period other comprehensive income (loss)	(7,574 )	64	6	(7,504 )
Less: other comprehensive (income) loss attributable to noncontrolling interests	571	-	(3 )	568
Balance at May 3, 2015	\$15,648	\$ (370 )	\$(440)	\$14,838

The amortization of the cash flow hedge is included in cost of sales in the condensed consolidated statements of income for all periods presented.

## NOTE 10 - FAIR VALUE MEASUREMENTS

The accounting framework for determining fair value includes a hierarchy for ranking the quality and reliability of the information used to measure fair value, which enables the reader of the financial statements to assess the inputs used to develop those measurements. The fair value hierarchy consists of three tiers as follows: Level 1, defined as quoted prices (unadjusted) in active markets for identical securities; Level 2, defined as inputs other than Level 1 that are observable, either directly or indirectly; and Level 3, defined as unobservable inputs that are not corroborated by market data.

The Company did not have any assets or liabilities measured at fair value on a recurring or a nonrecurring basis at May 1, 2016 or November 1, 2015.

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## Fair Value of Other Financial Instruments

The fair values of the Company's cash and cash equivalents (Level 1 measurements), accounts receivable, accounts payable, and certain other current assets and current liabilities (Level 2 measurements) approximate their carrying value due to their short-term maturities. The fair value of the Company's convertible senior notes is a Level 2 measurement that is determined using recent bid prices.

The table below presents the fair and carrying values of the Company's convertible senior notes at May 1, 2016 and November 1, 2015.

	May 1, 2016		November 1, 2015	
	Fair Value	Carrying Value	Fair Value	Carrying Value
3.25% convertible senior notes due 2016	\$-	\$ -	\$60,375	\$ 57,500
3.25% convertible senior notes due 2019	\$69,966	\$ 57,500	\$64,550	\$ 57,500

## NOTE 11 - COMMITMENTS AND CONTINGENCIES

As of May 1, 2016, the Company had commitments outstanding for capital expenditures of approximately \$59 million.

The Company is subject to various claims that arise in the ordinary course of business. The Company believes such claims, individually or in the aggregate, will not have a material effect on its condensed consolidated financial statements.

## NOTE 12 – GAIN ON SALE OF INVESTMENT

The Company had a minority interest in a foreign entity. In the first quarter of fiscal year 2016, the Company sold this investment and recognized a gain of \$8.8 million.

## NOTE 13 - RECENT ACCOUNTING PRONOUNCEMENTS

In March 2016 the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016 – 09 “Improvements to Employee Share-Based Payment Accounting”, which simplifies the accounting for share-based payment transactions including their income tax consequences, classification as either equity or liability awards, classification on the statement of cash flows, and other areas. The Update is effective for the Company in its first quarter of fiscal year 2018, with early application permitted. The Company is currently evaluating the effect this ASU will have on its consolidated financial statements.

In February 2016 the FASB issued ASU 2016 – 02 “Leases (Topic 842)”, which requires lessees to recognize right-of-use assets and corresponding liabilities for all leases with an initial term in excess of twelve months. The ASU is effective for the Company in its first quarter of fiscal year 2020, with early application permitted, and the Company is currently evaluating the effect this ASU will have on its consolidated financial statements.

In January 2016 the FASB issued ASU 2016-01 “Recognition and Measurement of Financial Assets and Financial Liabilities”, which provides targeted improvements to the recognition, measurement, presentation and disclosure of financial assets and financial liabilities. Specific accounting areas addressed include, equity investments, financial liabilities reported under the fair value option and valuation allowance assessment resulting from unrealized losses on available-for-sale securities. The ASU also changes certain presentation and disclosure requirements for financial

instruments. This ASU is effective for the Company in its first quarter of fiscal year 2019. Early adoption, with certain exceptions, is not permitted. The Company is currently evaluating the effect this ASU will have on its consolidated financial statements.

In November 2015 the FASB issued ASU 2015-17 “Balance Sheet Classification of Deferred Taxes”, which requires that deferred tax liabilities and assets be classified as noncurrent in a classified statement of financial position. This ASU is effective for the Company in its first quarter of fiscal year 2018, with early application permitted and, upon adoption, may be applied either prospectively or retrospectively. The Company is currently evaluating the effect this ASU will have on its consolidated financial statements.

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In April 2015 the FASB issued ASU 2015-03 “Simplifying the Presentation of Debt Issuance Costs”, which requires debt issuance costs related to recognized debt liability to be presented in the balance sheet as a direct deduction from that debt liability, consistent with the presentation of a debt discount. This ASU is effective for the Company in its first quarter of fiscal year 2017 and, upon adoption, should be applied retrospectively. Early adoption is permitted. The Company is currently evaluating the effect this ASU will have on its consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09 “Revenue from Contracts with Customers”, which will supersede nearly all existing revenue recognition guidance under accounting principles generally accepted in the United States. The core principle of this ASU is that revenue should be recognized for the amount of consideration expected to be received for promised goods or services transferred to customers. This ASU also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments, and assets recognized for costs incurred to obtain or fulfill a contract. In August 2015 the FASB issued ASU 2015-14 which defers the effective date of ASU 2014-09 by one year and allows entities to early adopt, but no earlier than the original effective date. ASU 2014-09 will now be effective for the Company in its first quarter of fiscal year 2019. ASU 2014-09 allows for either full retrospective or modified retrospective adoption. In April 2016 the FASB issued ASU 2016-10 “Identifying Performance Obligations and Licensing” which amends guidance previously issued on these matters in ASU 2014-09. The effective date and transition requirements of ASU 2016-10 are the same as those for ASU 2014-09. The Company is evaluating the transition method that will be elected and the potential effects of the adoption of these Updates on its consolidated financial statements.

## Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

### Overview

Management's discussion and analysis ("MD&A") of the Company's financial condition, results of operations and outlook should be read in conjunction with its condensed consolidated financial statements and related notes. Various segments of this MD&A contain forward-looking statements, all of which are presented based on current expectations and may be adversely affected by uncertainties and risk factors (presented throughout this filing and in the Company's Annual Report on Form 10-K for the fiscal 2015 year), that may cause actual results to materially differ from these expectations.

The Company sells substantially all of its photomasks to semiconductor designers and manufacturers, and manufacturers of FPDs. Photomask technology is also being applied to the fabrication of other higher performance electronic products such as photonics, micro-electronic mechanical systems and certain nanotechnology applications. Thus, the Company's selling cycle is tightly interwoven with the development and release of new semiconductor designs and flat panel applications, particularly as it relates to the semiconductor industry's migration to more advanced design methodologies and fabrication processes. The Company believes that the demand for photomasks primarily depends on design activity rather than sales volumes from products produced using photomask technologies. Consequently, an increase in semiconductor or FPD sales does not necessarily result in a corresponding increase in photomask sales. However, the reduced use of customized ICs, reductions in design complexity, other changes in the technology or methods of manufacturing or designing semiconductors, or a slowdown in the introduction of new semiconductor or FPD designs could reduce demand for photomasks even if demand for semiconductors and FPDs increases. Advances in semiconductor, FPD and photomask design and semiconductor production methods could also reduce the demand for photomasks. Historically, the semiconductor industry has been volatile, with sharp periodic downturns and slowdowns. These downturns have been characterized by, among other things, diminished product demand, excess production capacity and accelerated erosion of selling prices.

The global semiconductor industry, including mobile displays, is driven by end markets which have been closely tied to consumer driven applications of high performance semiconductor devices including, but not limited to, mobile

communications and computing solutions. The Company is typically required to fulfill its customer orders within a short period of time, sometimes within 24 hours. This results in the Company having a minimal level of backlog orders, typically one to two weeks for IC photomasks and two to three weeks for FPD photomasks. The Company cannot predict the timing of the industry's transition to volume production of next generation technology nodes or the timing of up and down cycles with precise accuracy, but believes that such transitions and cycles will continue into the future, beneficially and adversely affecting its business, financial condition and operating results in the near term. The Company believes its ability to remain successful in these environments is dependent upon achieving its goals of being a service and technology leader and efficient solutions supplier, which it believes should enable it to continually reinvest in its global infrastructure.

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## Material Changes in Results of Operations

Three and Six Months ended May 1, 2016 and May 3, 2015

The following table represents selected operating information expressed as a percentage of net sales.

	Three Months Ended		Six Months Ended	
	May 1, 2016	May 3, 2015	May 1, 2016	May 3, 2015
Net sales	100.0 %	100.0 %	100.0 %	100.0 %
Cost of sales	(74.5 )	(74.0 )	(73.6 )	(75.6 )
Gross margin	25.5	26.0	26.4	24.4
Selling, general and administrative expenses	(9.0 )	(9.7 )	(9.2 )	(9.7 )
Research and development expenses	(4.4 )	(4.6 )	(4.4 )	(4.2 )
Operating income	12.1	11.7	12.8	10.5
Gain on acquisition	-	-	3.4	-
Other income (expense), net	(2.5 )	(1.2 )	(0.8 )	(1.1 )
Income before income tax benefit (provision)	9.6	10.5	15.4	9.4
Income tax benefit (provision)	1.9	(1.0 )	(0.5 )	(1.7 )
Net income	11.5	9.5	14.9	7.7
Net income attributable to noncontrolling interests	(1.9 )	(1.6 )	(1.9 )	(2.2 )
Net income attributable to Photronics, Inc. shareholders	9.6 %	7.9 %	13.0 %	5.5 %

Note: All of the following tabular comparisons, unless otherwise indicated, are for the three months ended May 1, 2016 (Q2-16) and May 3, 2015 (Q2-15) and for the six months ended May 1, 2016 (YTD-16) and May 3, 2015 (YTD-15), in millions of dollars.

## Net Sales

	Three Months Ended			Six Months Ended		
	Q2-16	Q2-15	Percent Change	YTD-16	YTD-15	Percent Change
IC	\$90.9	\$103.8	( 12.5 )%	\$190.6	\$205.3	( 7.1 )%
FPD	32.0	23.5	36.4 %	62.3	45.5	36.7 %
Total net sales	\$122.9	\$127.3	(3.4 )%	\$252.9	\$250.8	0.8 %

Net sales for Q2-16 decreased 3.4% to \$122.9 million as compared to \$127.3 million for Q2-15. The decrease was primarily a result of reduced high-end IC demand and seasonality in Asia, offset by higher FPD revenue due to increased advanced display demand. Revenues attributable to high-end products increased by \$1.4 million to \$58.1 million in Q2-16 as compared to \$56.6 million in Q2-15. High-end photomask applications include mask sets for 45 nanometer and below for IC products, and G8 and above and active matrix organic light-emitting diode (AMOLED) display screen technologies for FPD products. By geographic area, net sales in Q2-16, as compared to Q2-15, increased (decreased) by \$(2.9) million or (5.9)% to \$46.6 million in Taiwan, \$(1.3) million or (3.8)% to \$31.6 million

in the United States, and \$(0.2) million or (2.4)% to \$8.6 million in Europe. Net sales in Korea in Q2-16 were \$35.6 million, unchanged from Q2-15.

Net sales for YTD-16 increased to \$252.9 million as compared to \$250.8 million for YTD-15, as a result of strong FPD demand offset by lower IC revenues. Revenues attributable to high-end products increased by \$14.8 million to \$123.2 million in YTD-16 as compared to \$108.4 million in YTD-15 primarily due to increased FPD advanced display demand.



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The Company's quarterly revenues can be affected by the seasonal purchasing of its customers. Demand for the Company's products is typically negatively impacted during the first six months of its fiscal year by the North American, European and Asian holiday periods, as some customers reduce their effective workdays and orders during this period.

## Gross Margin

	Three Months Ended			Six Months Ended		
	Q2-16	Q2-15	Percent Change	YTD-16	YTD-15	Percent Change
Gross margin	\$31.3	\$33.1	(5.5 )%	\$66.7	\$ 61.3	8.9 %
Percentage of net sales	25.5 %	26.0 %		26.4%	24.4 %	

Gross margin percentage decreased to 25.5% in Q2-16 from 26.0% in Q2-15, primarily due to lower demand for IC products. YTD-16 increased to 26.4% from 24.4% in YTD-15 due to increased high-end revenues. The Company operates in a high fixed cost environment and, to the extent that the Company's revenues and utilization increase or decrease, gross margin will generally be positively or negatively impacted.

## Selling, General and Administrative Expenses

	Three Months Ended			Six Months Ended		
	Q2-16	Q2-15	Percent Change	YTD-16	YTD-15	Percent Change
Selling, general and administrative expenses	\$11.0	\$12.4	(11.2 )%	\$23.2	\$ 24.4	(4.7 )%
Percentage of net sales	9.0 %	9.7 %		9.2 %	9.7 %	

Selling, general and administrative expenses were \$11.0 million in Q2-16 and \$12.4 million in Q2-15, and were \$23.2 million in YTD-16 and \$24.4 million in YTD-15. These decreases were primarily the result of lower compensation and selling expenses.

## Research and Development

	Three Months Ended			Six Months Ended		
	Q2-16	Q2-15	Percent Change	YTD-16	YTD-15	Percent Change
Research and development	\$5.4	\$5.8	(6.2 )%	\$11.1	\$ 10.5	6.3 %
Percentage of net sales	4.4 %	4.6 %		4.4 %	4.2 %	

Research and development expenses consist primarily of global development efforts related to high-end process technologies for advanced sub-wavelength reticle solutions for IC technologies. Research and development expenses decreased by \$0.4 million to \$5.4 million in Q2-16, as compared to \$5.8 million in Q2-15 due to decreased development activities related to advanced nanometer technology nodes. YTD-16 research and development expense increased by \$0.6 million to \$11.1 million, as compared \$10.5 million in YTD-15 due to increased activities at advanced nanometer technology nodes for IC photomasks in Q1-16.

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## Other Income (Expense), net

	Three Months Ended		Six Months Ended	
	Q2-16	Q2-15	YTD-16	YTD-15
Gain on sale of investment	\$ -	\$ -	\$ 8.8	\$ -
Interest expense	(1.0 )	(1.3 )	(2.1 )	(2.6 )
Interest and other income (expense), net	(2.0 )	(0.2 )	-	(0.1 )
Other income (expense), net	\$ (3.0 )	\$ (1.5 )	\$ 6.7	\$ (2.7 )

In January 2016 the Company sold a minority interest investment in a foreign entity and recognized a gain of \$8.8 million.

Interest expense decreased by \$0.3 million in Q2-16, as compared to Q2-15, and by \$0.5 million in YTD-16, as compared to YTD-15, primarily as a result of the impact of the 3.25% convertible debt that matured on April 1, 2016.

Interest and other income (expense), net decreased in Q2-16 as compared to Q2-15 by \$1.8 million primarily due to foreign currency exchange losses recorded in Q2-16, and increased \$0.1 million in YTD-16, as compared to YTD-15, as the impact of debt conversion expenses incurred in FY-15 offset less favorable foreign currency exchange results in FY-15.

## Income Tax (Benefit) Provision

	Three Months Ended		Six Months Ended	
	Q2-16	Q2-15	YTD-16	YTD-15
Income tax provision	\$(2.3 )	\$ 1.3	\$ 1.4	\$ 4.4
Effective income tax rate	(19.7 )%	9.3 %	3.5 %	18.5 %

The Company's effective income tax rate is sensitive to the jurisdictional mix of earnings, due in part to the non-recognition of tax benefits on losses in jurisdictions with valuation allowances.

The effective income tax rate decreased in Q2-16 and YTD-16, as compared with Q2-15 and YTD-15, primarily as a result of the following factors: the recognition in Q2-16 and FY-16 of \$2.5 million, compared with \$1.5 million in Q2-15 and FY-15, of previously unrecognized deferred tax assets which resulted from the improved performance of the Company's FPD operations; the reversal of previously recognized tax expense of \$2.4 million that was eliminated by a distribution of the FY-15 earnings of a foreign subsidiary to its foreign parent; a higher percentage of income before income taxes, including the \$8.8 million gain on the sale of investment in Q1-16, generated in jurisdictions where the company previously incurred losses that, due to valuation allowances, did not result in the Company recognizing tax benefits. These positive factors were offset in part by the accrual of \$0.7 million of withholding taxes related to a foreign subsidiary share redemption in a foreign jurisdiction. As of each reporting date, the Company considers new evidence, both positive and negative, that could impact management's view with regards to the future realizations of deferred tax assets.

## Net Income Attributable to Noncontrolling Interests

Net income attributable to noncontrolling interests increased \$0.2 million to \$2.3 million in Q2-16, as compared to \$2.1 million in Q2-15, and decreased by \$0.6 million to \$4.8 million in YTD-16, as compared to \$5.4 million in

YTD-15, as a result of the net income of the Company's IC manufacturing facility in Taiwan.

#### Liquidity and Capital Resources

The Company's working capital increased to \$233.1 million at May 1, 2016 as compared to \$171.4 million at November 1, 2015. Cash and cash equivalents decreased to \$194.0 million at May 1, 2016, as compared to \$205.9 million at November 1, 2015. The decrease was primarily due to repayment of \$50.1 million to convertible debt noteholders, offset by an increase in net income over the prior year's comparable period, and the proceeds of \$8.8 million from the sale of an investment in a foreign entity. Net cash provided by operating activities was \$65.1 million for the six month period ended May 1, 2016, as compared to \$57.9 million for the six month period ended May 3, 2015, the increase primarily due to an increase in net income over the prior year's comparable period. Net cash used in investing activities for the six month period ended May 1, 2016, was \$26.0 million, which was comprised primarily of capital expenditure payments, partially offset by proceeds of \$8.8 million received from the sale of an investment. Net cash used in financing activities of \$51.9 million for the six month period ended May 1, 2016, was comprised of repayments of long-term borrowings of \$55.0 million, partially offset by proceeds of \$3.0 million received from exercises of employee stock options. The Company may use its cash available on hand for operations, capital expenditures, debt repayments, strategic opportunities, stock repurchases or other corporate uses, any of which may be material.

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As of May 1, 2016 and November 1, 2015, the Company's total cash and cash equivalents include \$111.3 million and \$102.9 million, respectively, held by its foreign subsidiaries. The majority of earnings of the Company's foreign subsidiaries are considered to be indefinitely reinvested. However, in the event that the Company was to repatriate these earnings, such action may result in increased U.S. federal income taxes and local country withholding tax in certain jurisdictions. The Company's foreign subsidiaries continue to grow through the reinvestment of earnings in additional manufacturing capacity and capability, particularly in the high-end IC and FPD areas.

On May 5, 2016, the Company sold its investment in MP Mask to Micron for \$93.1 million. On that same date a supply agreement commenced between the Company and Micron, which provides that the Company will be the majority outsourced supplier of Micron's photomasks and related services. The supply agreement has a one year term, subject to mutually agreeable renewals. In addition, the Company forevermore has the rights to use technology under the prior technology license agreement.

In April 2016 PDMC, the Company's majority owned IC manufacturing subsidiary in Taiwan, declared a dividend of approximately \$23.8 million, approximately \$11.9 million of which is expected to be paid to PDMC's noncontrolling interest in the third fiscal quarter of 2016.

In April 2016 \$57.5 million of the Company's senior convertible notes matured. The Company repaid \$50.1 million to noteholders and issued approximately 0.7 million shares to noteholders that elected to convert their notes to common stock. The notes were exchanged at the rate of approximately 96 shares per \$1,000 note principle, equivalent to a conversion rate of \$10.37 per share.

In January 2015 the Company privately exchanged \$57.5 million in aggregate principal amount of its 3.25% convertible senior notes with a maturity date of April 1, 2016, for new 3.25% convertible senior notes with an aggregate principal amount of \$57.5 million with a maturity date of April 1, 2019. The conversion rate of the new notes is the same as that of the exchanged notes, which were issued in March 2011 with a conversion rate of approximately 96 shares of common stock per \$1,000 note principal, equivalent to a conversion price of \$10.37 per share of common stock, and is subject to adjustment upon the occurrence of certain events, which are described in the indenture dated January 22, 2015. Noteholders may convert each \$1,000 principal amount of notes at any time prior to the close of business on the second scheduled trading day immediately preceding April 1, 2019, and the Company is not required to redeem the notes prior to their maturity date. Interest on the notes accrues in arrears, and is paid semiannually through the notes' maturity date.

The Company's credit facility, which expires in December 2018, has a \$50 million limit with an expansion capacity to \$75 million, and is secured by substantially all of the Company's assets located in the United States and common stock the Company owns in certain of its foreign subsidiaries. The credit facility precludes the Company from paying cash dividends and is subject to a minimum interest coverage ratio, total leverage ratio and minimum unrestricted cash balance financial covenants, all of which the Company was in compliance with at May 1, 2016. The Company had no outstanding borrowings against the credit facility at May 1, 2016, and \$50 million was available for borrowing. The interest rate on the credit facility (1.73% at May 1, 2016) is based on the Company's total leverage ratio at LIBOR plus a spread, as defined in the credit facility.

As of May 1, 2016, the Company had capital equipment commitments outstanding of approximately \$59 million. The Company believes that its currently available resources, together with its capacity for growth, and its access to equity and other financing sources, will be sufficient to satisfy its currently planned capital expenditures, as well as its anticipated working capital requirements for the next twelve months. However, the Company cannot assure that additional sources of financing would be available to the Company on commercially favorable terms should the Company's capital requirements exceed cash available from operations, existing cash, and cash available under its credit facility.

The Company's liquidity is highly dependent on its sales volume, cash conversion cycle, and the timing of its capital expenditures (which can vary significantly from period to period), as it operates in a high fixed cost environment. Depending on conditions in the semiconductor and FPD markets, the Company's cash flows from operations and current holdings of cash may not be adequate to meet its current and long-term needs for capital expenditures, operations and debt repayments. However, the Company believes its cash on hand, cash generated from its operations and cash committed under its credit facility will allow it to fund its operations through at least the next twelve months. Historically, in certain years, the Company has used external financing to fund these needs. Due to conditions in the credit markets, some financing instruments used by the Company in the past may not be currently available to it. The Company continues to evaluate further cost reduction initiatives. However, the Company cannot assure that additional sources of financing would be available to it on commercially favorable terms, should its cash requirements exceed cash available from operations, existing cash, and cash available under its credit facility.

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Off-Balance Sheet Arrangements

In April 2014 the Company acquired 50.01% (a controlling interest) of PDMC, its IC manufacturing facility located in Taiwan. Under the PDMC operating agreement the shareholders of PDMC may be requested to make additional contributions to PDMC. In the event that PDMC requests additional capital from its shareholders, the Company may be required to make additional capital contributions to PDMC in order to maintain its 50.01% ownership. The PDMC operating agreement limits the amount of contributions that may be requested during both the first four years of PDMC and during any individual year within those first four years.

The Company leases certain office facilities and equipment under operating leases that may require it to pay taxes, insurance and maintenance expenses related to the properties. Certain of these leases contain renewal or purchase options exercisable at the end of the lease terms.

Business Outlook

A majority of the Company's revenue growth is expected to continue to come from the Asian region, as customers increase their use of manufacturing foundries located outside of North America and Europe. Additional revenue growth is also anticipated in North America, as the Company expects to continue to benefit from advanced technology it may utilize under its technology license with Micron.

The Company continues to assess its global manufacturing strategy and monitor its market capitalization, sales volume and related cash flows from operations. This ongoing assessment could result in future facility closures, asset redeployments, additional impairments of intangible or long-lived assets, workforce reductions, or the addition of increased manufacturing facilities, all of which would be based on market conditions and customer requirements.

Effect of Recent Accounting Pronouncements

See "Note 13 – Recent Accounting Pronouncements" to the condensed consolidated financial statements.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Foreign Currency Exchange Rate Risk

The Company conducts business in several major international currencies through its worldwide operations and its financial performance may be affected by fluctuations in the exchange rates of these currencies. Changes in exchange rates can positively or negatively affect the Company's sales, operating margins, assets, liabilities, and equity. The functional currencies of the Company's Asian subsidiaries are the Korean won, the New Taiwan dollar, and the Singapore dollar. The functional currencies of the Company's European subsidiaries are the British pound and the euro. The Company also engages in transactions and holds balances in Japanese yen.

The Company attempts to minimize its risk of foreign currency transaction losses by producing its products in the same country in which the products are sold (thereby generating revenues and incurring expenses in the same currency), and by managing its working capital. There can be no assurance that this approach will continue to be successful, especially in the event of a significant adverse movement in the value of any foreign currency against the U.S. dollar, the New Taiwan dollar or the Korean won. However, in some instances, the Company sells products in a currency other than the functional currency of the country where it was produced or purchases products in a currency that differs from the functional currency of the purchasing manufacturing facility.

The Company's primary net foreign currency exposures as of May 1, 2016, included the Korean won, the Japanese yen, the New Taiwan dollar, the Singapore dollar, the British pound, and the euro. As of May 1, 2016, a 10% adverse

movement in the value of these currencies against the U.S. dollar would have resulted in a net unrealized pre-tax loss of \$8.3 million. The Company does not believe that a 10% change in the exchange rates of other non-U.S. dollar currencies would have a material effect on its results of operations or cash flows.

#### Interest Rate Risk

At May 1, 2016, the Company did not have any variable rate borrowings. A 10% change in interest rates would not have had a material effect on the Company's consolidated financial position, results of operations, or cash flows in the three or six month periods ended May 1, 2016.

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Item 4. CONTROLS AND PROCEDURES

**Evaluation of Disclosure Controls and Procedures**

The Company has established and currently maintains disclosure controls and procedures, as such term is defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), designed to provide reasonable assurance that information required to be disclosed in its reports filed under the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to management, including the Company's chief executive officer and chief financial officer, as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

The Company's management, under the supervision and with the participation of the Company's chief executive officer and chief financial officer, evaluated the effectiveness of the design and operation of the Company's disclosure controls and procedures as of the end of the period covered by this report. Based upon that evaluation the Company's chief executive officer and chief financial officer concluded that the Company's disclosure controls and procedures were effective at a reasonable assurance level as of the end of the period covered by this report.

**Changes in Internal Control over Financial Reporting**

There was no change in the Company's internal control over financial reporting during the Company's second quarter of fiscal 2016 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1A. RISK FACTORS

There have been no material changes to risks relating to the Company's business as disclosed in Part 1, Item 1A of the Company's Form 10-K for the year ended November 1, 2015.



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Item 6. EXHIBITS

(a) Exhibits

Exhibit

Number Description

- 31.1 Certification of Chief Executive Officer pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 31.2 Certification of Chief Financial Officer pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 32.1 Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- 32.2 Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

101.INS XBRL Instance Document

101.SCH XBRL Taxonomy Extension Schema Document

101.CAL XBRL Taxonomy Extension Calculation Linkbase Document

101.DEF XBRL Taxonomy Extension Definition Linkbase Document

101.LAB XBRL Taxonomy Extension Label Linkbase Document

101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

SIGNATURES

Pursuant to the requirements 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.

Photronics, Inc.  
(Registrant)

By: /s/ SEAN T. SMITH  
Sean T. Smith  
Senior Vice President  
Chief Financial Officer  
(Duly Authorized Officer and  
Principal Financial Officer)

Date: June 3, 2016

