

UNIVERSAL DISPLAY CORP \PA\  
Form 10-Q  
May 09, 2013

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

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2013  
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 1-12031

UNIVERSAL DISPLAY CORPORATION  
(Exact name of registrant as specified in its charter)

Pennsylvania 23-2372688  
(State or other jurisdiction of (I.R.S. Employer Identification No.)  
incorporation or organization)

375 Phillips Boulevard  
Ewing, New Jersey 08618  
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (609) 671-0980

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

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

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

Large accelerated filer  Accelerated filer \_\_\_\_  
Smaller reporting company \_\_\_\_

Non-accelerated filer  (Do not check if a smaller reporting company)

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

As of May 7, 2013, the registrant had outstanding 46,147,826 shares of common stock.

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TABLE OF CONTENTS

PART I – FINANCIAL INFORMATION

<u>Item 1. Financial Statements (unaudited)</u>	
<u>Consolidated Balance Sheets – March 31, 2013 and December 31, 2012</u>	<u>3</u>
<u>Consolidated Statements of Operations – Three months ended March 31, 2013 and 2012</u>	<u>4</u>
<u>Consolidated Statements of Comprehensive Loss – Three months ended March 31, 2013 and 2012</u>	<u>5</u>
<u>Consolidated Statements of Cash Flows – Three months ended March 31, 2013 and 2012</u>	<u>6</u>
<u>Notes to Consolidated Financial Statements</u>	<u>7</u>
<u>Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>20</u>
<u>Item 3. Quantitative and Qualitative Disclosures About Market Risk</u>	<u>25</u>
<u>Item 4. Controls and Procedures</u>	<u>26</u>

PART II – OTHER INFORMATION

<u>Item 1. Legal Proceedings</u>	<u>26</u>
<u>Item 1A. Risk Factors</u>	<u>29</u>
<u>Item 2. Unregistered Sales of Equity Securities and Use of Proceeds</u>	<u>29</u>
<u>Item 3. Defaults Upon Senior Securities</u>	<u>30</u>
<u>Item 4. Mine Safety Disclosures</u>	<u>30</u>
<u>Item 5. Other Information</u>	<u>30</u>
<u>Item 6. Exhibits</u>	<u>31</u>

PART I – FINANCIAL INFORMATION  
ITEM 1. FINANCIAL STATEMENTS  
UNIVERSAL DISPLAY CORPORATION AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS  
(UNAUDITED)

(in thousands, except for share and per share data)

	March 31, 2013	December 31, 2012
<b>ASSETS</b>		
<b>CURRENT ASSETS:</b>		
Cash and cash equivalents	\$45,536	\$85,923
Short-term investments	175,311	158,018
Accounts receivable	10,527	8,657
Inventory	9,082	11,018
Other current assets	7,632	3,929
Total current assets	248,088	267,545
PROPERTY AND EQUIPMENT, net of accumulated depreciation of \$21,222 and \$20,713	12,512	11,808
ACQUIRED TECHNOLOGY, net of accumulated amortization of \$24,610 and \$21,868	102,196	104,624
INVESTMENTS	4,868	1,270
OTHER ASSETS	259	277
<b>TOTAL ASSETS</b>	<b>\$367,923</b>	<b>\$385,524</b>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES:</b>		
Accounts payable	\$5,622	\$7,596
Accrued expenses	5,706	10,394
Deferred revenue	3,826	4,273
Other current liabilities	35	36
Total current liabilities	15,189	22,299
DEFERRED REVENUE	2,966	3,153
RETIREMENT PLAN BENEFIT LIABILITY	10,084	9,837
Total liabilities	28,239	35,289
<b>COMMITMENTS AND CONTINGENCIES (Note 12)</b>		
<b>SHAREHOLDERS' EQUITY:</b>		
Preferred Stock, par value \$0.01 per share, 5,000,000 shares authorized, 200,000 shares of Series A Nonconvertible Preferred Stock issued and outstanding (liquidation value of \$7.50 per share or \$1,500)		2
Common Stock, par value \$0.01 per share, 100,000,000 shares authorized, 46,587,199 and 46,561,437 shares issued at March 31, 2013 and December 31, 2012, respectively	466	465
Additional paid-in capital	564,379	564,883
Accumulated deficit	(208,969)	(204,211)
Accumulated other comprehensive loss	(5,536)	(5,702)
Treasury stock, at cost (401,501 and 205,902 shares at March 31, 2013 and December 31, 2012, respectively)	(10,658)	(5,202)

Total shareholders' equity	339,684	350,235
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$367,923	\$385,524

The accompanying notes are an integral part of these consolidated statements.

## UNIVERSAL DISPLAY CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS  
(UNAUDITED)

(in thousands, except for share and per share data)

	Three Months Ended March 31,	
	2013	2012
REVENUE:		
Material sales	\$12,752	\$10,529
Royalty and license fees	1,299	422
Technology development and support revenue	925	1,669
Total revenue	14,976	12,620
OPERATING EXPENSES:		
Cost of material sales	3,092	1,088
Research and development	8,938	6,661
Selling, general and administrative	5,171	4,311
Patent costs and amortization of acquired technology	4,617	1,868
Royalty and license expense	312	250
Total operating expenses	22,130	14,178
Operating loss	(7,154	) (1,558
INTEREST INCOME	210	357
INTEREST EXPENSE	(8	) (20
LOSS BEFORE INCOME TAXES	(6,952	) (1,221
INCOME TAX BENEFIT	2,194	—
NET LOSS	(4,758	) (1,221
NET LOSS PER COMMON SHARE:		
BASIC	\$(0.10	) \$(0.03
DILUTED	\$(0.10	) \$(0.03
WEIGHTED AVERAGE SHARES USED IN COMPUTING		
NET LOSS PER COMMON SHARE:		
BASIC	45,823,414	45,749,072
DILUTED	45,823,414	45,749,072

The accompanying notes are an integral part of these consolidated statements.

## UNIVERSAL DISPLAY CORPORATION AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

(UNAUDITED)

(in thousands)

	Three Months Ended March 31,		
	2013	2012	
NET LOSS	\$ (4,758	) \$ (1,221	)
OTHER COMPREHENSIVE INCOME, NET OF TAX:			
Unrealized loss on available-for-sale securities	(3	) (104	)
Amortization of prior service cost and actuarial loss for retirement plan included in net periodic pension costs	169	148	
TOTAL OTHER COMPREHENSIVE INCOME	166	44	
COMPREHENSIVE LOSS	\$ (4,592	) \$ (1,177	)

The accompanying notes are an integral part of these consolidated statements.

## UNIVERSAL DISPLAY CORPORATION AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF CASH FLOWS

(UNAUDITED)

(in thousands)

	Three Months Ended March 31,	
	2013	2012
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>		
Net loss	\$(4,758	) \$(1,221
Adjustments to reconcile net loss to net cash used in operating activities:		)
Amortization of deferred revenue	(678	) (917
Depreciation	509	) 418
Amortization of intangibles	2,742	) 15
Amortization of premium and discount on investments, net	(116	) (238
Stock-based employee compensation	1,174	) 800
Stock-based compensation to Board of Directors and Scientific Advisory Board	224	) 213
Retirement plan benefit expense	417	) 388
(Increase) decrease in assets:		
Accounts receivable	(1,870	) 2,019
Inventory	1,936	) (1,731
Other current assets	(3,703	) (827
Other assets	18	) 15
(Decrease) increase in liabilities:		
Accounts payable and accrued expenses	(6,837	) (1,987
Other current liabilities	—	) (1
Deferred revenue	44	) 1,042
Net cash used in operating activities	(10,898	) (2,012
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>		
Purchase of property and equipment	(549	) (1,802
Additions to intangibles	(69	) —
Purchase of investments	(102,142	) (139,512
Proceeds from sale of investments	81,364	) 178,638
Net cash (used in) provided by investing activities	(21,396	) 37,324
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>		
Proceeds from the issuance of common stock	93	) 71
Repurchase of common stock	(5,456	) —
Proceeds from the exercise of common stock options and warrants	66	) 541
Payment of withholding taxes related to stock-based employee compensation	(2,796	) (3,473
Net cash used in financing activities	(8,093	) (2,861
<b>(DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS</b>	<b>(40,387</b>	<b>) 32,451</b>
<b>CASH AND CASH EQUIVALENTS, BEGINNING OF PERIOD</b>	<b>85,923</b>	<b>) 111,795</b>
<b>CASH AND CASH EQUIVALENTS, END OF PERIOD</b>	<b>\$45,536</b>	<b>) \$144,246</b>
The following non-cash activities occurred:		
Unrealized loss on available-for-sale securities	\$(3	) \$(104
Common stock issued to Board of Directors and Scientific Advisory Board that was earned in a previous period	300	) 328
Common stock issued to employees that was accrued for in a previous period, net of shares withheld for taxes	282	) 252



Property, equipment and intangible invoices included in accounts payable 909 —

The accompanying notes are an integral part of these consolidated statements.

6

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## UNIVERSAL DISPLAY CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

#### 1. BACKGROUND

Universal Display Corporation (the Company) is engaged in the research, development and commercialization of organic light emitting diode (OLED) technologies and materials for use in flat panel display, solid-state lighting and other product applications. The Company's primary business strategy is to develop and license its proprietary OLED technologies to product manufacturers for use in these applications. In support of this objective, the Company also develops new OLED materials and sells those materials to product manufacturers. Through internal research and development efforts and acquisitions from and relationships with entities such as Princeton University (Princeton), the University of Southern California (USC), the University of Michigan (Michigan), FUJIFILM Corporation (Fujifilm), Motorola Solutions, Inc. (f/k/a Motorola, Inc.) (Motorola) and PPG Industries, Inc. (PPG Industries), the Company has established a significant portfolio of proprietary OLED technologies and materials (see Notes 5, 6 and 7).

#### 2. BASIS OF PRESENTATION

##### Interim Financial Information

In the opinion of management, the accompanying unaudited consolidated financial statements contain all adjustments (consisting of only normal recurring adjustments) necessary to present fairly the Company's financial position as of March 31, 2013 and results of operations and cash flows for the three months ended March 31, 2013 and 2012. While management believes that the disclosures presented are adequate to make the information not misleading, these unaudited consolidated financial statements should be read in conjunction with the audited consolidated financial statements and the notes thereto in the Company's latest year-end financial statements, which are included in the Company's Annual Report on Form 10-K for the year ended December 31, 2012. The results of the Company's operations for any interim period are not necessarily indicative of the results of operations for any other interim period or for the full year.

##### Management's Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles 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 reporting period. The estimates made are principally in the areas of revenue recognition for license agreements, the useful life of acquired technology, stock-based compensation and the valuation of stock warrant and retirement benefit plan liabilities. Actual results could differ from those estimates.

##### Fair Value of Financial Instruments

The carrying values of accounts receivable and accounts payable approximate fair value in the accompanying financial statements due to the short-term nature of those instruments. See Notes 3 and 4 for a discussion of cash equivalents and investments.

##### Cost of Material Sales

Cost of material sales represents costs associated with the sale of materials that have been classified as commercial.

#### Recent Accounting Pronouncements

In February 2013, the Financial Accounting Standards Board (FASB) issued amended standards that revised the reporting of reclassifications out of accumulated other comprehensive income and addressed certain matters from standards for reporting of other comprehensive income that were deferred pending additional consideration. The amendment requires an entity to provide information about the amounts reclassified out of accumulated other comprehensive income by component. In addition, entities are required to present, either on the face of the statement where net income is presented or in the notes, significant amounts reclassified out of accumulated other comprehensive income by the respective line items of net income but only if the amount reclassified is required under U.S. GAAP to be reclassified to net income in its entirety in the same reporting period. For other amounts that are not required under U.S. GAAP to be reclassified in their entirety to net income, entities are required to cross-

reference to other disclosures required under U.S. GAAP that provide additional detail on these amounts. This guidance is effective prospectively for reporting periods beginning after December 15, 2012. The Company adopted this guidance in the first quarter of 2013, and such adoption did not have an impact on the Company's results of operations or financial position, but did change the Company's disclosures related to accumulated other comprehensive income. In addition, consistent with its annual financial statements, the Company has elected to present separate statements of operations and comprehensive income (loss) versus one continuous statement.

### 3. CASH, CASH EQUIVALENTS AND INVESTMENTS

The Company considers all highly liquid debt instruments purchased with an original maturity of three months or less to be cash equivalents. The Company classifies its remaining investments as available-for-sale. These securities are carried at fair market value, with unrealized gains and losses reported in shareholders' equity. Gains or losses on securities sold are based on the specific identification method.

Investments at March 31, 2013 consisted of the following (in thousands):

Investment Classification	Amortized Cost	Unrealized Gains	(Losses)	Aggregate Fair Market Value
March 31, 2013 –				
Certificates of deposit	\$8,447	\$4	\$(7	) \$8,444
Commercial paper	1,998	—	—	1,998
Corporate bonds	162,356	12	(30	) 162,338
U.S. government bonds	3,099	—	—	3,099
Convertible notes	4,300	—	—	4,300
	\$180,200	\$16	\$(37	) \$180,179

Investments at December 31, 2012 consisted of the following (in thousands):

Investment Classification	Amortized Cost	Unrealized Gains	(Losses)	Aggregate Fair Market Value
December 31, 2012 –				
Certificates of deposit	\$7,562	\$3	\$(5	) \$7,560
Commercial paper	2,997	—	—	2,997
Corporate bonds	141,349	9	(25	) 141,333
U.S. government bonds	3,098	—	—	3,098
Convertible notes	4,300	—	—	4,300
	\$159,306	\$12	\$(30	) \$159,288

On July 13, 2012, the Company entered into a three-year joint development agreement with Plextronics, Inc. (Plextronics), a private company engaged in printed solar, lighting and other electronics related research and development. Under the joint development agreement, the Company is committed to pay \$1.0 million per year to Plextronics for three years. In addition, the Company invested \$4.0 million in Plextronics through the purchase of a convertible promissory note. The Company also received warrants in connection with the purchase of the convertible note. The note accrues interest at the rate of 3% per year. The Company intends to modify the note beyond its original due date of June 30, 2013. Depending on certain conditions, the note may either convert automatically, or if other certain conditions are met, the Company has the option to convert the note into shares of Plextronics' preferred stock at a specified conversion price. The note was classified as a short-term investment at December 31, 2012 and has been classified in long-term investments at March 31, 2013.

On July 17, 2012, the Company invested \$300,000 in a private company engaged in plasma processing equipment research and development (the Borrower) through the purchase of a convertible promissory note. The note accrues interest at the rate of 5% per year and is due and payable by August 1, 2015. The note is included in long-term investments on the consolidated balance sheet. The Company has the option to convert the note into shares of the Borrower's preferred stock at a specified conversion price.

8

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All short-term investments held at March 31, 2013 will mature within one year.

#### 4. FAIR VALUE MEASUREMENTS

The following table provides the assets carried at fair value measured on a recurring basis as of March 31, 2013 (in thousands):

	Total carrying value as of March 31, 2013	Fair Value Measurements, Using		
		Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Cash equivalents	\$36,063	\$36,063	\$ —	\$—
Short-term investments	175,311	175,311	—	—
Long-term investments	4,868	568	—	4,300

The following table provides the assets carried at fair value measured on a recurring basis as of December 31, 2012 (in thousands):

	Total carrying value as of December 31, 2012	Fair Value Measurements, Using		
		Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Cash equivalents	\$63,863	\$63,863	\$ —	\$—
Short-term investments	158,018	154,018	—	4,000
Long-term investments	1,270	970	—	300

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs are 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 inputs are unobservable inputs based on management's own assumptions used to measure assets and liabilities at fair value. A financial asset or liability's classification is determined based on the lowest level input that is significant to the fair value measurement.

The Company's convertible promissory note investments were initially recorded at cost and are classified within investments on the consolidated balance sheet. During the period, the convertible promissory note in Plextronics was reclassified from short-term investments to long-term investments. See Note 3.

These convertible promissory note investments are inherently risky as they lack a ready market for resale, and the note issuer's success is dependent on product development, market acceptance, operational efficiency, the ability of the investee companies to raise additional funds in financial markets that can be volatile, and other key business factors. The companies the Company has invested in could fail or not be able to raise additional funds when needed. These events could cause the Company's investments to become impaired. In addition, financial market volatility could negatively affect the Company's ability to realize value in the Company's investments through liquidity events, such as mergers and private sales.

The Company determines the fair value of our convertible promissory note investments portfolio quarterly. The fair value of the Company's convertible promissory note investments is determined through the consideration of whether an investee is experiencing financial difficulty. Management performs an evaluation of the probability that the borrower will be in payment default on any of its debt in the foreseeable future. The evaluation requires significant judgment and includes quantitative and qualitative analysis of identified events or circumstances affecting the investee, which may impact the fair value of the investment, such as:

- the investee's revenue and earnings trends relative to pre-defined milestones and overall business prospects;

- the technological feasibility of the investee's products and technologies;

the general market conditions in the investee's industry or geographic area, including adverse regulatory or economic changes;

factors related to the investee's ability to remain in business, such as the investee's liquidity, debt ratios, and the rate at which the investee is using its cash; and

the investee's receipt of additional funding at a lower valuation.

If the fair value of a convertible promissory note investment is below the Company's carrying value, the asset will be written down to its fair value with a resulting charge to net income. Temporary impairments result in a write down of the investment to its fair value with the charge reported in shareholders' equity. There were no impairments of non-marketable convertible promissory note investments as of March 31, 2013.

The following table is a reconciliation of the changes in fair value of the Company's investments in convertible notes for the three months ended March 31, 2013, which had been classified in Level 3 in the fair value hierarchy (in thousands):

Fair value of notes, beginning of period	\$4,300
Investments	—
Fair value of notes, end of period	\$4,300

5. RESEARCH AND LICENSE AGREEMENTS WITH PRINCETON, USC AND MICHIGAN

The Company funded OLED technology research at Princeton and, on a subcontractor basis, at USC for 10 years under a Research Agreement executed with Princeton in August 1997 (the 1997 Research Agreement). The principal investigator conducting work under the 1997 Research Agreement transferred to Michigan in January 2006. Following this transfer, the 1997 Research Agreement was allowed to expire on July 31, 2007.

As a result of the transfer, the Company entered into a new Sponsored Research Agreement with USC to sponsor OLED technology research at USC and, on a subcontractor basis, Michigan. This new Sponsored Research Agreement (as amended, the 2006 Research Agreement) was effective as of May 1, 2006 and had an original term of three years. The 2006 Research Agreement superseded the 1997 Research Agreement with respect to all work being performed at USC and Michigan. Payments under the 2006 Research Agreement were made to USC on a quarterly basis as actual expenses were incurred. The Company incurred \$2.2 million in research and development expense for work performed under the 2006 Research Agreement during the original term, which ended on April 30, 2009.

Effective May 1, 2009, the Company amended the 2006 Research Agreement to extend the term of the agreement for an additional four years. As of March 31, 2013, the Company was obligated to pay USC up to \$457,000 for work actually performed during the remaining extended term, which expired April 30, 2013. From May 1, 2009 through March 31, 2013, the Company incurred \$4.7 million in research and development expense for work performed under the amended 2006 Research Agreement.

On October 9, 1997, the Company, Princeton and USC entered into an Amended License Agreement (as amended, the 1997 Amended License Agreement) under which Princeton and USC granted the Company worldwide, exclusive license rights, with rights to sublicense, to make, have made, use, lease and/or sell products and to practice processes based on patent applications and issued patents arising out of work performed by Princeton and USC under the 1997 Research Agreement. Under this 1997 Amended License Agreement, the Company is required to pay Princeton royalties for licensed products sold by the Company or its sublicensees. For licensed products sold by the Company,



the Company is required to pay Princeton 3% of the net sales price of these products. For licensed products sold by the Company's sublicensees, the Company is required to pay Princeton 3% of the revenues received by the Company from these sublicensees. These royalty rates are subject to renegotiation for products not reasonably conceivable as arising out of the 1997 Research Agreement if Princeton reasonably determines that the royalty rates payable with respect to these products are not fair and competitive.

The Company is obligated under the 1997 Amended License Agreement to pay to Princeton minimum annual royalties. The minimum royalty payment is \$100,000 per year. The Company accrued royalty expense in connection with this agreement of \$309,000 and \$256,000 for the three months ended March 31, 2013 and 2012, respectively.

The Company also is required under the 1997 Amended License Agreement to use commercially reasonable efforts to bring the licensed OLED technology to market. However, this requirement is deemed satisfied if the Company invests a minimum of

\$800,000 per year in research, development, commercialization or patenting efforts respecting the patent rights licensed to the Company.

In connection with entering into the 2006 Research Agreement, the Company amended the 1997 Amended License Agreement to include Michigan as a party to that agreement effective as of January 1, 2006. Under this amendment, Princeton, USC and Michigan have granted the Company a worldwide exclusive license, with rights to sublicense, to make, have made, use, lease and/or sell products and to practice processes based on patent applications and issued patents arising out of work performed under the 2006 Research Agreement. The financial terms of the 1997 Amended License Agreement were not impacted by this amendment.

## 6. ACQUIRED TECHNOLOGY

In 2000, the Company entered into a license agreement with Motorola whereby Motorola granted the Company perpetual license rights to what are now 74 issued U.S. patents relating to Motorola's OLED technologies, together with foreign counterparts in various countries. These patents expire in the U.S. between 2014 and 2018.

The Company was required under the license agreement with Motorola to pay Motorola annual royalties on gross revenues received on account of the Company's sales of OLED products or components, or from its OLED technology licensees, whether or not these revenues related specifically to inventions claimed in the patent rights licensed from Motorola.

On March 9, 2011, the Company purchased these patents from Motorola, including all existing and future claims and causes of action for any infringement of the patents, pursuant to a Patent Purchase Agreement. The Patent Purchase Agreement effectively terminated the Company's license agreement with Motorola, including any obligation to make royalty payments to Motorola.

The technology acquired from Motorola had an assigned value of \$440,000 as of March 9, 2011, which is being amortized over a period of 7.5 years.

On July 23, 2012, the Company entered into a Patent Sale Agreement (the Agreement) with Fujifilm. Under the Agreement, Fujifilm sold more than 1,200 OLED-related patents and patent applications to the Company in exchange for a cash payment of \$105.0 million.

The Company recorded the \$105.0 million plus \$4.1 million of costs as acquired technology which is being amortized over a period of 10 years.

Total amortization expense associated with acquired technology for the three month periods ended March 31, 2013 and 2012 was \$2.7 million and \$15,000, respectively. Amortization expense is included in the patent costs and amortization of acquired technology expense line item on the Consolidated Statements of Operations.

## 7. EQUITY AND CASH COMPENSATION UNDER THE PPG INDUSTRIES AGREEMENTS

On October 1, 2000, the Company entered into a five-year Development and License Agreement (the Development Agreement) and a seven-year Supply Agreement (the Supply Agreement) with PPG Industries. Under the Development Agreement, a team of PPG Industries scientists and engineers assisted the Company in developing its proprietary OLED materials and supplied the Company with these materials for evaluation purposes. Under the Supply Agreement, PPG Industries supplied the Company with its proprietary OLED materials that were intended for resale to customers for commercial purposes.

On July 29, 2005, the Company entered into an OLED Materials Supply and Service Agreement with PPG Industries (the OLED Materials Agreement). The OLED Materials Agreement superseded and replaced in their entireties the Development Agreement and Supply Agreement effective as of January 1, 2006, and extended the term of the Company's relationship with PPG Industries through December 31, 2009. The term of the OLED Materials Agreement was subsequently extended through December 31, 2014.

On September 22, 2011, the Company entered into an Amended and Restated OLED Materials Supply and Service Agreement with PPG Industries (the New OLED Materials Agreement), which replaced the original OLED Materials Agreement with PPG Industries effective as of October 1, 2011. The term of the New OLED Materials Agreement runs through December 31, 2014 and contains provisions that are substantially similar to those of the original OLED Materials Agreement. Under the New OLED Materials Agreement, PPG Industries continues to assist the Company in developing its proprietary OLED materials and to supply the Company with those materials for evaluation purposes and for resale to its customers.

Under the New OLED Materials Agreement, the Company compensates PPG Industries on a cost-plus basis for the services provided during each calendar quarter. The Company is required to pay for some of these services in all cash. Up to 50% of the

remaining services are payable, at the Company's sole discretion, in cash or shares of the Company's common stock, with the balance payable in cash. The actual number of shares of common stock issuable to PPG Industries is determined based on the average closing price for the Company's common stock during a specified number of days prior to the end of each calendar half-year period ending on March 31 and September 30. If, however, this average closing price is less than \$20.00, the Company is required to compensate PPG Industries in cash.

The Company also reimburses PPG Industries for raw materials used for research and development. The Company records the purchases of these raw materials as a current asset until such materials are used for research and development efforts.

The Company recorded expense of \$2.3 million and \$1.3 million for the three months ended March 31, 2013 and 2012, respectively, in relation to the cash portion of the reimbursement of expenses and work performed by PPG Industries, excluding amounts paid for commercial chemicals. No shares were issued for services to PPG Industries for the three months ended March 31, 2013 and 2012.

#### 8. SHAREHOLDERS' EQUITY (in thousands, except for share and per share data)

	Series A Nonconvertible Preferred Stock		Common Stock		Additional Paid-In Capital		Accumulated Other Comprehensive Income		Treasury Stock		Total Shareholders' Equity
	Shares	Amount	Shares	Amount	Capital	Deficit	Loss	Shares	Amount	Equity	
Balance, January 1, 2013	200,000	\$2	46,561,437	\$465	\$564,883	\$(204,211)	\$(5,702)	(205,902)	\$(5,202)	\$350,235	
Net loss	—	—	—	—	—	(4,758)	—	—	—	(4,758)	
Other comprehensive income	—	—	—	—	—	—	166	—	—	166	
Repurchase of common stock	—	—	—	—	—	—	—	(195,599)	(5,456)	(5,456)	
Exercise of common stock options, net of tendered shares	—	—	5,332	—	66	—	—	—	—	66	
Stock-based employee compensation, net of shares withheld for employee taxes (A)	—	—	(7,981)	—	(1,187)	—	—	—	—	(1,187)	
Issuance of common stock to Board of Directors and Scientific Advisory Board (B)	—	—	24,153	1	524	—	—	—	—	525	
	—	—	4,258	—	93	—	—	—	—	93	

Issuance of  
common stock  
under an  
Employee  
Stock Purchase  
Plan

Balance, 200,000 \$2 46,587,199 \$466 \$564,379 \$(208,969 ) \$(5,536 ) (401,501) \$(10,658) \$339,684  
March 31, 2013

- (A) Includes \$435 (13,356 shares) that was accrued for in a previous period and charged to expense when earned, but issued in 2013, less shares withheld for taxes in the amount of \$153 (4,672 shares).
- (B) Includes \$300 (9,212 shares) that was earned in a previous period and charged to expense when earned, but issued in 2013.

## 9. ACCUMULATED OTHER COMPREHENSIVE LOSS

Accumulated other comprehensive loss consists of the following (in thousands):

	Unrealized loss on available-for-sale securities	Net unrealized loss on retirement plan	Total
Balance January 1, 2013	\$(18 )	\$(5,684 )	\$(5,702 )
Other comprehensive income before reclassification	(3 )	—	(3 )
Amounts reclassified from accumulated other comprehensive income	—	169	169
Net current-period other comprehensive income	(3 )	169	166
Balance March 31, 2013	\$(21 )	\$(5,515 )	\$(5,536 )

Amounts related to the retirement plan reclassified out of accumulated other comprehensive loss and included in net periodic benefit costs (see Note 11) for the three months ended March 31, 2013 were as follows (in thousands):

Amortization of prior service cost	\$ 146
Amortization of actuarial loss	23
Total	\$ 169

## 10. STOCK-BASED COMPENSATION

The Company recognizes in the statements of operations the grant-date fair value of stock options and other equity based compensation, such as shares issued under employee stock purchase plans, restricted stock awards, restricted stock units, performance unit awards and stock appreciation rights (SARs), issued to employees and directors.

The grant-date fair value of stock options is determined using the Black-Scholes option pricing model. The fair value of share-based awards is recognized as compensation expense on a straight-line basis over the requisite service period, net of estimated forfeitures. The Company relies primarily upon historical experience to estimate expected forfeitures and recognizes compensation expense on a straight-line basis from the date of the grant. The Company issues new shares upon the respective grant, exercise or vesting of share-based payment awards, as applicable.

Cash-settled SARs awarded in share-based payment transactions are classified as liability awards; accordingly, the Company records these awards as a component of accrued expenses on its consolidated balance sheets. The fair value of each SAR is estimated using the Black-Scholes option pricing model and is remeasured at each reporting period until the award is settled. Changes in the fair value of the liability award are recorded as expense or income in the statements of operations.

Performance unit awards are subject to either a performance-based or market-based vesting requirement. For performance-based vesting, the grant-date fair value is recognized over the service period, based on an assessment of the likelihood that the applicable performance goals will be achieved and compensation expense is periodically adjusted based on actual and expected performance. Compensation expense for performance units with market-based vesting is calculated based on the estimated fair value as of the grant date and is recognized over the service period on a straight-line basis.

## Equity Compensation Plan

In 1995, the Board of Directors of the Company (the “Board”) adopted a stock option plan, which was amended and restated in 2003, 2011, and 2013 and is now called the Equity Compensation Plan. The Equity Compensation Plan provides for the granting of incentive and nonqualified stock options, shares of common stock, SARs, and performance units to employees, directors and consultants of the Company. Stock options are exercisable over periods determined by the Compensation Committee, but for no longer than 10 years from the grant date. Through March 31, 2013, the Company’s shareholders have approved increases in the number of shares reserved for issuance under the Equity Compensation Plan to 8,000,000 and have extended the term of the plan through September 1, 2015.

#### Restricted Stock Awards and Restricted Stock Units

During the three months ended March 31, 2013, the Company granted 111,821 shares of restricted stock awards and restricted stock units to employees, which had a total fair value of \$3.7 million on the respective dates of grant, and will vest over two to three years from the date of grant, provided that the grantee is still an employee of the Company on the applicable vesting date.

For the three months ended March 31, 2013 and 2012, the Company recorded general and administrative expense of \$767,000 and \$573,000 and research and development expense of \$327,000 and \$171,000, respectively, related to restricted stock awards and restricted stock units.

In connection with the vesting of restricted common stock previously issued to employees, for the three months ended March 31, 2013, 88,063 shares of common stock with a fair value of \$2.8 million were withheld in satisfaction of tax withholding obligations.

#### Performance Unit Awards

During the three months ended March 31, 2013, the Company granted 35,776 performance units, of which 17,888 are subject to a performance-based vesting requirement and 17,888 are subject to a market-based vesting requirement and will vest over the terms described above. Total fair value of the performance unit awards granted was \$1.4 million on the date of grant.

Each performance unit award is subject to both a performance-vesting requirement (either performance-based or market-based) and a service-vesting requirement.

The performance-based vesting requirement is tied to the Company's cumulative revenue growth compared to the cumulative revenue growth of companies comprising the Nasdaq Electronics Components Index, as measured over a two-year performance period beginning January 1, 2013 and ending December 31, 2014. The market-based vesting requirement is tied to the Company's total shareholder return relative to the total shareholder return of companies comprising the Nasdaq Electronics Components Index, as measured over a two-year performance period beginning January 1, 2013 and ending December 31, 2014.

The maximum number of performance units that may vest based on performance is two times the shares granted. Further, if the Company's total shareholder return is negative, the performance units may not vest above the shares granted.

For the three months ended March 31, 2013, the Company recorded general and administrative expense of \$38,000 and research and development expense of \$11,000 related to performance units.

#### Employee Stock Grants

For the three months ended March 31, 2012, the Company recorded research and development expense of \$31,000 related to fully vested shares issued to employees. No such grants were made or expenses recorded in 2013.

#### Stock Appreciation Rights

During 2011, the Company granted 24,000 cash-settled SARs to certain executive officers. The SARs represented the right to receive, for each SAR, a cash payment equal to the amount, if any, by which the fair market value of a share of the common stock of the Company on the vesting date exceeded the base price of the SAR award. The base price of each SAR award was \$34.78 per share. The SARs vested on the first anniversary of the date of grant, provided that the grantee was still an employee of the Company on the applicable vesting date. During the three months ended March 31, 2012, all SARs were settled, resulting in cash payments of \$49,000. The Company recorded \$1,000 to general and administrative expense, and \$3,000 to research and development expense, for the three months ended



March 31, 2012, related to the SARs. No such grants were made in 2013 or 2012.

#### Other Compensation

During the three months ended March 31, 2013, the Company issued 5,000 shares of common stock to members of the Board as partial compensation for their service on the Board. The Company recorded general and administrative expense of \$138,000 and \$160,000 for the three months ended March 31, 2013 and 2012, respectively, related to shares issued to members of the Board.

During the three months ended March 31, 2013, the Company granted 7,370 shares of restricted stock to certain members of its Scientific Advisory Board. These shares of restricted stock will vest and be issued in equal increments annually over three years from the date of grant, provided that the grantee is still engaged as a consultant of the Company on the applicable vesting date. The Company recorded research and development expense of \$86,000 and \$53,000 for the three months ended March 31, 2013 and 2012, respectively, related to shares issued to members of its Scientific Advisory Board.

## Employee Stock Purchase Plan

On April 7, 2009, the Board adopted an Employee Stock Purchase Plan (ESPP). The ESPP was approved by the Company's shareholders and became effective on June 25, 2009. The Company has reserved 1,000,000 shares of common stock for issuance under the ESPP. Unless sooner terminated by the Board, the ESPP will expire when all reserved shares have been issued.

Eligible employees may elect to contribute to the ESPP through payroll deductions during consecutive three-month purchase periods, the first of which began on July 1, 2009. Each employee who elects to participate will be deemed to have been granted an option to purchase shares of the Company's common stock on the first day of the purchase period. Unless the employee opts out during the purchase period, the option will automatically be exercised on the last day of the period, which is the purchase date, based on the employee's accumulated contributions to the ESPP. The purchase price will equal 85% of the lesser of the price per share of common stock on the first day of the period or the last day of the period.

Employees may allocate up to 10% of their base compensation to purchase shares of common stock under the ESPP; however, each employee may purchase no more than 12,500 shares on a given purchase date, and no employee may purchase more than \$25,000 of common stock under the ESPP during a given calendar year.

During the three months ended March 31, 2013 and 2012, the Company issued 4,258 and 2,298 shares of its common stock, respectively, under the ESPP, resulting in proceeds of \$93,000 and \$71,000, respectively.

For the three months ended March 31, 2013 and 2012, the Company recorded general and administrative expense of \$7,000 and \$5,000 and research and development expense of \$23,000 and \$20,000, respectively, related to the ESPP.

The expense recorded equals the amount of the discount and the value of the look-back feature for the shares that were issued under the ESPP.

## 11. SUPPLEMENTAL EXECUTIVE RETIREMENT PLAN

On March 18, 2010, the Compensation Committee and the Board approved and adopted the Universal Display Corporation Supplemental Executive Retirement Plan (SERP), effective as of April 1, 2010. The purpose of the SERP, which is unfunded, is to provide certain executive officers of the Company with supplemental pension benefits following a cessation of their employment. As of March 31, 2013, there were five participants in the SERP. The SERP benefit is based on a percentage of the participant's annual base salary and the number of years of service.

The Company records amounts relating to the SERP based on calculations that incorporate various actuarial and other assumptions, including discount rates, rate of compensation increases, retirement dates and life expectancies. The net periodic costs are recognized as employees render the services necessary to earn the SERP benefits.

The components of net periodic pension cost were as follows for the three months ended March 31, (in thousands):

	2013	2012
Service cost	\$162	\$144
Interest cost	86	96
Amortization of prior service cost	146	146
Amortization of actuarial loss	23	2
Total net periodic benefit cost	\$417	\$388

## 12. COMMITMENTS AND CONTINGENCIES

## Commitments

On July 13, 2012, the Company entered into a three-year joint development agreement with Plextronics. Under the joint development agreement, the Company is committed to pay \$1.0 million per year to Plextronics for three years starting on July 13, 2012.

Under the 2006 Research Agreement with USC, the Company is obligated to make certain payments to USC based on work performed by USC under that agreement, and by Michigan under its subcontractor agreement with USC. See Note 5 for further explanation.

Under the terms of the 1997 Amended License Agreement, the Company is required to make minimum royalty payments to Princeton. See Note 5 for further explanation.

The Company has agreements with six executive officers which provide for certain cash and other benefits upon termination of employment of the officer in connection with a change in control of the Company. Each executive is entitled to a lump-sum cash payment equal to two times the sum of the average annual base salary and bonus of the officer and immediate vesting of all stock options and other equity awards that may be outstanding at the date of the change in control, among other items.

#### Patent Related Challenges and Oppositions

Each major jurisdiction in the world that grants patents provides third parties with opportunities and access to administrative proceedings whereby they can request for additional review of previously issued patents in the respective jurisdiction. Each jurisdiction provides unique procedures for undertaking such activities, as well as different vehicles to review and appeal the determinations made in connection with such reviews. The conclusions made by the administration bodies tend to be appealable and generally are limited in scope and applicability to the specific claims and jurisdiction in question.

Below are summaries of certain proceedings that have been commenced against issued patents that are either exclusively licensed to the Company or which are now assigned to the Company. The Company notes that it currently has more than 3,000 issued patents and pending patent applications, worldwide, which are utilized in the Company's materials supply and device licensing business. The Company does not believe that the confirmation, loss or modification of the Company's rights in any individual claim or set of claim(s) that are the subject of the following legal proceedings would have a material impact on the Company's material sales or licensing business. However, as noted within the descriptions, many of the following legal proceedings involve patents relating to the Company's key phosphorescent OLED technologies and the Company intends to vigorously defend against such claims, which may require the expenditure of significant amounts of the Company's resources. The entries marked with an "\*" relate to our UniversalPHOLED phosphorescent OLED technology.

#### Opposition to European Patent No. 0946958

On December 8, 2006, Cambridge Display Technology Ltd. (CDT), which was acquired in 2007 by Sumitomo Chemical Company (Sumitomo), filed a Notice of Opposition to European Patent No. 0946958 (EP '958 patent), which relates to the Company's FOLED™ flexible OLED technology. The EP '958 patent, which was issued on March 8, 2006, is a European counterpart patent to U.S. patents 5,844,363, 6,602,540, 6,888,306 and 7,247,073. These patents are exclusively licensed to the Company by Princeton, and the Company is required to pay all legal costs and fees associated with this proceeding.

The European Patent Office (the EPO) conducted an Oral Hearing in this matter and on November 26, 2009 issued its written decision to reject the opposition and to maintain the patent as granted. CDT has filed an appeal to the EPO panel decision.

At this time, based on its current knowledge, Company management believes that the EPO panel decision will be upheld on appeal. However, Company management cannot make any assurances of this result.

#### Opposition to European Patent No. 1449238\*

Between March 8, 2007 and July 27, 2007, three companies filed Notices of Opposition to European Patent No. 1449238 (EP '238 patent). The three companies are Sumation Company Limited (Sumation), a joint venture between Sumitomo and CDT, Merck Patent GmbH, of Darmstadt, Germany, and BASF Aktiengesellschaft, of Mannheim, Germany. The EP '238 patent, which was issued on November 2, 2006, is a European counterpart patent, in part, to U.S. patents 6,830,828; 6,902,830; 7,001,536; 7,291,406; 7,537,844; and 7,883,787; and to pending U.S. patent application 13/009,001, filed on January 19, 2011, and 13/205,290, filed on August 9, 2011 (hereinafter the "U.S. '828 Patent Family"). They are exclusively licensed to the Company by Princeton, and the Company is required to pay all legal costs and fees associated with this proceeding.

The EPO combined all three oppositions into a single opposition proceeding. The EPO conducted an Oral Hearing in this matter and at the conclusion of the Oral Hearing, the EPO panel announced its decision to maintain the patent with claims directed to OLEDs comprising phosphorescent organometallic iridium compounds. The official minutes from the Oral Hearing and written decision were published on January 13, 2012.

All the parties filed notices of appeal to the EPO's panel decision and submitted their initial papers in support of their respective requests for appellate review. An Oral hearing has been scheduled by the EPO for November 21-22, 2013.

At this time, based on its current knowledge, Company management believes that the EPO will uphold the Company's positions on appeal. However, Company management cannot make any assurances of this result.

#### Opposition to European Patent No. 1394870\*

On April 20, 2010, five European companies filed Notices of Opposition to European Patent No. 1394870 (the EP '870 patent). The EP '870 patent, which was issued on July 22, 2009, is a European counterpart patent, in part, to U.S. patents 6,303,238; 6,579,632; 6,872,477; 7,279,235; 7,279,237; 7,488,542; 7,563,519; and 7,901,795; and to pending U.S. patent application 13/035,051, filed on February 25, 2011 (hereinafter the "U.S. '238 Patent Family"). They are exclusively licensed to the Company by Princeton, and the Company is required to pay all legal costs and fees associated with this proceeding.

The five companies are Merck Patent GmbH; BASF Schweiz AG of Basel, Switzerland; Osram GmbH of Munich, Germany; Siemens Aktiengesellschaft of Munich, Germany; and Koninklijke Philips Electronics N.V., of Eindhoven, The Netherlands.

The EPO combined the oppositions into a single opposition proceeding. The matter has been briefed and the Company is waiting for the EPO to provide notice of the date of the Oral Hearing. The Company is also waiting to see whether any of the other parties in the opposition file additional documents to which the Company might respond.

At this time, based on its current knowledge, Company management believes there is a substantial likelihood that the patent being challenged will be declared valid and that all or a significant portion of the Company's claims will be upheld. However, Company management cannot make any assurances of this result.

#### Invalidation Trials in Japan for Japan Patent Nos. 4357781 and 4358168\*

On May 24, 2010, the Company received two Notices of Invalidation Trials against Japan Patent Nos. 4357781 (the JP '781 patent) and 4358168 (the JP '168 patent), which were both issued on August 14, 2009. The requests for these two additional Invalidation Trials were also filed by Semiconductor Energy Laboratory Co., Ltd. (SEL) of Kanagawa, Japan. The JP '781 and '168 patents are also Japanese counterpart patents, in part, to the above-noted U.S. '828 Patent Family and EP '238 Patent. They are exclusively licensed to the Company by Princeton, and the Company is required to pay all legal costs and fees associated with this proceeding.

On March 31, 2011, the Company learned that the JPO had issued decisions finding all claims in the JP '781 and JP '168 patents invalid. Company management believed that the JPO's decisions invalidating these claims were erroneous, and the Company filed appeals for both cases to the Japanese IP High Court.

Both parties filed appeal briefs in this matter with the Japanese IP High Court. The Japanese IP High Court held hearings for this matter on November 22, 2011, March 5, 2012, and June 18, 2012. On November 7, 2012, the Company was notified by the Company's Japanese counsel that the Japanese IP High Court had reversed the JPO's finding of invalidity and remanded the case back to the JPO for further consideration.

In a decision reported to the Company on April 15, 2013, all claims in the Company's JP '781 and JP '168 patents were upheld as valid by the JPO. The Company's opponent has until about May 15, 2013 to file an appeal.

#### Invalidation Trial in Korea for Patent No. KR-0998059

On March 10, 2011, the Company received informal notice from its Korean patent counsel of a Request for an Invalidation Trial from the Korean Intellectual Property Office (KIPO) for its Korean Patent No. 10-0998059 (the KR

'059 patent), which was issued on November 26, 2010. The Request was filed by a certain individual petitioner, but the Company still does not know which company, if any, was ultimately responsible for filing this Request. The KR '059 patent is a Korean counterpart patent to the OVJP, Organic Vapor Jet Printing, family of U.S. patents originating from U.S. patent 7,431,968.

An oral hearing relating to this matter was held on December 18, 2012, after numerous supporting briefs were filed by both parties. On March 5, 2013, the Company was notified that a favorable decision had been rendered in which the Company's patent was held valid. The Company has not received any notice of intent to appeal from the petitioner.

Invalidation Trial in Japan for Japan Patent No. 4511024\*

On June 16, 2011, the Company learned that a Request for an Invalidation Trial was filed in Japan for its Japanese Patent No. JP-4511024 (the JP '024 patent), which issued on May 14, 2010. The Request was filed by SEL, the same opponent as in the above-noted Japanese Invalidation Trial for the JP '929 patent. The JP '024 patent is a counterpart patent, in part, to the U.S. '238 Patent

Family, which relate to the EP '870 patent, which is subject to one of the above-noted European oppositions; and to the Company's Korean KR-558632 and KR-963857 patents, which relate to the Company's UniversalPHOLED phosphorescent OLED technology. They are exclusively licensed to the Company by Princeton, and the Company is required to pay all legal costs and fees associated with this proceeding.

The Company timely filed a Written Reply to the Request for Invalidation Trial. A hearing was held on March 15, 2012.

On May 10, 2012, the Company learned that the JPO issued a decision upholding the validity of certain claimed inventions in the JP '024 Patent but invalidating the broadest claims in the patent. Company management believes the JPO's decision was erroneous with respect to the broadest claims, and the Company intended to appeal the decision to the Japanese IP High Court.

A Notice of Appeal was filed with the Japanese IP High Court on September 5, 2012. The Appeal Brief was timely filed on October 19, 2012. The opponent filed their reply on January 15, 2013. The Company filed its response on March 8, 2013. A Technical Hearing is scheduled for May 30, 2013. It is expected that the Japanese IP High Court may render a decision in the second half of 2013.

At this time, based on its current knowledge, Company management believes that the patent being challenged should be declared valid and that all or a significant portion of the Company's claims should be upheld. However, Company management cannot make any assurances of this result.

#### Opposition to European Patent No. 1252803\*

On July 12 and 13, 2011, three companies filed oppositions to the Company's European Patent No. 1252803 (the EP '803 patent). The three companies are Sumitomo, Merck Patent GmbH and BASF SE, of Ludwigshaven, Germany. The EP '803 patent, which was issued on October 13, 2010, is a European counterpart patent, in part, to the U.S. '828 Patent Family. They are exclusively licensed to the Company by Princeton, and the Company is required to pay all legal costs and fees associated with this proceeding.

The EPO combined the oppositions into a single opposition proceeding. The Company's initial response to the oppositions was timely filed prior to the February 18, 2012 extended due date.

On December 7, 2012 the EPO rendered a decision at an Oral Hearing wherein it upheld the broadest claim of the granted patent. The written decision was reported by the EPO on December 21, 2012. The Company chose not to file an appeal. All three opponents filed an appeal.

At this time, based on its current knowledge, Company management believes there is a substantial likelihood that the patent being challenged will be declared valid and that all or a significant portion of the Company's claims will be further upheld on appeal if one is timely filed by the opponents. However, Company management cannot make any assurances of this result.

#### Opposition to European Patent No. 1390962

On November 16, 2011, Osram AG and BASF SE each filed a Notice of Opposition to European Patent No. 1390962 (EP '962 patent), which relates to the Company's white phosphorescent OLED technology. The EP '962 patent, which was issued on February 16, 2011, is a European counterpart patent to U.S. patents 7,009,338 and 7,285,907. They are exclusively licensed to the Company by Princeton, and the Company is required to pay all legal costs and fees associated with this proceeding.



The EPO combined the oppositions into a single opposition proceeding. The Company's response to the opponents' opposition briefs was timely filed on June 28, 2012.

At this time, based on its current knowledge, Company management believes there is a substantial likelihood that the patent being challenged will be declared valid, and that all or a significant portion of the Company's claims will be upheld. However, Company management cannot make any assurances of this result.

Opposition to European Patent No. 1933395\*

On February 24 and 27, 2012, oppositions were filed to the Company's European Patent No. 1933395 (the EP '395 patent). These oppositions were filed by Sumitomo, Merck Patent GmbH and BASF SE. The EP '395 patent is a counterpart patent to the above-noted JP '168 patent, and to Korean Patent Nos. KR-840,637 and KR-937-470, counterpart patent, in part, to the U.S. '828 Patent Family. This patent is exclusively licensed to the Company by Princeton, and the Company is required to pay all legal costs and fees associated with this proceeding.

The Company's response to the opponents' opposition briefs was timely filed on September 27, 2012. An Oral Hearing has been scheduled by the EPO for October 14, 2013.

At this time, based on its current knowledge, Company management believes there is a substantial likelihood that the patent being challenged will be declared valid and that all or a significant portion of the Company's claims will be upheld. However, Company management cannot make any assurances of this result.

### 13. CONCENTRATION OF RISK

Included in technology development and support revenue in the accompanying statements of operations is \$629,000 and \$1.2 million for the three months ended March 31, 2013 and 2012, respectively, which was derived from contracts with United States government agencies. Revenues derived from contracts with United States government agencies represented 4% and 9% of the consolidated revenue for the three months ended March 31, 2013 and 2012, respectively.

Revenues for the three months ended March 31, 2013 and 2012, and accounts receivable as of March 31, 2013, from our largest non-government customers were as follows:

Customer	% of Total Revenue		Accounts Receivable (in thousands) March 31, 2013
	2013	2012	
A	42%	42%	\$4,829
B	21%	12%	1,260
C	19%	13%	2,822

Revenues from outside of North America represented 95% and 90% of consolidated revenue for the three months ended March 31, 2013 and 2012, respectively. Revenues by geographic area are as follows (in thousands):

Country	2013	2012
United States	\$755	\$1,274
South Korea	9,344	7,393
Japan	4,612	2,566
Taiwan	166	1,257
Other	99	130
All foreign locations	14,221	11,346
Total revenue	\$14,976	\$12,620

The Company attributes revenue to different geographic areas on the basis of the location of the customer.

Long-lived assets (net) by geographic area at March 31, 2013 and December 31, 2012 are as follows (in thousands):

	March 31, 2013	December 31, 2012
United States	\$12,225	\$11,512
Other	287	296
Total long-lived assets	\$12,512	\$11,808

All chemical materials were purchased from one supplier. See Note 7.



#### 14. INCOME TAXES

In July 2012, Samsung Mobile Display Co., Ltd (SMD) merged with Samsung Display Co., Ltd. (SDC). Following the merger, all agreements between the Company and SMD were assigned to SDC, and SDC will honor all pre-existing agreements made between the Company and SMD.

The Company is subject to income taxes in both United States and foreign jurisdictions. For the three months ended March 31, 2013, a tax benefit of approximately \$2.2 million was recorded based on the Company's estimated annual effective tax rate for 2013 applied to the Company's loss before income taxes. The loss recognized during the three months ended March 31, 2013 is expected to be offset by income during the remainder of 2013, therefore realizing the benefit. There was no benefit recorded during the three months ended March 31, 2012. The Company's estimated effective tax rate is primarily related to foreign taxes withheld on royalty and license fees paid to the Company. SDC has been required to withhold tax upon payment of royalty and license fees to the Company at a rate of 16.5%. Any potential foreign tax credits to be received by the Company for these amounts on its United States tax returns are currently offset by a full valuation allowance as noted below.

Based on previous earnings history, a current evaluation of expected future taxable income and other evidence, the Company determined it is not more likely than not that certain deferred tax assets will be realized. Therefore, the Company has continued to establish a full valuation allowance for significantly all its net deferred tax assets.

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent on the Company's ability to generate future taxable income to obtain benefit from the reversal of temporary differences, net operating loss carryforwards and tax credits. The Company considers the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning strategies in making this assessment. As of March 31, 2013, a full valuation allowance continued to be established for significantly all of the Company's net deferred tax assets because the Company incurred substantial consolidated operating losses from inception through 2010, as well as continuing losses in certain jurisdictions, and based on the aforementioned factors, the Company has assessed that the net deferred tax assets do not meet the criteria for realization. In future periods, if the Company determines it is more likely than not that net deferred tax assets will be realized, the related valuation allowance would be reduced and an income tax benefit would be recorded.

#### 15. NET INCOME (LOSS) PER COMMON SHARE

Basic net income (loss) per common share is computed by dividing the net income (loss) by the weighted-average number of shares of common stock outstanding for the period excluding unvested restricted stock awards. Diluted net income (loss) per common share reflects the potential dilution from the exercise or conversion of securities into common stock, the effect of unvested restricted stock awards and restricted stock units, and the impact of shares to be issued under the ESPP.

For the three months ended March 31, 2013 and 2012, the combined effects of outstanding stock options, and unvested restricted stock awards, restricted stock units and performance units of 1,404,031 and 1,575,513, respectively, and the impact of shares to be issued under the ESPP, which was minor, were excluded from the calculation of diluted net loss per common share as their impact would have been antidilutive.

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the consolidated financial statements and related notes above.

**CAUTIONARY STATEMENT  
CONCERNING FORWARD-LOOKING STATEMENTS**

This discussion and analysis contains some “forward-looking statements.” Forward-looking statements concern possible or assumed future results of operations, including descriptions of our business strategies and customer relationships. These statements often include words such as “believe,” “expect,” “anticipate,” “intend,” “plan,” “estimate,” “seek,” “will,” “may,” and similar expressions. These statements are based on assumptions that we have made in light of our experience in the industry, as well as our perceptions of historical trends, current conditions, expected future developments and other factors we believe are appropriate in these circumstances.

As you read and consider this discussion and analysis, you should not place undue reliance on any forward-looking statements. You should understand that these statements involve substantial risk and uncertainty and are not guarantees of future performance or results. They depend on many factors that are discussed further in the section entitled (Risk Factors) in our Annual Report on Form 10-K for the year ended December 31, 2012, as supplemented by disclosures, if any, in Item 1A of Part II below. Changes or developments in any of these areas could affect our financial results or results of operations and could cause actual results to differ materially from those contemplated in the forward-looking statements.

All forward-looking statements speak only as of the date of this report or the documents incorporated by reference, as the case may be. We do not undertake any duty to update any of these forward-looking statements to reflect events or circumstances after the date of this report or to reflect the occurrence of unanticipated events.

## OVERVIEW

We are a leader in the research, development and commercialization of organic light emitting diode, or OLED, technologies for use in flat panel display, solid-state lighting and other applications. Since 1994, we have been exclusively engaged, and expect to continue to be exclusively engaged, in funding and performing research and development activities relating to OLED technologies and materials, and in attempting to commercialize these technologies and materials. We derive our revenue from the following:

- intellectual property and technology licensing;
- sales of OLED materials for evaluation, development and commercial manufacturing; and
- technology development and support, including government contract work and support provided to third parties for commercialization of their OLED products.

While we have made significant progress over the past few years developing and commercializing our family of OLED technologies (including our PHOLED, TOLED, FOLED) and materials, we have incurred significant losses since our inception, resulting in an accumulated deficit of \$209.0 million as of March 31, 2013.

We anticipate fluctuations in our annual and quarterly results of operations due to uncertainty regarding, among other factors:

- the timing, cost and volume of sales of our OLED materials;
- the timing of our receipt of license fees and royalties, as well as fees for future technology development and evaluation;
- the timing and magnitude of expenditures we may incur in connection with our ongoing research and development and patent-related activities; and
- the timing and financial consequences of our formation of new business relationships and alliances.

## RESULTS OF OPERATIONS

Three Months Ended March 31, 2013 Compared to Three Months Ended March 31, 2012

We had an operating loss of \$7.2 million for the three months ended March 31, 2013, compared to an operating loss of \$1.6 million for the three months ended March 31, 2012. The increase in operating loss was due to the following:

an increase in operating expenses of \$8.0 million, which includes a \$2.0 million increase in the cost of sales, a \$2.3 million increase in research and development costs and a \$2.7 million increase in patent costs and amortization of acquired technology, described in detail below, offset by

an increase in revenue of \$2.4 million which includes increases in both material sales and royalty and license fees.

We had a net loss of \$4.8 million (or \$0.10 per basic and diluted share) for the three months ended March 31, 2013, compared to a net loss of \$1.2 million (or \$0.03 per basic and diluted share) for the three months ended March 31, 2012.

Our revenues were \$15.0 million for the three months ended March 31, 2013, compared to \$12.6 million for the three months ended March 31, 2012. The increase in our overall revenue was primarily due to increases in both material sales and royalty and

license fees, which included a \$3.0 million increase in commercial material sales and an increase in royalty and license fees of \$877,000, offset by a \$781,000 decrease in development chemical sales.

Material sales increased to \$12.8 million for the three months ended March 31, 2013, compared to \$10.5 million for the same period in 2012. Material sales relate to the sale of our OLED materials for our customers' evaluation, manufacture and development activities, and for incorporation into their commercial OLED products. The increase in material sales resulted primarily from increased commercial chemical sales due to the overall expanded adoption of our technology and materials in the marketplace by display manufacturers, particularly from SDC.

Material sales included sales of both phosphorescent emitter and host materials. Phosphorescent emitter sales were 71% of our total material sales for the three months ended March 31, 2013, compared to 81% of our total material sales for the three months ended March 31, 2012. Host material sales were 29% of our total material sales for the three months ended March 31, 2013, compared to 19% of our total material sales for the three months ended March 31, 2012.

Phosphorescent emitter sales increased by approximately \$519,000 due to an increase in commercial phosphorescent emitter sales, offset by a decrease in development phosphorescent emitter sales. Commercial green emitter sales increased by approximately \$3.1 million due to expanded use of our green emitter in customer products. Commercial red emitter sales decreased by approximately \$1.5 million mainly due to a decrease in the average price per gram of red emitter based on the cumulative volume of purchases, as well as a reduction in the number of grams sold, as we believe our customers utilized our materials more effectively.

Host material sales increased by \$1.7 million, mainly related to the use of commercial host materials with our green emitter materials. We believe we can participate in the host materials business due to our long experience in developing emitter materials, which are used together with host materials in the emissive layer of an OLED. However, our customers are not required to purchase our host materials in order to utilize our phosphorescent emitter materials, and the host material sales business is more competitive than the phosphorescent emitter material sales business. Thus, our long-term prospects for host material sales are uncertain.

We cannot accurately predict how long our phosphorescent emitter material sales or host material sales to particular customers will continue, as our customers frequently update and alter their product offerings in response to market demands. Continued sales of our OLED materials to these customers will depend on several factors, including pricing, availability, continued technical improvement and competitive product offerings.

Royalty and license fees increased to \$1.3 million for the three months ended March 31, 2013, compared to \$422,000 for the three months ended March 31, 2012. The increase was mainly related to an increase in material sales to certain customers for which a portion of the total consideration is allocated to license fees.

In August 2011, we entered into a patent license agreement with SDC which replaced and superseded the then existing patent license agreement with SMD. This patent license agreement with SDC runs through December 31, 2017. Our current patent license agreement with SDC covers the manufacture and sale of specified OLED display products. Under the agreement, SDC has agreed to pay us a fixed license fee, payable in semi-annual installments over the agreement term. These installments, that are due in the second and fourth quarter of each annual period, increase on an annual basis over the term of the license agreement. The installment amounts replaced the quarterly royalty reporting structure in the prior patent license agreement. The installment amounts were determined through negotiation based on a number of factors, including, without limitation, estimates of SDC's OLED business growth as a percentage of published OLED market forecasts, the use of red and green phosphorescent materials in SDC's OLED display products, and appropriate royalty rates relating to SDC's practice under the licensed patents. Based upon the extended payment arrangement, such amounts are not considered fixed and determinable for revenue recognition



purposes until such time the installments become due and payable. As a result, license fees under our new agreement with SDC will be recognized as they become due and payable, which is currently scheduled to be in the second and fourth quarter of each year; therefore our quarterly license fees, will fluctuate accordingly, depending on the timing of such payments.

At the same time we entered into the current patent license agreement with SDC, we also entered into a new supplemental material purchase agreement with SDC. Under the current supplemental material purchase agreement, SDC agrees to purchase from us a minimum dollar amount of phosphorescent emitter materials for use in the manufacture of licensed products. This minimum purchase commitment is subject to SDC's requirements for phosphorescent emitter materials and our ability to meet these requirements over the term of the supplemental agreement. The minimum purchase amounts increase on an annual basis over the term of the supplemental agreement. These amounts were determined through negotiation based on a number of factors, including, without limitation, estimates of SDC's OLED business growth as a percentage of published OLED market forecasts and SDC's projected minimum usage of red and green phosphorescent emitter materials over the term of the agreement.

Technology development and support revenue decreased to \$925,000 for the three months ended March 31, 2013, compared to \$1.7 million in technology development revenue for the same period in 2012 due to fewer outstanding contracts in the current period when compared to the prior period.

Cost of material sales increased to \$3.1 million for the three months ended March 31, 2013, compared to \$1.1 million for the three months ended March 31, 2012, partially due to the aforementioned increase in material sales. Cost of material sales includes the cost of producing materials that have been classified as commercial and shipping costs for such materials, but excludes the cost of producing certain materials, which cost has already been included in research and development expense. Commercial materials are materials that have been validated by us for use in commercial OLED products.

During the three months ended March 31, 2012, costs related to our green emitter material sales excluded costs that had been previously included in research and development expenses, however, during the three months ended March 31, 2013, costs related to our green emitter material sales included all costs to produce the material. In addition, there was an increase of approximately 30% to the cost of one of the main materials used in the production of our emitters during the three months ended March 31, 2013 when compared to the same period in 2012.

Depending on the amounts, timing and stage of materials being classified as commercial, we expect cost of materials sales to fluctuate from quarter to quarter. As a result of these timing issues, and due to increased sales of commercial materials, cost of material sales increased for the three months ended March 31, 2013, compared to the same period in 2012. For the three months ended March 31, 2013 and 2012, costs associated with \$10.5 million and \$7.5 million, respectively, of material sales relating to commercial materials were included in cost of material sales.

We incurred research and development expenses of \$8.9 million for the three months ended March 31, 2013, compared to \$6.7 million for the three months ended March 31, 2012. The overall increase was primarily due to:

- increased costs of \$1.0 million incurred under our agreement with PPG Industries, which represented the cost of scaling up of a new red emitter material developed to commercial status, as well as to supply us with those materials for evaluation purposes;

- increased costs of \$767,000 due to increased employee costs related to bonus compensation, as well as salaries and salary related expenses for new employees;

- increased costs of \$432,000 associated with sponsored research and development contracts; and

- increased costs of \$219,000 related to outsourced research and development efforts; offset by

- decreased subcontract costs of \$262,000.

Selling, general and administrative expenses were \$5.2 million for the three months ended March 31, 2013, compared to \$4.3 million for the three months ended March 31, 2012. The increase in these costs was primarily due to increased costs associated with bonus and stock-based compensation for certain executive officers as well as increased salaries and salary-related expenses associated with new employees.

Patent costs and amortization of acquired technology increased to \$4.6 million for the three months ended March 31, 2013, compared to \$1.9 million for the three months ended March 31, 2012. The increase was mainly due to increased amortization costs of \$2.7 million due to the amortization expense associated with technology acquired in July 2012 (see Note 6 in Notes to Consolidated Financial Statements for further discussion). In addition, we have increased our number of patents including those of the newly acquired technology and the increase reflects the additional

maintenance costs of these new patents.

Royalty and license expense increased to \$312,000 for the three months ended March 31, 2013, compared to \$250,000 for the three months ended March 31, 2012. The increase was mainly due to increased royalties incurred under our amended license agreement with Princeton, USC, and Michigan, resulting from higher material sales and increased royalty and license fees. See Note 5 in Notes to Consolidated Financial Statements for further discussion.

Interest income decreased to \$210,000 for the three months ended March 31, 2013, compared to \$357,000 for the three months ended March 31, 2012. The decrease was mainly attributable to interest earned on lower average cash and investment balances as a result of the purchase of acquired technology in July 2012 (see Note 6 in Notes to Consolidated Financial Statements for further discussion).

## Provision for Income Tax

The effective income tax rate was 31.6% and 0.0% for the three months ended March 31, 2013 and 2012, respectively. For the three months ended March 31, 2013, a tax benefit of approximately \$2.2 million was recorded based on the estimated annual effective income tax rate applied to our loss before income taxes. The loss recognized during the three months ended March 31, 2013, is expected to be offset by income during the remainder of 2013 therefore realizing the benefit. Our estimated effective tax rate is primarily related to foreign taxes on South Korean royalty and license fee income, as well as U.S. Alternative Minimum tax.

Based on previous earnings history, a current evaluation of expected future taxable income and other evidence, we determined it is not more likely than not that certain deferred tax assets will be realized. Therefore we have established a full valuation allowance for significantly all of our net deferred tax assets.

The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income to obtain benefit from the reversal of temporary differences, net operating loss carryforwards and tax credits. We consider the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning strategies in making this assessment. Our level of future profitability could cause us to conclude that all or a portion of our deferred tax assets will be realizable. We continue to assess our current and projected taxable income in the jurisdictions in which we operate on a quarterly basis and provided that we sustain actual profitability and can demonstrate sustained forecasted profitability and/or upon the implementation of certain tax planning strategies, we could release all or a portion of our deferred tax valuation allowance to reflect the realizability of our deferred tax assets and would begin to provide for income taxes at a rate equal to our combined federal, state and foreign effective rates, at that time.

Currently, a full valuation allowance continues to be established for significantly all our net deferred tax assets because we incurred substantial consolidated operating losses from inception through 2010, as well as continuing losses in certain jurisdictions, and based on the aforementioned factors, we have assessed that the net deferred tax assets did not meet the criteria for realization as of March 31, 2013.

At this time, the amount and timing of any future release of the deferred tax valuation allowance and resulting future effective tax rates cannot be determined, but could be material to both our financial position and results of operations and may occur in the near term if expected operating trends continue or we implement certain tax planning strategies.

## Liquidity and Capital Resources

As of March 31, 2013, we had cash and cash equivalents of \$45.5 million and short-term investments of \$175.3 million, for a total of \$220.8 million. This compares to cash and cash equivalents of \$85.9 million and short-term investments of \$158.0 million, for a total of \$243.9 million, as of December 31, 2012.

Cash used in operating activities was \$10.9 million for the three months ended March 31, 2013, compared to cash used in operating activities of \$2.0 million for the same period in 2012. The increase in cash used in operating activities was primarily due to the following:

- the timing of payments of accounts payable and accrued expenses of \$4.9 million;
- the impact of the timing of receipts of accounts receivable of \$3.9 million;
- an increase in pretax net loss of approximately \$2.1 million, which excludes the impact of non-cash items;
- a decrease of \$1.0 million in deferred revenue received; offset by

the impact of the timing of inventory purchases of \$3.7 million.

Cash used in investing activities was \$21.4 million for the three months ended March 31, 2013, compared to cash provided by of \$37.3 million for the same period in 2012. The increase in cash used in investing activities was mainly due to the timing of maturities of investments, offset by the timing of purchases of investments and equipment.

Cash used in financing activities was \$8.1 million for the three months ended March 31, 2013, compared to cash used of \$2.9 million for the same period in 2012. The increase in cash used in financing activities is primarily due to repurchases of common

stock of \$5.5 million, as well as a decrease in the proceeds from the exercise of stock options of \$475,000. This was offset by a decrease in the payment of taxes related to stock-based employee compensation of \$677,000.

Working capital was \$232.9 million as of March 31, 2013, compared to \$245.2 million as of December 31, 2012 mainly due to the increase in cash used in operating and financing activities and the reclassification of an investment from short-term investments to investments.

We anticipate, based on our internal forecasts and assumptions relating to our operations (including, among others, assumptions regarding our working capital requirements, the progress of our research and development efforts, the availability of sources of funding for our research and development work, and the timing and costs associated with the preparation, filing, prosecution, maintenance, defense and enforcement of our patents and patent applications), that we have sufficient cash, cash equivalents and short-term investments to meet our obligations for at least the next 12 months.

We believe that potential additional financing sources for us include long-term and short-term borrowings, public and private sales of our equity and debt securities and the receipt of cash upon the exercise of outstanding stock options. It should be noted, however, that additional funding may be required in the future for research, development and commercialization of our OLED technologies and materials, to obtain, maintain and enforce patents respecting these technologies and materials, and for working capital and other purposes, the timing and amount of which are difficult to ascertain. There can be no assurance that additional funds will be available to us when needed, on commercially reasonable terms or at all, particularly in the current economic environment.

#### Critical Accounting Policies

We have various share-based compensation awards under the Equity Compensation Plan, which include stock options, restricted stock awards, restricted stock units and performance-based units. On March 7 and 8, 2013, the Board, upon the recommendation of the Compensation Committee (“Committee”) of the Board, granted restricted stock units and performance units under the Equity Compensation Plan to its executive officers. See Note 10 in the Notes to Consolidated Financial Statements in Item 1. Financial Statements for further detail.

Refer to our Annual Report on Form 10-K for the year ended December 31, 2012, for additional discussion of our critical accounting policies.

#### Contractual Obligations

Refer to our Annual Report on Form 10-K for the year ended December 31, 2012 for a discussion of our contractual obligations.

#### Off-Balance Sheet Arrangements

Refer to our Annual Report on Form 10-K for the year ended December 31, 2012 for a discussion of off-balance sheet arrangements. As of March 31, 2013, we had no off-balance sheet arrangements.

### ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We do not utilize financial instruments for trading purposes and hold no derivative financial instruments, other financial instruments or derivative commodity instruments that could expose us to significant market risk other than our investments disclosed in Note 4 to the consolidated financial statements included herein. We generally invest in investment grade financial instruments to reduce our exposure related to investments. Our primary market risk

exposure with regard to such financial instruments is to changes in interest rates, which would impact interest income earned on investments. However, based upon the conservative nature of our investment portfolio and current experience, we do not believe a decrease in investment yields would have a material negative effect on our interest income.

Substantially all our revenue is derived from outside of North America. All revenue is primarily denominated in U.S. dollars and therefore we bear no significant foreign exchange risk.

#### ITEM 4. CONTROLS AND PROCEDURES

##### Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2013. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures, as of the end of the period covered by this report, are effective to provide reasonable assurance that the information required to be disclosed by us in reports filed or submitted under the Securities Exchange Act of 1934, as amended, is (i) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and (ii) accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding disclosure. However, a controls system, no matter how well designed and operated, cannot provide absolute assurance that the objectives of the controls system are met, and no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected.

##### Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the three months ended March 31, 2013 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

#### PART II – OTHER INFORMATION

#### ITEM 1. LEGAL PROCEEDINGS

##### Patent Related Challenges and Oppositions

Each major jurisdiction in the world that grants patents provides third parties with opportunities and access to administrative proceedings whereby they can request for additional review of previously issued patents in the respective jurisdiction. Each jurisdiction provides unique procedures for undertaking such activities, as well as different vehicles to review and appeal the determinations made in connection with such reviews. The conclusions made by the administration bodies tend to be appealable and generally are limited in scope and applicability to the specific claims and jurisdiction in question.

Below are summaries of certain proceedings that have been commenced against issued patents that are either exclusively licensed to us or which are now assigned to us. We note that we currently have more than 3,000 issued patents and pending patent applications, worldwide, which are utilized in our materials supply and device licensing business. We do not believe that the confirmation, loss or modification of our rights in any individual claim or set of claim(s) that are the subject of the following legal proceedings would have a material impact on our material sales or licensing business. However, as noted within the descriptions, many of the following legal proceedings involve patents relating to our key phosphorescent OLED technologies and we intend to vigorously defend against such claims, which may require the expenditure of significant amounts of our resources. The entries marked with an "\*" relate to our UniversalPHOLED phosphorescent OLED technology.

##### Opposition to European Patent No. 0946958

On December 8, 2006, Cambridge Display Technology Ltd. (CDT), which was acquired in 2007 by Sumitomo Chemical Company (Sumitomo), filed a Notice of Opposition to European Patent No. 0946958 (EP '958 patent),



which relates to our FOLED™ flexible OLED technology. The EP '958 patent, which was issued on March 8, 2006, is a European counterpart patent to U.S. patents 5,844,363, 6,602,540, 6,888,306 and 7,247,073. These patents are exclusively licensed to us by Princeton, and we are required to pay all legal costs and fees associated with this proceeding.

The European Patent Office (the EPO) conducted an Oral Hearing in this matter and on November 26, 2009 issued its written decision to reject the opposition and to maintain the patent as granted. CDT has filed an appeal to the EPO panel decision.

At this time, based on our current knowledge, we believe that the EPO panel decision will be upheld on appeal. However, we cannot make any assurances of this result.

Opposition to European Patent No. 1449238\*

Between March 8, 2007 and July 27, 2007, three companies filed Notices of Opposition to European Patent No. 1449238 (EP '238 patent). The three companies are Sumation Company Limited (Sumation), a joint venture between Sumitomo and CDT, Merck Patent GmbH, of Darmstadt, Germany, and BASF Aktiengesellschaft, of Mannheim, Germany. The EP '238 patent, which was issued on November 2, 2006, is a European counterpart patent, in part, to U.S. patents 6,830,828; 6,902,830; 7,001,536; 7,291,406; 7,537,844; and 7,883,787; and to pending U.S. patent application 13/009,001, filed on January 19, 2011, and 13/205,290, filed on August 9, 2011 (hereinafter the "U.S. '828 Patent Family"). They are exclusively licensed to us by Princeton, and we are required to pay all legal costs and fees associated with this proceeding.

The EPO combined all three oppositions into a single opposition proceeding. The EPO conducted an Oral Hearing in this matter and at the conclusion of the Oral Hearing, the EPO panel announced its decision to maintain the patent with claims directed to OLEDs comprising phosphorescent organometallic iridium compounds. The official minutes from the Oral Hearing and written decision were published on January 13, 2012.

All the parties filed notices of appeal to the EPO's panel decision and submitted their initial papers in support of their respective requests for appellate review. An Oral hearing has been scheduled by the EPO for November 21-22, 2013.

At this time, based on our current knowledge, we believe that the EPO will uphold our positions on appeal. However, we cannot make any assurances of this result.

Opposition to European Patent No. 1394870\*

On April 20, 2010, five European companies filed Notices of Opposition to European Patent No. 1394870 (the EP '870 patent). The EP '870 patent, which was issued on July 22, 2009, is a European counterpart patent, in part, to U.S. patents 6,303,238; 6,579,632; 6,872,477; 7,279,235; 7,279,237; 7,488,542; 7,563,519; and 7,901,795; and to pending U.S. patent application 13/035,051, filed on February 25, 2011 (hereinafter the "U.S. '238 Patent Family"). They are exclusively licensed to us by Princeton, and we are required to pay all legal costs and fees associated with this proceeding.

The five companies are Merck Patent GmbH; BASF Schweiz AG of Basel, Switzerland; Osram GmbH of Munich, Germany; Siemens Aktiengesellschaft of Munich, Germany; and Koninklijke Philips Electronics N.V., of Eindhoven, The Netherlands.

The EPO combined the oppositions into a single opposition proceeding. The matter has been briefed and we are waiting for the EPO to provide notice of the date of the Oral Hearing. We are also waiting to see whether any of the other parties in the opposition file additional documents to which we might respond.

At this time, based on our current knowledge, we believe there is a substantial likelihood that the patent being challenged will be declared valid and that all or a significant portion of our claims will be upheld. However, we cannot make any assurances of this result.

Invalidation Trials in Japan for Japan Patent Nos. 4357781 and 4358168\*

On May 24, 2010, we received two Notices of Invalidation Trials against Japan Patent Nos. 4357781 (the JP '781 patent) and 4358168 (the JP '168 patent), which were both issued on August 14, 2009. The requests for these two additional Invalidation Trials were also filed by SEL. The JP '781 and '168 patents are also Japanese counterpart patents, in part, to the above-noted U.S. '828 Patent Family and EP '238 Patent. They are exclusively licensed to us by

Princeton, and we are required to pay all legal costs and fees associated with this proceeding.

On March 31, 2011, we learned that the JPO had issued decisions finding all claims in the JP '781 and JP '168 patents invalid. We believed that the JPO's decisions invalidating these claims were erroneous, and we filed appeals for both cases to the Japanese IP High Court.

Both parties filed appeal briefs in this matter with the Japanese IP High Court. The Japanese IP High Court held hearings for this matter on November 22, 2011, March 5, 2012, and June 18, 2012. On November 7, 2012, we were notified by our Japanese counsel that the Japanese IP High Court had reversed the JPO's finding of invalidity and remanded the case back to the JPO for further consideration.

In a decision reported to us on April 15, 2013, all claims in our JP '781 and JP '168 patents were upheld as valid by the JPO. Our opponent has until about May 15, 2013 to file an appeal.

#### Invalidation Trial in Korea for Patent No. KR-0998059

On March 10, 2011, we received informal notice from our Korean patent counsel of a Request for an Invalidation Trial from the Korean Intellectual Property Office (KIPO) for its Korean Patent No. 10-0998059 (the KR '059 patent), which was issued on November 26, 2010. The Request was filed by a certain individual petitioner, but we still do not know which company, if any, was ultimately responsible for filing this Request. The KR '059 patent is a Korean counterpart patent to the OVJP, Organic Vapor Jet Printing, family of U.S. patents originating from U.S. patent 7,431,968.

An oral hearing relating to this matter was held on December 18, 2012, after numerous supporting briefs were filed by both parties. On March 5, 2013, we were notified that a favorable decision had been rendered in which our patent was held valid. We have not received any notice of intent to appeal from the petitioner.

#### Invalidation Trial in Japan for Japan Patent No. 4511024\*

On June 16, 2011, we learned that a Request for an Invalidation Trial was filed in Japan for our Japanese Patent No. JP-4511024 (the JP '024 patent), which issued on May 14, 2010. The Request was filed by SEL, the same opponent as in the above-noted Japanese Invalidation Trial for the JP '929 patent. The JP '024 patent is a counterpart patent, in part, to the U.S. '238 Patent Family, which relate to the EP '870 patent, which is subject to one of the above-noted European oppositions; and to our Korean KR-558632 and KR-963857 patents, which relate to our UniversalPHOLED phosphorescent OLED technology. They are exclusively licensed to us by Princeton, and we are required to pay all legal costs and fees associated with this proceeding.

We timely filed a Written Reply to the Request for Invalidation Trial. A hearing was held on March 15, 2012.

On May 10, 2012, we learned that the JPO issued a decision upholding the validity of certain claimed inventions in the JP '024 Patent but invalidating the broadest claims in the patent. We believe the JPO's decision was erroneous with respect to the broadest claims, and we intended to appeal the decision to the Japanese IP High Court.

A Notice of Appeal was filed with the Japanese IP High Court on September 5, 2012. The Appeal Brief was timely filed on October 19, 2012. The opponent filed their reply on January 15, 2013. We filed our response on March 8, 2013. A Technical Hearing is scheduled for May 30, 2013. It is expected that the Japanese IP High Court may render a decision in the second half of 2013.

At this time, based on our current knowledge, we believe that the patent being challenged should be declared valid and that all or a significant portion of our claims should be upheld. However, we cannot make any assurances of this result.

#### Opposition to European Patent No. 1252803\*

On July 12 and 13, 2011, three companies filed oppositions to our European Patent No. 1252803 (the EP '803 patent). The three companies are Sumitomo, Merck Patent GmbH and BASF SE, of Ludwigshaven, Germany. The EP '803 patent, which was issued on October 13, 2010, is a European counterpart patent, in part, to the U.S. '828 Patent Family. They are exclusively licensed to us by Princeton, and we are required to pay all legal costs and fees associated with this proceeding.

The EPO combined the oppositions into a single opposition proceeding. Our initial response to the oppositions was timely filed prior to the February 18, 2012 extended due date.

On December 7, 2012 the EPO rendered a decision at an Oral Hearing wherein it upheld the broadest claim of the granted patent. The written decision was reported by the EPO on December 21, 2012. We chose not to file an appeal. All three opponents filed an appeal.

At this time, based on our current knowledge, we believe there is a substantial likelihood that the patent being challenged will be declared valid and that all or a significant portion of our claims will be further upheld on appeal if one is timely filed by the opponents. However, we cannot make any assurances of this result.

#### Opposition to European Patent No. 1390962

On November 16, 2011, Osram AG and BASF SE each filed a Notice of Opposition to European Patent No. 1390962 (EP '962 patent), which relates to our white phosphorescent OLED technology. The EP '962 patent, which was issued on February 16, 2011, is a European counterpart patent to U.S. patents 7,009,338 and 7,285,907. They are exclusively licensed to us by Princeton, and we are required to pay all legal costs and fees associated with this proceeding.

The EPO combined the oppositions into a single opposition proceeding. Our response to the opponents' opposition briefs was timely filed on June 28, 2012.

At this time, based on our current knowledge, we believe there is a substantial likelihood that the patent being challenged will be declared valid, and that all or a significant portion of our claims will be upheld. However, we cannot make any assurances of this result.

#### Opposition to European Patent No. 1933395\*

On February 24 and 27, 2012, oppositions were filed to our European Patent No. 1933395 (the EP '395 patent). These oppositions were filed by Sumitomo, Merck Patent GmbH and BASF SE. The EP '395 patent is a counterpart patent to the above-noted JP '168 patent, and to Korean Patent Nos. KR-840,637 and KR-937-470, counterpart patent, in part, to the U.S. '828 Patent Family. This patent is exclusively licensed to us by Princeton, and we are required to pay all legal costs and fees associated with this proceeding.

Our response to the opponents' opposition briefs was timely filed on September 27, 2012. An Oral Hearing has been scheduled by the EPO for October 14, 2013.

At this time, based on our current knowledge, we believe there is a substantial likelihood that the patent being challenged will be declared valid and that all or a significant portion of our claims will be upheld. However, we cannot make any assurances of this result.

#### ITEM 1A. RISK FACTORS

There have been no material changes to the risk factors previously discussed in Part I, Item 1A "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2012.

#### ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

##### Share Repurchases

During the quarter ended December 31, 2012, we announced that the Board of Directors had approved a program to repurchase up to \$50 million of our outstanding shares of our common stock from time to time over the next twelve months (the "Repurchase Program"). The amount and timing of repurchases will depend on a number of factors, including the price, availability of shares of the company's common stock, trading volume and general market conditions. The repurchases may be made on the open market, in block trades or otherwise. The Repurchase Program may be suspended or discontinued at any time.

Additionally, we acquired 88,063 shares of common stock through transactions related to the vesting of restricted share awards previously granted to employees of ours. Upon vesting, the employees turned in shares of common stock in amounts sufficient to pay the minimum statutory tax withholding at rates required by the relevant tax authorities.

The following table provides information relating to the shares we received and repurchased during the three months ended March 31, 2013 (dollar amounts in thousands, other than per share amounts):

Period	Total Number of Shares Purchased	Weighted Average Price Paid per Share	Total Number of Shares Purchased as Part of Repurchase	Approximate Dollar Value of Shares that May Yet Be
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			Program	Purchased Under the Program
January 1 - January 31	155,553	\$27.45	136,500	\$41,066
February 1 - February 28	32,499	28.94	32,499	40,125
March 1 - March 31	95,610	31.81	26,600	39,342
Total	283,662		195,599	

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

30

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## ITEM 6. EXHIBITS

The following is a list of the exhibits included as part of this report. Where so indicated by footnote, exhibits that were previously included are incorporated by reference. For exhibits incorporated by reference, the location of the exhibit in the previous filing is indicated parenthetically, together with a reference to the filing indicated by footnote.

Exhibit Number	Description
10.1	Amendment to Universal Display Corporation Equity Compensation Plan, dated March 7, 2013.
31.1*	Certifications of Steven V. Abramson, Chief Executive Officer, as required by Rule 13a-14(a) or Rule 15d-14(a)
31.2*	Certifications of Sidney D. Rosenblatt, Chief Financial Officer, as required by Rule 13a-14(a) or Rule 15d-14(a)
32.1**	Certifications of Steven V. Abramson, Chief Executive Officer, as required by Rule 13a-14(b) or Rule 15d-14(b), and by 18 U.S.C. Section 1350 (This exhibit shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section. Further, this exhibit shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended.)
32.2**	Certifications of Sidney D. Rosenblatt, Chief Financial Officer, as required by Rule 13a-14(b) or Rule 15d-14(b), and by 18 U.S.C. Section 1350 (This exhibit shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section. Further, this exhibit shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended.)
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

\* Filed herewith.

\*\* Furnished herewith.

Note: Any of the exhibits listed in the foregoing index not included with this report may be obtained, without charge, by writing to Mr. Sidney D. Rosenblatt, Corporate Secretary, Universal Display Corporation, 375

Phillips Boulevard, Ewing, New Jersey 08618.

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:

UNIVERSAL DISPLAY CORPORATION

Date: May 9, 2013

By: /s/ Sidney D. Rosenblatt  
Sidney D. Rosenblatt  
Executive Vice President and Chief Financial Officer