

UNIVERSAL DISPLAY CORP \PA\  
Form 10-Q  
August 08, 2012

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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 June 30, 2012

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

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

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 August 2, 2012, the registrant had outstanding 46,453,060 shares of common stock.

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## 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)

|   | June 30,<br>2012  | December 31,<br>2011 |
|---|-------------------|----------------------|
| <b>ASSETS</b>   |                   |                      |
| <b>CURRENT ASSETS:</b>  |                   |                      |
| Cash and cash equivalents   | \$ 159,599        | \$ 111,795           |
| Short-term investments  | 190,417           | 234,294              |
| Accounts receivable   | 9,580             | 10,727               |
| Inventory   | 8,571             | 3,843                |
| Other current assets  | 3,902             | 1,645                |
| <b>Total current assets</b>   | <b>372,069</b>    | <b>362,304</b>       |
| <b>PROPERTY AND EQUIPMENT, net of<br/>accumulated depreciation of<br/>\$19,663 and \$18,735</b> | <b>12,011</b>     | <b>10,884</b>        |
| <b>ACQUIRED TECHNOLOGY, net of<br/>accumulated amortization of<br/>\$17,029 and \$17,000</b>    | <b>380</b>        | <b>391</b>           |
| <b>INVESTMENTS</b>  | <b>1,172</b>      | <b>—</b>             |
| <b>OTHER ASSETS</b>   | <b>289</b>        | <b>299</b>           |
| <b>TOTAL ASSETS</b>   | <b>\$ 385,921</b> | <b>\$ 373,878</b>    |
| <b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>   |                   |                      |
| <b>CURRENT LIABILITIES:</b>   |                   |                      |
| Accounts payable  | \$ 7,071          | \$ 4,776             |
| Accrued expenses  | 7,920             | 9,020                |
| Deferred revenue  | 5,338             | 5,534                |
| Other current liabilities   | 589               | 187                  |
| <b>Total current liabilities</b>  | <b>20,918</b>     | <b>19,517</b>        |
| <b>DEFERRED REVENUE</b>   | <b>3,568</b>      | <b>3,874</b>         |
| <b>RETIREMENT PLAN BENEFIT LIABILITY</b>  | <b>8,543</b>      | <b>8,260</b>         |
| <b>Total liabilities</b>  | <b>33,029</b>     | <b>31,651</b>        |
| <b>COMMITMENTS AND CONTINGENCIES</b>  |                   |                      |
| <b>(Note 12)</b>  |                   |                      |

**SHAREHOLDERS' EQUITY:**

|   |                   |                   |
|---|-------------------|-------------------|
| Preferred Stock, par value \$0.01 per share,<br>5,000,000 shares authorized, 200,000 shares of<br>Series A Nonconvertible Preferred Stock issued<br>and outstanding (liquidation value of \$7.50 per<br>share or \$1,500) | 2                 | 2                 |
| Common Stock, par value \$0.01 per share,<br>100,000,000 shares authorized, 46,453,060 and<br>46,113,296 shares issued and outstanding at June<br>30, 2012 and December 31, 2011, respectively                            | 465               | 461               |
| Additional paid-in capital  | 562,152           | 561,492           |
| Accumulated deficit   | (204,128 )        | (213,871 )        |
| Accumulated other comprehensive loss  | (5,599 )          | (5,857 )          |
| Total shareholders' equity  | 352,892           | 342,227           |
| <b>TOTAL LIABILITIES AND<br/>SHAREHOLDERS' EQUITY</b>   | <b>\$ 385,921</b> | <b>\$ 373,878</b> |

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

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UNIVERSAL DISPLAY CORPORATION AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME  
(UNAUDITED)

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

|   | Three Months Ended June 30, |                 |
|---|-----------------------------|-----------------|
|   | 2012                        | 2011            |
| <b>REVENUE:</b>   |                             |                 |
| Material sales  | \$ 12,848                   | \$ 6,681        |
| Royalty and license fees  | 15,435                      | 2,665           |
| Technology development and support revenue  | 1,704                       | 1,906           |
| <b>Total revenue</b>  | <b>29,987</b>               | <b>11,252</b>   |
| <b>OPERATING EXPENSES:</b>  |                             |                 |
| Cost of material sales  | 1,611                       | 142             |
| Research and development  | 7,236                       | 5,551           |
| Selling, general and administrative   | 5,189                       | 4,496           |
| Patent costs  | 2,255                       | 1,915           |
| Royalty and license expense   | 786                         | 218             |
| <b>Total operating expenses</b>   | <b>17,077</b>               | <b>12,322</b>   |
| Operating income (loss)   | 12,910                      | (1,070 )        |
| INTEREST INCOME   | 357                         | 184             |
| INTEREST EXPENSE  | (18 )                       | (8 )            |
| GAIN ON STOCK WARRANT LIABILITY   | —                           | 4,496           |
| <b>INCOME BEFORE INCOME TAX EXPENSE</b>   | <b>13,249</b>               | <b>3,602</b>    |
| INCOME TAX EXPENSE  | (2,285 )                    | (289 )          |
| <b>NET INCOME</b>   | <b>10,964</b>               | <b>3,313</b>    |
| <b>OTHER COMPREHENSIVE INCOME (LOSS):</b>   |                             |                 |
| Unrealized gain (loss) on available-for-sale securities   | 65                          | (217 )          |
| Amortization of prior service cost and actuarial loss for retirement plan included in net periodic pension cost | 149                         | 150             |
| <b>TOTAL OTHER COMPREHENSIVE INCOME (LOSS)</b>  | <b>214</b>                  | <b>(67 )</b>    |
| <b>COMPREHENSIVE INCOME</b>   | <b>\$ 11,178</b>            | <b>\$ 3,246</b> |
| <b>NET INCOME (LOSS) PER COMMON SHARE:</b>  |                             |                 |
| BASIC   | \$ 0.24                     | \$ 0.07         |

|         |         |            |
|---------|---------|------------|
| DILUTED | \$ 0.23 | \$ (0.03 ) |
|---------|---------|------------|

WEIGHTED AVERAGE SHARES USED IN COMPUTING  
NET INCOME (LOSS) PER COMMON SHARE:

|         |            |            |
|---------|------------|------------|
| BASIC   | 45,953,312 | 45,024,373 |
| DILUTED | 46,857,309 | 45,201,175 |

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

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## UNIVERSAL DISPLAY CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)  
(UNAUDITED)

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

|   | Six Months Ended June 30, |             |
|---|---------------------------|-------------|
|   | 2012                      | 2011        |
| <b>REVENUE:</b>   |                           |             |
| Material sales  | \$ 23,377                 | \$ 11,218   |
| Royalty and license fees  | 15,857                    | 5,334       |
| Technology development and support revenue  | 3,373                     | 4,301       |
| Total revenue   | 42,607                    | 20,853      |
| <b>OPERATING EXPENSES:</b>  |                           |             |
| Cost of material sales  | 2,699                     | 245         |
| Research and development  | 13,897                    | 12,106      |
| Selling, general and administrative   | 9,486                     | 8,368       |
| Patent costs  | 4,123                     | 3,528       |
| Royalty and license expense   | 1,036                     | 420         |
| Total operating expenses  | 31,241                    | 24,667      |
| Operating income (loss)   | 11,366                    | (3,814 )    |
| INTEREST INCOME   | 714                       | 280         |
| INTEREST EXPENSE  | (38 )                     | (18 )       |
| LOSS ON STOCK WARRANT LIABILITY   | —                         | (4,430 )    |
| INCOME (LOSS) BEFORE INCOME TAX EXPENSE   | 12,042                    | (7,982 )    |
| INCOME TAX EXPENSE  | (2,299 )                  | (586 )      |
| NET INCOME (LOSS)   | 9,743                     | (8,568 )    |
| <b>OTHER COMPREHENSIVE INCOME:</b>  |                           |             |
| Unrealized loss on available-for-sale securities  | (39 )                     | (206 )      |
| Amortization of prior service cost and actuarial loss for retirement plan included in net periodic pension cost | 297                       | 300         |
| TOTAL OTHER COMPREHENSIVE INCOME  | 258                       | 94          |
| COMPREHENSIVE INCOME (LOSS)   | \$ 10,001                 | \$ (8,474 ) |
| <b>NET INCOME (LOSS) PER COMMON SHARE:</b>  |                           |             |
| BASIC   | \$ 0.21                   | \$ (0.20 )  |



|         |         |            |
|---------|---------|------------|
| DILUTED | \$ 0.21 | \$ (0.20 ) |
|---------|---------|------------|

WEIGHTED AVERAGE SHARES USED IN COMPUTING  
NET INCOME (LOSS) PER COMMON SHARE:

|         |            |            |
|---------|------------|------------|
| BASIC   | 45,871,166 | 41,977,113 |
| DILUTED | 46,896,898 | 41,977,113 |

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

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## UNIVERSAL DISPLAY CORPORATION AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF CASH FLOWS

(UNAUDITED)

(in thousands)

|  | Six Months Ended June 30, |             |
|--|---------------------------|-------------|
|  | 2012                      | 2011        |
| <b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>   |                           |             |
| Net income (loss)  | \$ 9,743                  | \$ (8,568 ) |
| Adjustments to reconcile net income (loss) to net cash provided by operating activities: |                           |             |
| Amortization of deferred revenue   | (1,837 )                  | (1,479 )    |
| Depreciation   | 927                       | 734         |
| Amortization of intangibles  | 29                        | 19          |
| Amortization of premium and discount on investments, net                                 | (437 )                    | (166 )      |
| Stock-based employee compensation  | 1,951                     | 2,151       |
| Stock-based non-employee compensation  | —                         | 2           |
| Non-cash expense under a materials agreement   | —                         | 9           |
| Stock-based compensation to Board of Directors and Scientific Advisory Board             | 437                       | 718         |
| Loss on stock warrant liability  | —                         | 4,430       |
| Retirement plan benefit expense  | 777                       | 763         |
| Increase (decrease) in assets:   |                           |             |
| Accounts receivable  | 1,147                     | 707         |
| Inventory  | (4,728 )                  | (459 )      |
| Other current assets   | (2,257 )                  | (395 )      |
| Other assets   | 10                        | (107 )      |
| Increase in liabilities:   |                           |             |
| Accounts payable and accrued expenses  | 1,899                     | 1,836       |
| Other current liabilities  | 205                       | —           |
| Deferred revenue   | 1,335                     | 1,645       |
| Net cash provided by operating activities  | 9,201                     | 1,840       |
| <b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>   |                           |             |
| Purchase of property and equipment   | (2,054 )                  | (1,510 )    |
| Purchase of intangibles  | (18 )                     | (440 )      |
| Purchase of investments  | (177,449 )                | (253,904 )  |
| Proceeds from sale of investments  | 220,552                   | 45,500      |
| Net cash provided by (used in) investing activities                                      | 41,031                    | (210,354 )  |
| <b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>   |                           |             |
| Proceeds from the issuance of common stock   | 137                       | 249,822     |
| Proceeds from the exercise of common stock options and warrants                          | 943                       | 7,543       |
| Payment of withholding taxes related to stock-based employee compensation                | (3,508 )                  | (3,980 )    |

|   |            |           |
|---|------------|-----------|
| Net cash (used in) provided by financing activities | (2,428 )   | 253,385   |
| INCREASE IN CASH AND CASH EQUIVALENTS               | 47,804     | 44,871    |
| CASH AND CASH EQUIVALENTS, BEGINNING OF PERIOD      | 111,795    | 20,369    |
| CASH AND CASH EQUIVALENTS, END OF PERIOD            | \$ 159,599 | \$ 65,240 |

The following non-cash activities occurred:

|  |          |        |
|--|----------|--------|
| Unrealized (loss) gain on available-for-sale securities  | \$ (39 ) | \$ 206 |
| Common stock issued to Board of Directors and Scientific Advisory Board that was earned in a previous period | 328      | 300    |
| Common stock issued to employees that was accrued for in a previous period, net of shares withheld for taxes | 252      | 1,113  |
| Fair value of stock warrant liability reclassified to shareholders' equity upon exercise                     | —        | 10,501 |

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

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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 displays, solid-state lighting and other product applications. The Company's primary business strategy is to develop proprietary OLED technologies and materials, and to license these technologies and sell these materials to OLED product manufacturers. Through internal research and development efforts and relationships with entities such as Princeton University (Princeton), the University of Southern California (USC), the University of Michigan (Michigan), 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 June 30, 2012 and results of operations for the three and six months ended June 30, 2012 and 2011, and cash flows for the six months ended June 30, 2012 and 2011. 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, 2011. 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 area of revenue recognition for license agreements, 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.

Revenue

The Company revised the presentation of its revenue categories as of the year ended December 31, 2011 to better reflect its primary sources of revenue. Revenue categories for the three and six months ended June 30, 2011 were

conformed to reflect the current presentation.

#### 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 May 2011, the Financial Accounting Standards Board (FASB) issued amended standards that revised the application of the valuation premise of highest and best use of an asset, the application of premiums and discounts for fair value determination, as well as the required disclosures for transfers between Level 1 and Level 2 fair value measures and the highest and best use

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of nonfinancial assets. The update provides additional disclosures regarding Level 3 fair value measurements and clarifies certain other existing disclosure requirements. The new guidance is effective prospectively for fiscal years, and interim periods within those years, beginning after December 15, 2011. The Company adopted this guidance in the first quarter of 2012, and such adoption did not have a material impact on the Company's results of operations or financial position.

In June 2011, the FASB issued amended standards for the reporting of other comprehensive income (loss). The amendments require that all non-owner changes in shareholders' equity be presented either in a single continuous statement of comprehensive income (loss) or in two separate but consecutive statements. In either case, an entity is required to present each component of net income (loss) along with total net income (loss), each component of other comprehensive income (loss) along with a total for other comprehensive income (loss), and a total amount for comprehensive income (loss). The new guidance is effective retrospectively for fiscal years, and interim periods within those years, beginning after December 15, 2011. The Company adopted this guidance in the first quarter of 2012, and such adoption did not have a material impact on its results of operations or financial position, but did change the Company's presentation of comprehensive income (loss).

### 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 June 30, 2012 consisted of the following (in thousands):

| Investment Classification | Amortized<br>Cost | Unrealized<br>Gains | (Losses) | Aggregate<br>Fair<br>Market Value |
|---------------------------|-------------------|---------------------|----------|-----------------------------------|
| June 30, 2012 –           |                   |                     |          |                                   |
| Certificates of deposit   | \$ 7,700          | \$ 1                | \$ (6 )  | \$ 7,695                          |
| Commercial paper          | 2,997             | 1                   | —        | 2,998                             |
| Corporate bonds           | 177,716           | 41                  | (63 )    | 177,694                           |
| U.S. government bonds     | 3,202             | —                   | —        | 3,202                             |
|                           | \$ 191,615        | \$ 43               | \$ (69 ) | \$ 191,589                        |

Investments at December 31, 2011 consisted of the following (in thousands):

| Investment Classification | Amortized<br>Cost | Unrealized<br>Gains | (Losses) | Aggregate<br>Fair<br>Market Value |
|---------------------------|-------------------|---------------------|----------|-----------------------------------|
| December 31, 2011 –       |                   |                     |          |                                   |
| Certificates of deposit   | \$ 5,797          | \$ —                | \$ (5 )  | \$ 5,792                          |
| Corporate bonds           | 223,260           | 43                  | (25 )    | 223,278                           |
| U.S. government bonds     | 5,224             | —                   | —        | 5,224                             |
|                           | \$ 234,281        | \$ 43               | \$ (30 ) | \$ 234,294                        |

All short-term investments held at June 30, 2012 will mature within one year. All long-term investments held at June 30, 2012 will mature in more than one year.

### 4. FAIR VALUE MEASUREMENTS

The following table provides the assets carried at fair value measured on a recurring basis as of June 30, 2012 (in thousands):

|                        | Total<br>carrying<br>value as of<br>June 30, 2012 | Fair Value Measurements, Using<br>Quoted prices<br>in active<br>markets<br>(Level 1) | Significant<br>other<br>observable inputs<br>(Level 2) | Significant<br>unobservable<br>inputs<br>(Level 3) |
|------------------------|---|--|--|--|
| Cash equivalents       | \$ 141,478  | \$ 141,478   | \$ —   | \$ —   |
| Short-term investments | 190,417   | 190,417  | —  | —  |
| Long-term investments  | 1,172   | 1,172  | —  | —  |

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The following table provides the assets carried at fair value measured on a recurring basis as of December 31, 2011 (in thousands):

|                        | Total carrying value as of December 31, 2011 | Fair Value Measurements, Using Quoted prices in active markets (Level 1) | Significant other observable inputs (Level 2) | Significant unobservable inputs (Level 3) |
|------------------------|--|--|---|---|
| Cash equivalents       | \$ 96,538                                    | \$ 96,538  | \$ —  | \$ —                                      |
| Short-term investments | 234,294                                      | 234,294  | —   | —   |

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 following table is a reconciliation of the changes in fair value of the Company's stock warrant liability for the three months ended June 30, 2011, which had been classified in Level 3 in the fair value hierarchy (in thousands):

|  | 2011      |
|--|-----------|
| Fair value of stock warrant liability, beginning of period | \$ 13,110 |
| Gain for period  | (4,496)   |
| Warrants exercised   | (4,025)   |
| Fair value of stock warrant liability, end of period       | \$ 4,589  |

The following table is a reconciliation of the changes in fair value of the Company's stock warrant liability for the six months ended June 30, 2011, which had been classified in Level 3 in the fair value hierarchy (in thousands):

|  | 2011      |
|--|-----------|
| Fair value of stock warrant liability, beginning of period | \$ 10,660 |
| Loss for period  | 4,430     |
| Warrants exercised   | (10,501)  |
| Fair value of stock warrant liability, end of period       | \$ 4,589  |

The fair value of the stock warrant liability was determined using the Black-Scholes option pricing model with the following inputs at June 30, 2011:

|                          | 2011   |
|--------------------------|--------|
| Contractual life (years) | 0.1    |
| Expected volatility      | 87.4 % |



|                         |        |
|-------------------------|--------|
| Risk-free interest rate | 0.02 % |
| Annual dividend yield   | —      |

There was no stock warrant liability as of June 30, 2012, as all remaining stock warrants were exercised in 2011.

#### 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.

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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 June 30, 2012, the Company was obligated to pay USC up to \$1.8 million for work actually performed during the remaining extended term, which runs through April 30, 2013. From May 1, 2009 through June 30, 2012, the Company incurred \$3.2 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 \$783,000 and \$216,000 for the three months ended June 30, 2012 and 2011, respectively, and \$1,039,000 and \$415,000 for the six months ended June 30, 2012 and 2011, 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 2012 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.

#### 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.

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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 entirety 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 and the 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 issued 181 shares of the Company's common stock to PPG Industries as consideration for services provided by PPG Industries under the OLED Materials Agreement during the six months ended June 30, 2011. For these shares, the Company recorded expense of \$9,000 for the six months ended June 30, 2011. No shares were issued for services to PPG for the six months ended June 30, 2012.

The Company recorded expense of \$1.1 million and \$1.0 million for the three months ended June 30, 2012 and 2011, respectively, and \$2.4 million for each of the six month periods ended June 30, 2012 and 2011, in relation to the cash portion of the reimbursement of expenses and work performed by PPG Industries, excluding amounts paid for commercial chemicals.

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

|                                  | Series A       |                 | Common Stock | Additional | Additional | Accumulated  |             | Total      |
|----------------------------------|----------------|-----------------|--------------|------------|------------|--------------|-------------|------------|
|                                  | Nonconvertible | Preferred Stock |              |            |            | Accumulated  | Other       |            |
|                                  | Shares         | Amount          | Shares       | Amount     | Capital    | Deficit      | Loss        | Equity     |
| BALANCE,<br>JANUARY 1,<br>2012   | 200,000        | \$ 2            | 46,113,296   | \$ 461     | \$ 561,492 | \$ (213,871) | \$ (5,857 ) | \$ 342,227 |
| Net income                       | —              | —               | —            | —          | —          | 9,743        | —           | 9,743      |
| Other<br>comprehensive<br>income | —              | —               | —            | —          | —          | —            | 258         | 258        |

|  |                |             |                   |               |                   |                     |                    |                   |
|--|----------------|-------------|-------------------|---------------|-------------------|---------------------|--------------------|-------------------|
| Exercise of common stock options   | —              | —           | 130,691           | 1             | 942               | —                   | —                  | 943               |
| Stock-based employee compensation, net of shares withheld for taxes (A)          | —              | —           | 171,271           | 2             | (1,183 )          | —                   | —                  | (1,181 )          |
| Issuance of common stock to Board of Directors and Scientific Advisory Board (B) | —              | —           | 33,341            | 1             | 764               | —                   | —                  | 765               |
| Issuance of common stock under an Employee Stock Purchase Plan                   | —              | —           | 4,461             | —             | 137               | —                   | —                  | 137               |
| <b>BALANCE, June 30, 2012</b>  | <b>200,000</b> | <b>\$ 2</b> | <b>46,453,060</b> | <b>\$ 465</b> | <b>\$ 562,152</b> | <b>\$ (204,128)</b> | <b>\$ (5,599 )</b> | <b>\$ 352,892</b> |

(A) Includes \$376,000 (9,376 shares) that was accrued for in a previous period and charged to expense when earned, but issued in 2012, less shares withheld for taxes in the amount of \$124,000 (3,070 shares).

(B) Includes \$328,000 (7,490 shares) that was earned in a previous period and charged to expense when earned, but issued in 2012.

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## 9. ACCUMULATED OTHER COMPREHENSIVE (LOSS) INCOME

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

|   | June 30,<br>2012 | December<br>31, 2011 |
|---|------------------|----------------------|
| Unrealized (loss) gain on<br>available-for-sale<br>securities | \$ (26 )         | \$ 13                |
| Net unrealized loss on<br>retirement plan                     | (5,573)          | (5,870)              |
|   | \$ (5,599)       | \$ (5,857)           |

## 10. STOCK-BASED COMPENSATION

The Company recognizes in the statements of comprehensive income (loss) 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 and units 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 comprehensive income (loss).

## Equity Compensation Plan

In 1995, the Board of Directors of the Company adopted a stock option plan, which was amended and restated in 2003 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 June 30, 2012, 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 six months ended June 30, 2012, the Company granted 208,791 shares of restricted stock awards and restricted stock units to employees, which had a total fair value of \$8.1 million on the respective dates of grant, and will vest over three to five 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 June 30, 2012 and 2011, the Company recorded general and administrative expense of \$755,000 and \$744,000 and research and development expense of \$339,000 and \$306,000, respectively, related to restricted stock awards and restricted stock units.

For the six months ended June 30, 2012 and 2011, the Company recorded general and administrative expense of \$1,328,000 and \$1,472,000 and research and development expense of \$510,000 and \$575,000, respectively, related to restricted stock awards and restricted stock units.

#### Employee Stock Grants

During the six months ended June 30, 2012, the Company granted to employees 1,755 shares of common stock, which shares were issued and fully vested as of the date of grant.

For the three months ended June 30, 2012 and 2011, the Company recorded research and development expense of \$37,000 and \$33,000, respectively, related to fully vested shares issued to employees.

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For the six months ended June 30, 2012 and 2011, the Company recorded research and development expense of \$68,000 and \$55,000, respectively, related to fully vested shares issued to employees.

In connection with common stock issued to employees, for the six months ended June 30, 2012, 90,742 shares of common stock with a fair value of \$3.5 million were withheld in satisfaction of tax withholding obligations.

### Stock Appreciation Rights

During the six months ended June 30, 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.

For the three months ended June 30, 2011, the Company recorded a credit of \$11,000 to general and administrative expense, and \$27,000 to research and development expense, related to the SARs.

For the six months ended June 30, 2012 and 2011, the Company recorded \$1,000 and a credit of \$24,000 to general and administrative expense, respectively, and \$3,000 and \$59,000 to research and development expense, respectively, related to the SARs.

No such grants were made in 2012.

### Other Compensation

During the six months ended June 30, 2012, the Company issued 10,000 shares of common stock to members of its Board of Directors as partial compensation for their service on the Board. The Company recorded general and administrative expense of \$160,000 and \$338,000 for the three months ended June 30, 2012 and 2011, respectively, and \$320,000 and \$394,000 for the six months ended June 30, 2012 and 2011, respectively, related to shares issued to members of its Board of Directors.

During the six months ended June 30, 2012, the Company granted 5,992 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 \$63,000 and \$149,000 for the three months ended June 30, 2012 and 2011, respectively, and \$116,000 and \$324,000 for the six months ended June 30, 2012 and 2011, respectively, related to shares issued to members of its Scientific Advisory Board.

### Employee Stock Purchase Plan

On April 7, 2009, the Board of Directors of the Company 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 of Directors, 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 six months ended June 30, 2012 and 2011, the Company issued 4,461 and 5,525 shares of its common stock, respectively, under the ESPP, resulting in proceeds of \$137,000 and \$154,000, respectively.

For the three months ended June 30, 2012 and 2011, the Company recorded general and administrative expense of \$5,000 and \$8,000 and research and development expense of \$15,000 and \$21,000, respectively, related to the ESPP.

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For the six months ended June 30, 2012 and 2011, the Company recorded general and administrative expense of \$10,000 and \$14,000 and research and development expense of \$35,000 and \$35,000, 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 of Directors of the Company 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 June 30, 2012, 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 June 30 (in thousands):

|                                    | 2012   | 2011   |
|------------------------------------|--------|--------|
| Service cost                       | \$ 144 | \$ 135 |
| Interest cost                      | 96     | 96     |
| Amortization of prior service cost | 146    | 146    |
| Amortization of actuarial loss     | 3      | 4      |
| Total net periodic benefit cost    | \$ 389 | \$ 381 |

The components of net periodic pension cost were as follows for the six months ended June 30 (in thousands):

|                                    | 2012   | 2011   |
|------------------------------------|--------|--------|
| Service cost                       | \$ 288 | \$ 271 |
| Interest cost                      | 192    | 192    |
| Amortization of prior service cost | 292    | 292    |
| Amortization of actuarial loss     | 5      | 8      |
| Total net periodic benefit cost    | \$ 777 | \$ 763 |

**12. COMMITMENTS AND CONTINGENCIES****Commitments**

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.

Set forth below are descriptions of legal proceedings to which the Company is a party. The Company notes that it currently has more than 2,700 issued patents and pending patent applications, worldwide, which are utilized in the Company's materials supply and device licensing business. Company management 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 materials' sales or licensing business. However, as noted

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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.

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), which relate to the Company's UniversalPHOLED phosphorescent OLED technology. 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 on or about May 13, 2012. The parties are currently waiting for a notice setting the remaining briefing schedule for responses to the opponents' papers.

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.

Invalidation Trial in Japan for Japan Patent No. 3992929

On April 19, 2010, the Company received a copy of a Notice of Invalidation Trial from the Japanese Patent Office (the JPO) for the Company's Japan Patent No. 3992929 (the JP '929 patent), which was issued on August 3, 2007, which relates to the Company's UniversalPHOLED phosphorescent OLED technology. The request for the Invalidation Trial was filed by Semiconductor Energy Laboratory Co., Ltd. (SEL), of Kanagawa, Japan. The JP '929

patent is a Japanese counterpart patent, in part, to the above-noted 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 February 28, 2011, the Company learned that the JPO had issued a decision recognizing the Company's invention and upholding the validity of most of the claims, but finding the broadest claims in the patent invalid. Company management believes that the JPO's decision invalidating these claims was erroneous, and the Company filed an appeal to the Japanese IP High Court.

Both parties filed appeal briefs in this matter with the Japanese IP High Court. A technical explanation hearing was held on February 1, 2012. At the hearing, both parties filed technical materials supporting their respective positions.

On May 16, 2012, the Company learned that the Japanese IP High Court issued a decision relating to the JP '929 Patent that confirmed the prior decision of the JPO. The Company has filed a notice of appeal with the Japanese Supreme Court.

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At this time, based on its current knowledge, Company management believes that the Japanese IP High Court's decision supporting the invalidation of certain claims in the Company's JP '929 patent was based on an erroneous technical and legal conclusion, and the Company's management believes it has a reasonable basis for overturning the decision as to all or a significant portion of the claims. However, Company management recognizes that the Japanese Supreme Court has a relatively low rate of review and reversal in patent related cases, and accordingly the Company's management cannot make any assurances of any such result.

### Opposition to European Patent No. 1394870

On about April 20, 2010, five European companies filed Notices of Opposition to European Patent No. 1394870 (the EP '870 patent), which relates to the Company's UniversalPHOLED phosphorescent OLED technology. 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 Schweitz 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 its 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, and which relate to the Company's UniversalPHOLED phosphorescent OLED technology. 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 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 believes 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.

At this time, based on its current knowledge, Company management believes that the JPO decisions invalidating all the claims in the Company's JP '781 and JP '168 patents should be overturned on appeal as to all or a significant portion of the claims. However, Company management cannot make any assurances of this result.

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

On March 10, 2011, the Company received informal notice from the Company's 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.

On April 21, 2011, the Company's Korean patent counsel received a copy of the petitioner's brief in support of the Request. The Company filed a response to the Request on June 20, 2011. The petitioner filed a rebuttal brief on August 8, 2011, and the Company filed a response to the rebuttal brief on October 12, 2011. The petitioner filed a second rebuttal brief on

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January 17, 2012, and the Company filed a response to the second rebuttal brief on March 29, 2012. The petitioner filed a third rebuttal brief on June 12, 2012, to which the Company intends to file a timely response by the August 11, 2012 due date.

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 its claims will be upheld. However, Company management cannot make any assurances of this result.

Invalidation Trials in Korea for Patent Nos. KR-558632 and KR-963857

On May 11 and May 31, 2011, respectively, the Company learned that Requests for Invalidation Trials were filed in Korea, on May 3 and May 26, 2011, respectively, for the Company's Korean Patent Nos. KR-558632 (the KR '632 patent), which issued on March 2, 2006, and KR-963857 (the KR '857 patent), which issued on June 8, 2010, which relate to the Company's UniversalPHOLED phosphorescent OLED technology. The Requests were filed by Duk San Hi-metal, Ltd. (Duk San) of Korea. The KR '632 and KR '857 patents are both Korean counterpart patents, in part, to U.S. '238 Patent Family and to EP '870 patent, which is subject to the above-noted European opposition; and to the JP '024 patent, which is subject to the below-noted Japanese Invalidation Trial. 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 its formal responses to the Requests by the due dates of August 27, 2011 and September 8, 2011, respectively. Duk San filed a reply brief on December 16, 2011 relating to the KR '857 patent, to which the Company timely filed a responsive brief on April 23, 2012.

On July 3, 2012, with the consent of Company management, Duk San withdrew its Invalidation Trial requests for both matters. Both Invalidation Trials against the KR-'632 and KR-'857 patents are now terminated with the patents remaining valid as granted and with all claims remaining intact.

Invalidation Trials in Korea for Patent Nos. KR-744199 and KR-913568

On May 10 and May 31, 2011, respectively, the Company learned that Requests for Invalidation Trials were filed in Korea, on May 3 and May 26, 2011, respectively, for the Company's Korean Patent Nos. KR-744199 (the KR '199 patent), which issued on July 24, 2007, and KR-913568 (the KR '568 patent), which issued on August 17, 2009, which relate to the Company's UniversalPHOLED phosphorescent OLED technology. The Requests were also filed by Duk San. The KR '199 and KR '568 patents are both Korean counterpart patents, in part, to the U.S. '828 Patent Family which relate to the EP '238 patent, which is subject to one of the above-noted European oppositions; and to the JP '929 patent, which is subject to one of the above-noted Japanese Invalidation Trials. 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 its formal responses to the Requests by the due dates of September 1, 2011 and August 23, 2011, respectively. Both parties have completed the process of filing briefs in these matters with KIPO. An Oral Hearing has been scheduled by KIPO for September 10, 2012.

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

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 the Company's Japanese Patent No. JP-4511024 (the JP '024 patent), which issued on May 14, 2010, relates to the Company's



UniversalPHOLED phosphorescent OLED technology. 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 KR '632 and KR '857 patents, which are subject to one of the above noted Korean Invalidation Trials. 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.

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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 intend to appeal the decision to the Japanese IP High Court.

The due date for filing the Appeal to the Japanese IP High Court is September 6, 2012.

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 its 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), which relate to the Company's UniversalPHOLED phosphorescent OLED technology. 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.

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 its claims will be upheld. However, Company management cannot make any assurances of this result.

Invalidation Trials in Korea for Patent Nos. KR-794,975, KR-840,637 and KR-937,470

On August 8, 2011, the Company received information indicating that Requests for Invalidation Trials were filed against the Company's Korean Patent Nos. KR-840,637 (the KR '637 patent) and KR-937,470 (the KR '470 patent), which issued on June 17, 2008 and January 11, 2010, respectively, which relate to the Company's UniversalPHOLED phosphorescent OLED technology. On December 12, 2011, the Company received information that a further Request for an Invalidation Trial was filed against the Company's Korean Patent No. KR-794,975 (the KR '975 patent). The Requests were also filed by Duk San. The KR '975, KR '637 and KR '470 patents are Korean counterpart patents, in part, to the U.S. '828 Patent Family; to the EP '803 patent, which is subject to one of the above-noted European oppositions; and to the JP '781 and JP '168 patents, which are subject to the above-noted Japanese Invalidation Trials. 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's formal responses relating to the KR '637, KR '470, and KR '975 patents were timely filed on December 7, 2011, December 8, 2011, March 3, 2012, and June 26, 2012, respectively. Both parties may file additional briefs in these matters with KIPO.

At this time, based on its current knowledge, Company management believes there is a substantial likelihood that the patents being challenged will be declared valid and that all or a significant portion of their claims will be upheld. 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 is in the process of preparing its response to the oppositions. The Company's initial response to the oppositions was timely filed prior to the June 30, 2012 due date.

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 its claims will be upheld. However, Company management cannot make any assurances of this result.

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## 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), which relate to the Company's UniversalPHOLED phosphorescent OLED technology. 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 the above-noted Patent Nos. KR '637 and KR '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 is due to be filed by September 30, 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 its 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 comprehensive income (loss) is \$1.2 million and \$1.4 million for the three months ended June 30, 2012 and 2011, respectively, and \$2.4 million and \$3.3 million for the six months ended June 30, 2012 and 2011, respectively, which was derived from contracts with United States government agencies. Revenues derived from contracts with United States government agencies represented 4% and 12% of the consolidated revenue for the three months ended June 30, 2012 and 2011, respectively, and 6% and 16% of the consolidated revenue for the six months ended June 30, 2012 and 2011, respectively.

Revenues for the three months ended June 30, 2012 and 2011, and accounts receivable as of June 30, 2012, from our largest non-government customer were as follows:

| Customer | % of Total Revenue |      | Accounts<br>Receivable<br>(in<br>thousands)<br>June 30,<br>2012 |
|----------|--------------------|------|---|
|          | 2012               | 2011 |   |
| A        | 75 %               | 47 % | \$ 5,367  |

Revenues for the six months ended June 30, 2012 and 2011, from the same customer, were as follows:

| Customer | % of Total Revenue |      |
|----------|--------------------|------|
|          | 2012               | 2011 |
| A        | 65 %               | 46 % |

Revenues from outside of North America represented 96% and 87% of consolidated revenue for the three months ended June 30, 2012 and 2011, respectively. Revenues by geographic area are as follows (in thousands):

| Country       | 2012     | 2011     |
|---------------|----------|----------|
| United States | \$ 1,284 | \$ 1,445 |
| South Korea   | 23,560   | 6,921    |
| Japan         | 4,137    | 2,595    |

|                       |           |           |
|-----------------------|-----------|-----------|
| Taiwan                | 732       | 251       |
| Other                 | 274       | 40        |
| All foreign locations | 28,703    | 9,807     |
| Total revenue         | \$ 29,987 | \$ 11,252 |

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Revenues from outside of North America represented 94% and 83% of consolidated revenue for the six months ended June 30, 2012 and 2011, respectively. Revenues by geographic area are as follows (in thousands):

| Country               | 2012      | 2011      |
|-----------------------|-----------|-----------|
| United States         | \$ 2,558  | \$ 3,447  |
| South Korea           | 30,953    | 13,075    |
| Japan                 | 6,703     | 3,711     |
| Taiwan                | 1,989     | 538       |
| Other                 | 404       | 82        |
| All foreign locations | 40,049    | 17,406    |
| Total revenue         | \$ 42,607 | \$ 20,853 |

The Company attributes revenue to different geographic areas on the basis of the location of the customer. Long-lived tangible assets at international locations are not significant for each of the periods presented. 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 preexisting agreements made between the Company and SMD.

The Company is subject to income taxes in both United States and foreign jurisdictions. Income tax expense for the three and six months ended June 30, 2012 and 2011 is primarily comprised of foreign taxes based on earnings during the period. For both the three and six months ended June 30, 2012, approximately \$2.1 million of foreign income taxes were recorded, and for the three and six months ended June 30, 2011, foreign income taxes of \$289,000 and \$586,000 were recorded, respectively. These foreign taxes are 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. We also recorded approximately \$208,000 related to federal and state income taxes in the three and six month periods ended June 30, 2012.

Although the Company generated income before income taxes during the three and six months ended June 30, 2012, there was no provision for United States federal or state income taxes, excluding certain estimated alternative minimum taxes due to the utilization of net operating loss carry forwards which are offset by a full valuation allowance.

The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the period in which the respective temporary difference become deductible. Currently, a full valuation allowance has been established for the Company's net deferred tax assets because the Company incurred substantial operating losses from inception through 2010 and management has assessed that the net deferred tax assets do not meet the criteria for realization at this time.

## 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.

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The following table is a reconciliation of net income (loss) and the shares used in calculating basic and diluted net income (loss) per common share for the three months ended June 30, 2012 and 2011 (in thousands, except for share and per share data):

|  | 2012       | 2011        |
|--|------------|-------------|
| <b>Numerator:</b>  |            |             |
| Net income – Basic   | \$ 10,964  | \$ 3,313    |
| Effect of warrants   | —          | (4,496 )    |
| Net income (loss) – Diluted  | \$ 10,964  | \$ (1,183 ) |
| <b>Denominator:</b>  |            |             |
| Weighted average common shares outstanding –                           |            |             |
| Basic  | 45,953,312 | 45,024,373  |
| Effect of dilutive shares:   |            |             |
| Common stock equivalents arising from stock options, warrants and ESPP | 663,419    | 177,802     |
| Restricted stock awards and units                                      | 240,578    | —           |
| Weighted average common shares outstanding –                           |            |             |
| Diluted  | 46,857,309 | 45,201,175  |
| Net income (loss) per common share:                                    |            |             |
| Basic  | \$ 0.24    | \$ 0.07     |
| Diluted  | \$ 0.23    | \$ (0.03 )  |

For the three months ended June 30, 2012, the effects combined unvested restricted stock awards and restricted stock units of 48,366, were excluded from the calculation of diluted EPS as their impact would have been antidilutive.

For the three months ended June 30, 2011, the effects of the exercise of the combined outstanding stock options and unvested restricted stock awards and restricted stock units of 2,088,014, and the impact of shares to be issued under the ESPP, which was minor, were excluded from the calculation of diluted EPS as the impact would have been antidilutive.

The following table is a reconciliation of net income (loss) and the shares used in calculating basic and diluted net income (loss) per common share for the six months ended June 30, 2012 and 2011 (in thousands, except for share and per share data):

|  | 2012       | 2011        |
|--|------------|-------------|
| <b>Numerator:</b>  |            |             |
| Net income (loss) – Basic  | \$ 9,743   | \$ (8,568 ) |
| Effect of warrants   | —          | —           |
| Net income (loss) – Diluted  | \$ 9,743   | \$ (8,568 ) |
| <b>Denominator:</b>  |            |             |
| Weighted average common shares outstanding –                           |            |             |
| Basic  | 45,871,166 | 41,977,113  |
| Effect of dilutive shares:   |            |             |
| Common stock equivalents arising from stock options, warrants and ESPP | 726,359    |             |
| Restricted stock awards and units                                      | 299,373    | —           |
| Weighted average common shares outstanding –                           |            |             |
| Diluted  | 46,896,898 | 41,977,113  |



Net income (loss) per common share:

|         |         |            |
|---------|---------|------------|
| Basic   | \$ 0.21 | \$ (0.20 ) |
| Diluted | \$ 0.21 | \$ (0.20 ) |

For the six months ended June 30, 2012, the effects combined unvested restricted stock awards and restricted stock units of 189,552, were excluded from the calculation of diluted EPS as their impact would have been antidilutive.

For the six months ended June 30, 2011, the effects of the exercise of the combined outstanding stock options and warrants and unvested restricted stock awards and restricted stock units of 2,302,760, and the impact of shares to be issued under the ESPP, which was minor, were excluded from the calculation of diluted EPS as the impact would have been antidilutive.

## 16. SUBSEQUENT EVENTS

On July 13, 2012, the Company entered into a three-year joint development agreement with Plextronics, Inc (Plextronics). Under the joint development agreement, the Company is committed to pay \$1.0 million a year to Plextronics for three years. In addition, the Company invested \$4 million in Plextronics through the purchase of a convertible promissory note, with a principal amount of \$4 million. The note accrues interest at the rate of 3% per annum and is due and payable by June 30,

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2013. The Company has the option to convert the note into shares of Plextronics' preferred stock at a specified conversion price.

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

On July 23, 2012, the Company entered into a Patent Sale Agreement (the Agreement), with FUJIFILM Corporation. Under the Agreement, FUJIFILM sold approximately 1,255 OLED (organic light emitting diode) related patents and patent applications in exchange for a cash payment of \$105 million. The Agreement contains customary representations and warranties and covenants, including respective covenants not to sue by both parties thereto. The Agreement permitted the Company to assign all of its rights and obligations under the Agreement to its affiliates, and the Company assigned, prior to the consummation of the transactions contemplated by the Agreement, its rights and obligations to UDC Ireland Limited ("UDC Ireland"), a wholly owned subsidiary of the Company formed under the laws of the Republic of Ireland. The transactions contemplated by the Agreement were consummated on July 26, 2012.

**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," 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, 2011, 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 (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.

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While we have made significant progress over the past few years developing and commercializing our family of OLED technologies (including our PHOLED, TOLED, and FOLED) and materials, we have incurred significant losses since our inception, resulting in an accumulated deficit of \$204.1 million as of June 30, 2012.

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

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

### RESULTS OF OPERATIONS

#### Three Months Ended June 30, 2012 Compared to Three Months Ended June 30, 2011

We had operating income of \$12.9 million for the three months ended June 30, 2012, compared to an operating loss of \$1.1 million for the three months ended June 30, 2011. The increase in operating income was due to the following:

- an increase in revenue of \$18.7 million; offset by
- an increase in operating expenses of \$4.8 million.

We had net income of \$11.0 million (or \$0.24 per basic and \$0.23 per diluted share) for the three months ended June 30, 2012, compared to net income of \$3.3 million (or income of \$0.07 per basic and a loss of \$0.03 per diluted share) for the three months ended June 30, 2011. In 2011, net income included a \$4.5 million gain on stock warrant liability related to warrants that were previously recorded as a liability. In August 2011, all remaining outstanding stock warrants to purchase shares of our common stock were exercised.

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

Our revenues were \$30.0 million for the three months ended June 30, 2012, compared to \$11.3 million for the three months ended June 30, 2011. The increase in our overall revenue was primarily due to the receipt and therefore recognition of \$15.0 million of royalty and license fees received under our patent license agreement with SDC, as well as an increase in OLED material sales.

Material sales increased to \$12.8 million for the three months ended June 30, 2012, compared to \$6.7 million for the same period in 2011. Material sales relates to the sale of our OLED materials for incorporation into our customers' commercial OLED products or for their OLED development and evaluation activities. The increase in material sales was due to the 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 85% of our total material sales for the three months ended June 30, 2012, compared to 71% of our total material sales for the three months ended June 30, 2011. Host material sales were 15% of our total material sales for the three months ended June 30, 2012, compared to 29% of our total material sales for the three months ended June 30, 2011. 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.

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Royalty and license fees increased to \$15.4 million for the three months ended June 30, 2012, compared to \$2.7 million for the three months ended June 30, 2011. A substantial portion of the increase was due to the receipt and therefore recognition of \$15.0 million of royalty and license fee payments under our patent license agreements with SDC. In August 2011 we entered into a patent license agreement with SDC which replaced and superseded the then existing patent license agreement. This patent license agreement with SDC runs through December 31, 2017.

Our new 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 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 August 2011 patent license agreement with SDC, we also entered into a new supplemental material purchase agreement with SDC. Under the August 2011 supplemental material purchase agreement, SDC agreed 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.

Cost of material sales increased to \$1.6 million for the three months ended June 30, 2012, compared to \$142,000 for the three months ended June 30, 2011, based on 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.

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 June 30, 2012, compared to the same period in 2011. For the three months ended June 30, 2012 and 2011, costs associated with \$8.1 million and \$3.1 million, respectively, of material sales relating to commercial materials were included in cost of material sales.

We incurred research and development expenses of \$7.2 million for the three months ended June 30, 2012, compared to \$5.6 million for the three months ended June 30, 2011. The following significant changes occurred:

- increased costs of \$637,000 primarily related to outsourced research and development efforts;
- increased costs of \$562,000 primarily due to increased salaries, costs associated with retirement benefits and stock-based compensation for certain executive officers; and

·increased other costs of approximately \$267,000 primarily related to the timing of costs incurred for raw materials and other lab related costs used for research and development.

Selling, general and administrative expenses were \$5.2 million for the three months ended June 30, 2012, compared to \$4.5 million for the three months ended June 30, 2011. The overall increase in these costs was primarily driven by increased employee costs due to increased costs associated with existing employees as well as increased costs due to new employees.

Patent costs increased to \$2.3 million for the three months ended June 30, 2012, compared to \$1.9 million for the three months ended June 30, 2011. The increase was mainly due to increased costs associated with our defense of certain ongoing and new challenges to our issued patents, as well as the timing of prosecution and maintenance costs associated with a number of patents and patent applications.

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Royalty and license expense increased to \$786,000 for the three months ended June 30, 2012, compared to \$218,000 for the three months ended June 30, 2011. The increase consisted mainly of royalties incurred under our amended license agreement with Princeton University (Princeton), the University of Southern California (USC), the University of Michigan (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 increased to \$357,000 for the three months ended June 30, 2012, compared to \$184,000 for the three months ended June 30, 2011. The increase was mainly attributable to interest earned on higher average cash and investment balances as a result of proceeds received from the completion of our public offering in March 2011.

At June 30, 2011, we had outstanding warrants to purchase shares of common stock, which warrants contained a “down-round” provision requiring liability classification. The change in fair value of these warrants during the period resulted in a \$4.5 million non-cash gain on our statement of comprehensive income for the three months ended June 30, 2011. In August 2011, all remaining outstanding stock warrants to purchase shares of our common stock were exercised.

Income tax expense was \$2.3 million and \$289,000 for the three months ended June 30, 2012 and 2011, respectively. See “Provision for Income Tax” below for additional information.

Six Months Ended June 30, 2012 Compared to Six Months Ended June 30, 2011

We had operating income of \$11.4 million for the six months ended June 30, 2012, compared to an operating loss of \$3.8 million for the six months ended June 30, 2011. The increase in operating income was due to the following:

- an increase in revenue of \$21.8 million; offset by
- an increase in operating expenses of \$6.6 million.

We had net income of \$9.7 million (or \$0.21 per basic and diluted share) for the six months ended June 30, 2012, compared to a net loss of \$8.6 million (or \$0.20 per basic and diluted share) for the six months ended June 30, 2011. In 2011, the net loss included a \$4.4 million loss on stock warrant liability. In August 2011, all remaining outstanding stock warrants to purchase shares of our common stock were exercised.

Our revenues were \$42.6 million for the six months ended June 30, 2012, compared to \$20.9 million for the six months ended June 30, 2011. The increase in our overall revenue was primarily due to increased OLED material sales, as well as increased royalty and license fees received and therefore recognized under our patent license agreement with SDC.

Material sales increased to \$23.4 million for the six months ended June 30, 2012, compared to \$11.2 million for the same period in 2011. Material sales relate to the sale of our OLED materials for incorporation into our customers’ commercial OLED products or for their OLED development and evaluation activities. The increase in material sales was due to the 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 83% of our total material sales for the six months ended June 30, 2012, compared to 81% of our total material sales for the six months ended June 30, 2011. Host material sales were 17% of our total material sales for the six months ended June 30, 2012, compared to 19% of our total material sales for the six months ended June 30, 2011. 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 \$15.9 million for the six months ended June 30, 2012, compared to \$5.3 million for the six months ended June 30, 2011. A substantial portion of the increase was due to the receipt and therefore recognition of \$15 million of royalty and license fee payments received under our patent license agreements with SDC. In August 2011 we entered into a patent license agreement with SDC which replaced and superseded the then existing patent license agreement. This patent license agreement with SDC runs through December 31, 2017.

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Technology and development revenues decreased to \$3.4 million for the six months ended June 30, 2012, compared to \$4.3 million for the six months ended June 30, 2011. The decrease was due principally to the timing of work performed and costs incurred in connection with several new and completed government programs. However, the overall value of our government contracts remained relatively constant during both periods.

Our new patent license agreement with SDC covers the manufacture and sale of specified OLED display products. Under the license agreement, SDC has agreed to pay us a fixed license fee, payable in semi-annual installments over the agreement term. These installments 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 August 2011 patent license agreement with SDC, we also entered into a new supplemental material purchase agreement. Under the August 2011 supplemental material purchase agreement, SDC agreed 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.

Cost of material sales increased to \$2.7 million for the six months ended June 30, 2012, compared to \$245,000 for the six months ended June 30, 2011, based on 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.

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 six months ended June 30, 2012, compared to the same period in 2011. For the six months ended June 30, 2012 and 2011, costs associated with \$15.6 million and \$6.2 million, respectively, of material sales relating to commercial materials were included in cost of material sales.

We incurred research and development expenses of \$13.9 million for the six months ended June 30, compared to \$12.1 million for the six months ended June 30, 2011. Research and development expenses increased overall due to increase research and development efforts. The following significant changes occurred:

- increased costs of \$486,000 related to the timing of costs incurred under research and development contracts;
- increased costs of \$482,000 primarily related to outsourced research and development efforts;

- increased employee costs of \$312,000, primarily due to increased salaries, costs associated with retirement benefits and stock-based compensation for certain executive officers, and new employees; and
- increased costs of \$251,000 related to lab-related expenses;

Research and development expenses for the six months ended June 30, 2012 were reduced by \$603,000 due to the reversal of certain compensation accruals, resulting from actual payments made during the first quarter of 2012 being lower than previously estimated at December 31, 2011.

Selling, general and administrative expenses were \$9.5 million for the six months ended June 30, 2012, compared to \$8.4 million for the six months ended June 30, 2011. The overall increase in these costs was driven in part by increased employee costs, commercial activities, professional fees and non-cash expenses related to stock-based compensation. Selling general and administrative expenses for the six months ended June 30, 2012 were reduced by \$315,000 due to the reversal of certain

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compensation accruals, resulting from actual payments made during the first quarter of 2012 being lower than previously estimated at December 31, 2011.

Patent costs increased to \$4.1 million for the six months ended June 30, 2012, compared to \$3.5 million for the six months ended June 30, 2011. The increase was mainly due to increased costs associated with our defense of certain ongoing and new challenges to our issued patents, as well as the timing of prosecution and maintenance costs associated with a number of patents and patent applications.

Royalty and license expense increased to \$1.0 million for the six months ended June 30, 2012, compared to \$420,000 for the six months ended June 30, 2011. The increase consisted mainly of royalties incurred under our amended license agreement with Princeton, USC and Michigan, resulting from higher material sales and increased royalty revenues. See Note 5 in Notes to Consolidated Financial Statements for further discussion.

Interest income increased to \$714,000 for the six months ended June 30, 2012, compared to \$280,000 for the six months ended June 30, 2011. The increase was mainly attributable to interest earned on higher average cash and investment balances as a result of proceeds received from the completion of our public offering in March 2011.

At June 30, 2011, we had outstanding warrants to purchase shares of common stock, which warrants contained a “down-round” provision requiring liability classification. The change in fair value of these warrants during the period resulted in a \$4.4 million non-cash loss on our statement of comprehensive loss for the six months ended June 30, 2011. In August 2011, all remaining outstanding stock warrants to purchase shares of our common stock were exercised.

Income tax expense was \$2.3 million and \$586,000 for the six months ended June 30, 2012 and 2011, respectively. See “Provision for Income Taxes” below for additional information.

Provision for Income Tax

We are subject to income taxes in both the U.S. and foreign jurisdictions. Judgment is required in evaluating our tax positions for future realization and determining our provision for income taxes. Income tax expense for the three and six months ended June 30, 2012 and 2011 is primarily comprised of foreign withholding taxes based upon income earned during the period. These foreign taxes are primarily related to foreign taxes withheld on royalty and license fees paid to us. SDC has been required to withhold tax upon payment of royalty and license fees to us at a rate of 16.5%. We can reasonably estimate the amount of withholding taxes based on anticipated license fee receipts from SDC. Any potential foreign tax credits to be received by us for these amounts on our United States tax returns are currently offset by a full valuation allowance as noted below. For the three months ended June 30, 2012 and 2011, total income tax expense was \$2.3 million and \$289,000, respectively, of which approximately \$2.1 million and \$289,999, respectively, were related to foreign income taxes.

For the six months ended June 30, 2012 and 2011, total income tax expense was \$2.3 million and \$586,000 respectively, of which approximately \$2.1 million and \$586,000, respectively, were related to foreign income taxes. Additionally, we recorded approximately \$208,000 related to federal and state income taxes during both the three and six month periods ended June 30, 2012. The effective income tax rate was 17.2% for the three months ended June 30, 2012, and was 19.1% for the six months ended June 30, 2012.

Although we generated income before income taxes during the three and six months ended June 30, 2012, there was no provision for United States federal or state income taxes, excluding certain estimated alternative minimum taxes due to the utilization of net operating loss carryforwards which are offset by a full valuation allowance. At December 31, 2011, we had approximately \$178 million of federal and \$87 million of state net operating loss carryforwards. Our ability to use these net operating loss carryforwards could be subject to limitation because of

certain ownership changes. The utilization of these tax attributes during the period results in a corresponding decrease in deferred tax assets and the related valuation allowance.

The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the period in which the respective temporary differences become deductible. 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 continue to sustain actual profitability and can demonstrate sustained forecasted profitability 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 has been established for all our net deferred tax assets because we incurred substantial operating losses from

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inception through 2010 and based on the aforementioned factors, we have assessed that the net deferred tax assets do not meet the criteria for realization.

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. Also, due to the uncertainty inherent in projections of future earnings within the statutory carryforward periods, it cannot be assured there will be any adjustment to the valuation allowance in the future. Subsequent revisions to the estimated net realizable value of our deferred tax assets could also cause our provision for income taxes to vary significantly from period to period.

Liquidity and Capital Resources

As of June 30, 2012, we had cash and cash equivalents of \$159.6 million and short-term investments of \$190.4 million, for a total of \$350.0 million. This compares to cash and cash equivalents of \$111.8 million and short-term investments of \$234.3 million, for a total of \$346.1 million, as of December 31, 2011.

Cash provided from operating activities was \$9.2 million for the six months ended June 30, 2012, compared to cash provided of \$1.8 million for the same period in 2011. The increase in cash provided from operating activities was primarily due to the following:

- an increase in net income of \$13.0 million when adjusted for non-cash items; offset partially by
- the impact of the timing of net inventory purchases of \$4.3 million; and
- the impact of the timing of payments for other current assets \$1.9 million.

Cash provided from investing activities was \$41.0 million for the six months ended June 30, 2012, compared to cash used of \$210.4 million for the same period in 2011. The increase in cash provided from investing activities was mainly due to the timing of maturities of investments as well as the timing of purchases of investments as a result of the completion of our public offering described below.

Cash used in financing activities was \$2.4 million for the six months ended June 30, 2012, compared to cash provided of \$253.4 million for the same period in 2011. In March 2011, the Company completed a public offering of its common stock resulting in net proceeds of \$249.7 million. For the six months ended June 30, 2012, we received proceeds of \$943,000 from the exercise of options to purchase shares of our common stock, compared to proceeds of \$7.5 million from the exercise of options and warrants to purchase shares of our common stock for the same period in 2011. We made payments of \$3.5 million in withholding taxes in connection with stock-based employee compensation including option exercises for the six months ended June 30, 2012, compared to \$4.0 million for the same period in 2011.

Working capital was \$351.2 million as of June 30, 2012, compared to \$342.8 million as of December 31, 2011.

In July 2012, we entered into various agreements requiring cash expenditures of approximately \$109.3 million. See Item 1. Notes to Consolidated Financial Statements – Note 16. Subsequent Events.

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.

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### Critical Accounting Policies

Refer to our Annual Report on Form 10-K for the year ended December 31, 2011, for a discussion of our critical accounting policies. There have been no changes in critical accounting policies to date in 2012.

### Contractual Obligations

Refer to our Annual Report on Form 10-K for the year ended December 31, 2011 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, 2011 for a discussion of off-balance sheet arrangements. As of June 30, 2012, 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 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 June 30, 2012. 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 June 30, 2012 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

Set forth below are descriptions of legal proceedings to which we are a party. We note that we currently have more than 2,700 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 materials 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.

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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 its 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), which relate to our UniversalPHOLED phosphorescent OLED technology. 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 on or about May 13, 2012. The parties are currently waiting for a notice setting the remaining briefing schedule for responses to the opponents' papers.

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

Invalidation Trial in Japan for Japan Patent No. 3992929

On April 19, 2010, we received a copy of a Notice of Invalidation Trial from the Japanese Patent Office (the JPO) for Japan Patent No. 3992929 (the JP '929 patent), which was issued on August 3, 2007, which relates to UniversalPHOLED phosphorescent OLED technology. The request for the Invalidation Trial was filed by Semiconductor Energy Laboratory Co., Ltd. (SEL), of Kanagawa, Japan. The JP '929 patent is a Japanese counterpart patent, in part, to the above-noted 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 February 28, 2011, we learned that the JPO had issued a decision recognizing our invention and upholding the validity of most of the claims, but finding the broadest claims in the patent invalid. We believe that the JPO's decision

invalidating these claims was erroneous, and we filed an appeal to the Japanese IP High Court.

Both parties filed appeal briefs in this matter with the Japanese IP High Court. A technical explanation hearing was held on February 1, 2012. At the hearing, both parties filed technical materials supporting their respective positions.

On May 16, 2012, we learned that the Japanese IP High Court issued a decision relating to the JP '929 Patent that confirmed the prior decision of the JPO. We have filed a notice of appeal with the Japanese Supreme Court.

At this time, based on its current knowledge, we believe that the Japanese IP High Court's decision supporting the invalidation of certain claims in our JP '929 patent was based on an erroneous technical and legal conclusion, and we believe it has a reasonable basis for overturning the decision as to all or a significant portion of the claims. However, we recognize

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that the Japanese Supreme Court has a relatively low rate of review and reversal in patent related cases, accordingly we cannot make any assurances of any such 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), which relates to our UniversalPHOLED phosphorescent OLED technology. 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 Schweitz 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 its 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 its 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, and which relate to our UniversalPHOLED phosphorescent OLED technology. 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 believe 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.

At this time, based on its current knowledge, we believe that the JPO decisions invalidating all the claims in our JP '781 and JP '168 patents should be overturned on appeal as to all or a significant portion of the claims. However, we cannot make any assurances of this result.

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.

On April 21, 2011, our Korean patent counsel received a copy of the petitioner's brief in support of the Request. We filed a response to the Request on June 20, 2011. The petitioner filed a rebuttal brief on August 8, 2011, and we filed a response to the rebuttal brief on October 12, 2011. The petitioner filed a second rebuttal brief on January 17, 2012, and we filed a response to the second rebuttal brief on March 29, 2012. The petitioner filed a third rebuttal brief on June 12, 2012, to which we intend to file a timely response by the August 11, 2012 due date.

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At this time, based on its 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 its claims will be upheld. However, we cannot make any assurances of this result.

Invalidation Trials in Korea for Patent Nos. KR-558632 and KR-963857

On May 11 and May 31, 2011, respectively, we learned that Requests for Invalidation Trials were filed in Korea, on May 3 and May 26, 2011, respectively, for our Korean Patent Nos. KR-558632 (the KR '632 patent), which issued on March 2, 2006, and KR-963857 (the KR '857 patent), which issued on June 8, 2010, which relate to our UniversalPHOLED phosphorescent OLED technology. The Requests were filed by Duk San Hi-metal, Ltd. (Duk San) of Korea. The KR '632 and KR '857 patents are both Korean counterpart patents, in part, to U.S. '238 Patent Family and to EP '870 patent, which is subject to the above-noted European opposition; and to the JP '024 patent, which is subject to the below-noted Japanese Invalidation Trial. They are exclusively licensed us by Princeton, and we are required to pay all legal costs and fees associated with this proceeding.

We timely filed our formal responses to the Requests by the due dates of August 27, 2011 and September 8, 2011, respectively. Duk San filed a reply brief on December 16, 2011 relating to the KR '857 patent, to which we timely filed a responsive brief on April 23, 2012.

On July 3, 2012, with our consent, Duk San withdrew its Invalidation Trial requests for both matters. Both Invalidation Trials against the KR-'632 and KR-'857 patents are now terminated with the patents remaining valid as granted and with all claims remaining intact.

Invalidation Trials in Korea for Patent Nos. KR-744199 and KR-913568

On May 10 and May 31, 2011, respectively, we learned that Requests for Invalidation Trials were filed in Korea, on May 3 and May 26, 2011, respectively, for our Korean Patent Nos. KR-744199 (the KR '199 patent), which issued on July 24, 2007, and KR-913568 (the KR '568 patent), which issued on August 17, 2009, which relate to our UniversalPHOLED phosphorescent OLED technology. The Requests were also filed by Duk San. The KR '199 and KR '568 patents are both Korean counterpart patents, in part, to the U.S. '828 Patent Family which relate to the EP '238 patent, which is subject to one of the above-noted European oppositions; and to the JP '929 patent, which is subject to one of the above-noted Japanese Invalidation Trials. 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 our formal responses to the Requests by the due dates of September 1, 2011 and August 23, 2011, respectively. Both parties have completed the process of filing briefs in these matters with KIPO. An Oral Hearing has been scheduled by KIPO for September 10, 2012.

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

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, relates to our UniversalPHOLED phosphorescent OLED technology. 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 KR '632 and KR '857 patents, which are subject to one of the above noted Korean Invalidation Trials. 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 intend to appeal the decision to the Japanese IP High Court.

The due date for filing the Appeal to the Japanese IP High Court is September 6, 2012.

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At this time, based on its current knowledge, we believe that the patent being challenged should be declared valid and that all or a significant portion of its 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), which relate to our UniversalPHOLED phosphorescent OLED technology. 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.

At this time, based on its 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 its claims will be upheld. However, we cannot make any assurances of this result.

Invalidation Trials in Korea for Patent Nos. KR-794,975, KR-840,637 and KR-937,470

On August 8, 2011, we received information indicating that Requests for Invalidation Trials were filed against our Korean Patent Nos. KR-840,637 (the KR '637 patent) and KR-937,470 (the KR '470 patent), which issued on June 17, 2008 and January 11, 2010, respectively, which relate to our UniversalPHOLED phosphorescent OLED technology. On December 12, 2011, we received information that a further Request for an Invalidation Trial was filed against our Korean Patent No. KR-794,975 (the KR '975 patent). The Requests were also filed by Duk San. The KR '975, KR '637 and KR '470 patents are Korean counterpart patents, in part, to the U.S. '828 Patent Family; to the EP '803 patent, which is subject to one of the above-noted European oppositions; and to the JP '781 and JP '168 patents, which are subject to the above-noted Japanese Invalidation Trials. They are exclusively licensed to us by Princeton, and we are required to pay all legal costs and fees associated with this proceeding.

Our formal responses relating to the KR '637, KR '470, and KR '975 patents were timely filed on December 7, 2011, December 8, 2011, March 3, 2012, and June 26, 2012, respectively. Both parties may file additional briefs in these matters with KIPO.

At this time, based on its current knowledge, we believe there is a substantial likelihood that the patents being challenged will be declared valid and that all or a significant portion of their claims will be upheld. 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. We are in the process of preparing its response to the oppositions. Our initial response to the oppositions was timely filed prior to the June 30, 2012 due date.



At this time, based on its 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 its 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), which relate to our UniversalPHOLED phosphorescent OLED technology. 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 the above-noted Patent Nos. KR '637 and KR '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.

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Our response to the opponents' opposition briefs is due to be filed by September 30, 2012.

At this time, based on its 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 its 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, 2011.

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

## Withholding of Shares to Satisfy Tax Liabilities

During the quarter ended June 30, 2012, we acquired 570 shares of common stock through transactions related to the vesting of restricted share awards previously granted to certain employees. Upon vesting, the employees turned in shares of common stock in amounts sufficient to pay their minimum statutory tax withholding at rates required by the relevant tax authorities.

The following table provides information relating to the shares we received during the quarter ended June 30, 2012.

| ISSUER PURCHASES OF EQUITY SECURITIES |                                  |                                       |  |  |
|---------------------------------------|----------------------------------|---------------------------------------|--|--|
| Period                                | Total Number of Shares Purchased | Weighted Average Price Paid per Share | Total Number of Shares Purchased as Part of Publicly Announced Program | Approximate Dollar Value of Shares that May Yet Be Purchased Under the Program |
| April 1 – April 30                    | --                               | \$ --                                 | n/a  | --   |
| May 1 – May 31                        | 570                              | 40.65                                 | n/a  | --   |
| June 1 – June 30                      | --                               | --                                    | n/a  | --   |
| Total                                 | 570                              | \$ 40.65                              | n/a  | --   |

## ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

## ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

## ITEM 5. OTHER INFORMATION

None.

## 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*          | Amended and Restated Change in Control Agreement between the Registrant and Mauro Premutico, dated April 16, 2012  |
| 10.2*          | Equity Retention Agreement between the Registrant and Mauro Premutico, dated April 16, 2012  |
| 31.1*          | Certifications of Steven V. Abramson, Chief Executive 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.) |

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Exhibit

Number Description

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.

# Confidential treatment has been requested as to certain portions of this exhibit pursuant to Rule 24b-2 under the Securities Exchange Act of 1934, as amended.

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.

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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: August 8, 2012

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