Universal Display Corporation

OLED Investor Presentation January 2015



Forward-Looking Statements

All statements in this document that are not historical, such as those relating to Universal Display Corporation's technologies and potential applications of those technologies, the Company's expected results as well as the growth of the OLED market and the Company's opportunities in that market, are forwardlooking statements within the meaning of the Private Securities Litigation Reform Act of 1995. You are cautioned not to place undue reliance on any forward-looking statements in this document, as they reflect Universal Display Corporation's current views with respect to future events and are subject to risks and uncertainties that could cause actual results to differ materially from those contemplated. These risks and uncertainties are discussed in greater detail in Universal Display Corporation's periodic reports on Form 10-K and Form 10-Q filed with the Securities and Exchange Commission, including, in particular, the section entitled "Risk Factors" in Universal Display Corporation's annual report on Form 10-K for the year ended December 31, 2013. Universal Display Corporation disclaims any obligation to update any forward-looking statement contained in this document.

Who We are:

Enabling the OLED industry through our Innovation and 20+ years of Materials & **Technology** Leadership

Leading Global OLED Patent Licensor

Over 3,300 OLED Patents Issued & Pending in China, Europe, India, Japan, Korea, Taiwan and the United States Fabless Commercial Emissive Layer Material Supplier

> Produced by PPG Industries, Inc., device-qualified and sold commercially by UDC since 2003

Innovative OLED Technology Developer

> Over 20 years and \$300M+ of Research & Development

Solid Financial Performance



Strong Financial Performance



Reconciliation of non-GAAP measures

The following table details our reconciliation of non-GAAP measures to the most directly comparable GAAP measures:

(in thousands, except per share data)	Year Ended December 31,			
		2013		2012
Operating Results:	(Unaudited)			
Net income (loss)	\$	74,052	\$	9,660
Non-GAAP Reconciling Items:				
Deferred income tax expense		17,934		—
Release of income tax valuation allowances		(59,352)		—
Total non-GAAP reconciling items		(41,418)		—
Non-GAAP Measures:				
Adjusted net income	\$	32,634	\$	9,660
Adjusted net income per common share, basic *	\$	0.71	\$	0.21
Adjusted net income per common share, diluted **	\$	0.70	\$	0.21

* The adjusted net income per common share, basic is derived from dividing adjusted net income by the number of weighted average shares used in computing basic net income per common share.

**The adjusted net income per common share, diluted for the year ended December 31, 2013, is derived from dividing adjusted net income by adjusted weighted average shares of 46,582,347, which excludes the amount of any excess tax benefits in assumed proceeds in calculating the weighted average shares using the treasury stock method. The exclusion is intended to present our diluted net income per common share for the year ended December 31, 2013 as if our assessment of the future realizability of our deferred tax assets did not change and the income tax valuation allowances were not reversed, consistent with prior periods. For the year ended December 31, 2012, there is no difference between net income per common share and adjusted net income per common share.

Non-GAAP Measures

To supplement our selected financial data presented in accordance with U.S. generally accepted accounting principles (GAAP), we use certain non-GAAP measures. These non-GAAP measures include adjusted net income (loss), adjusted net income (loss) per common share, basic and adjusted income (loss) per common share, diluted. Reconciliation to the nearest GAAP measures of all non-GAAP measures included in the presentation can be found within the table detailing the reconciliation of non-GAAP measures to GAAP measures above.

We have provided these non-GAAP measures to enhance investors' overall understanding of our current financial performance, and as a means to evaluate periodto-period comparisons. We believe that these non-GAAP measures provide meaningful supplemental information regarding our financial performance by excluding the effect of the release of income tax valuation allowances that may not be indicative of recurring core business operating results. We believe that the non-GAAP measures that exclude the impact of the release of income tax valuation allowances and deferred income tax expense recognized after the release of the allowances, when viewed with GAAP results, enhance the comparability or results against prior periods and allow for greater transparency of financial results. The presentation of non-GAAP measures is not intended to be considered in isolation or as a substitute for, or superior to, the financial information prepared and presented in accordance with GAAP.

Robust Capital Structure

	September 30, 2014
Cash, Cash Equivalents and Investments	\$268,359
Total Assets	\$472,170
Long-term Debt	
A/P and Accrued Liab.	\$17,359
Deferred Revenue	\$4,281
Shareholders' Equity	\$439,780
Total Shares Outstanding	46,633,763

Increasing Customer Diversification

2013: % of first 9-month Revenues: \$97.2M

2014: % of first 9-month Revenues: \$134.9M



Strategic Relationships with Blue Chip Partners



Elegant Simplicity of an OLED





Galaxy S4 Pixel Structure

- An Organic Light Emitting Diode is a series of organic thin films between two conductors
- When electrical current is applied, bright light is emitted
- OLEDs can be used for displays and lighting
- OLEDs are not just thin and efficient they can also be made *flexible* and *transparent*

Strong OLED Display Market Drivers

Lower Power Usage

- RED Phosphorescence reduces power consumption by 25%
- Add GREEN: 45% cumulative reduction
- Add BLUE: 74% cumulative reduction
- Enabled by PHOLEDs

Superior Aesthetics

- Improved image quality
- Thin and Light
- 180 degree viewing angle
- 2,000,000 : 1 contrast ratio – TRUE BLACK
- Real-time video speeds
 excellent for 3D
- Self-emissive display
- On cell touch without sacrificing fill factor
- Low UV output
- Flexible

More Cost Effective

- Fewer manufacturing process steps
- Low cost bill-ofmaterials
 - No backlight required
 - No color filter required
 - No liquid crystal required
 - Reduced driver IC costs
- Enables non-glass substrates

OLED Smartphones

Samsung GALAXY5





OLED Smartphones



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More OLED Products



LCD vs. OLED



✓ Lower BOM (bill of materials)
 ✓ Better Performance, More Efficient
 ✓ Thinner and Flexible Form Factor
 ✓ Vivid Colors and Superior Contrast Ratio

Strong OLED Lighting Market Drivers





Eco-Friendly. Extremely clean form of illumination does not contain harmful substances like mercury and consumes little power.



It is a **surface** light source. The light is soft and illuminates large areas evenly.



It remains cool. Even after many hours of use, this form of illumination does not heat up.

OLED Lighting Around the World Today



*Now available @ 🚫



AMOLED Display Market Potential



Source: DisplaySearch, Q4'14

IVERSAL DISPLAY CORPORATION

Material Revenue Stream







OLED Panel Area Demand



Source: DisplaySearch, Q3'14

UniversalPHOLED® Product Line

Today we offer emissive layer material systems and component materials:

- Red, Green and Yellow Emitters for Displays
- Red, Green, Yellow and Light Blue Emitters for White Lighting
- Host Systems (Mixed and Single Component) for Red, Green, Yellow and Light Blue

PHOLED Performance (at 1000 cd/m²)	1931 CIE Color Coordinates	Luminous Efficiency (cd/A)	Operating Lifetime (hrs) LT 95% LT 50%	
DEEP RED	(0.69, 0.31)	17	14,000	250,000
RED	(0.66, 0.34)	29	23,000	600,000
RED	(0.64, 0.36)	30	50,000	900,000
YELLOW	(0.44, 0.54)	81	85,000	1,450,000
GREEN	(0.31, 0.63)	85	18,000	4 00,000
LIGHT BLUE	(0.18, 0.42)	50	700	20,000

The results are for bottom-emitting structures (with no cavities) fabricated by vacuum thermal evaporation. Lifetime data are based on accelerated current drive conditions at room temperature without any initial burn-in.

Strong, Broad and Deep Patent Portfolio



Patents are Universal



1,546 patents issued (I) + 1,772 patents pending (P) For a total of 3,318 (I & P)*

*as of December 31, 2013

Future Growth: UDC Patents



Innovation: Future Revenue Streams



Future Growth: Flexible



Lighter



Unbreakable

Thinner

New Form Factors



Company Highlights

Global <u>Leader</u> in OLED Technology & Materials

- Lighting up the OLED Revolution
- License & Sell Proprietary Phosphorescent
 OLED Technology and Materials to <u>Display</u>
 <u>Solid-State Lighting</u> Manufacturers
- Fabless Model; 144 Employees
- Largest Global PHOLED Team

Blue-Chip Customer Base

- <u>Displays</u>: Samsung, LG Display, BOE, AUO, Innolux, Pioneer, Sony
- <u>Lighting</u>: Kaneka, Konica Minolta, Lumiotec, Pioneer, Fraunhofer IPMS, LG Chem, NEC, Philips
- Working with <u>over</u> 25 Companies
- Growing Pipeline

Strong Financial Performance

- \$268M Cash, <u>no</u> debt
- High Margin Business
- Lean Operating Model
- \$50M Stock Buy Back

Comprehensive & Robust IP

- Largest Phosphorescent
 OLED (PHOLED) Technology
 & Materials Portfolio
- Over 3,300 Issued & Pending Patents Worldwide and Growing