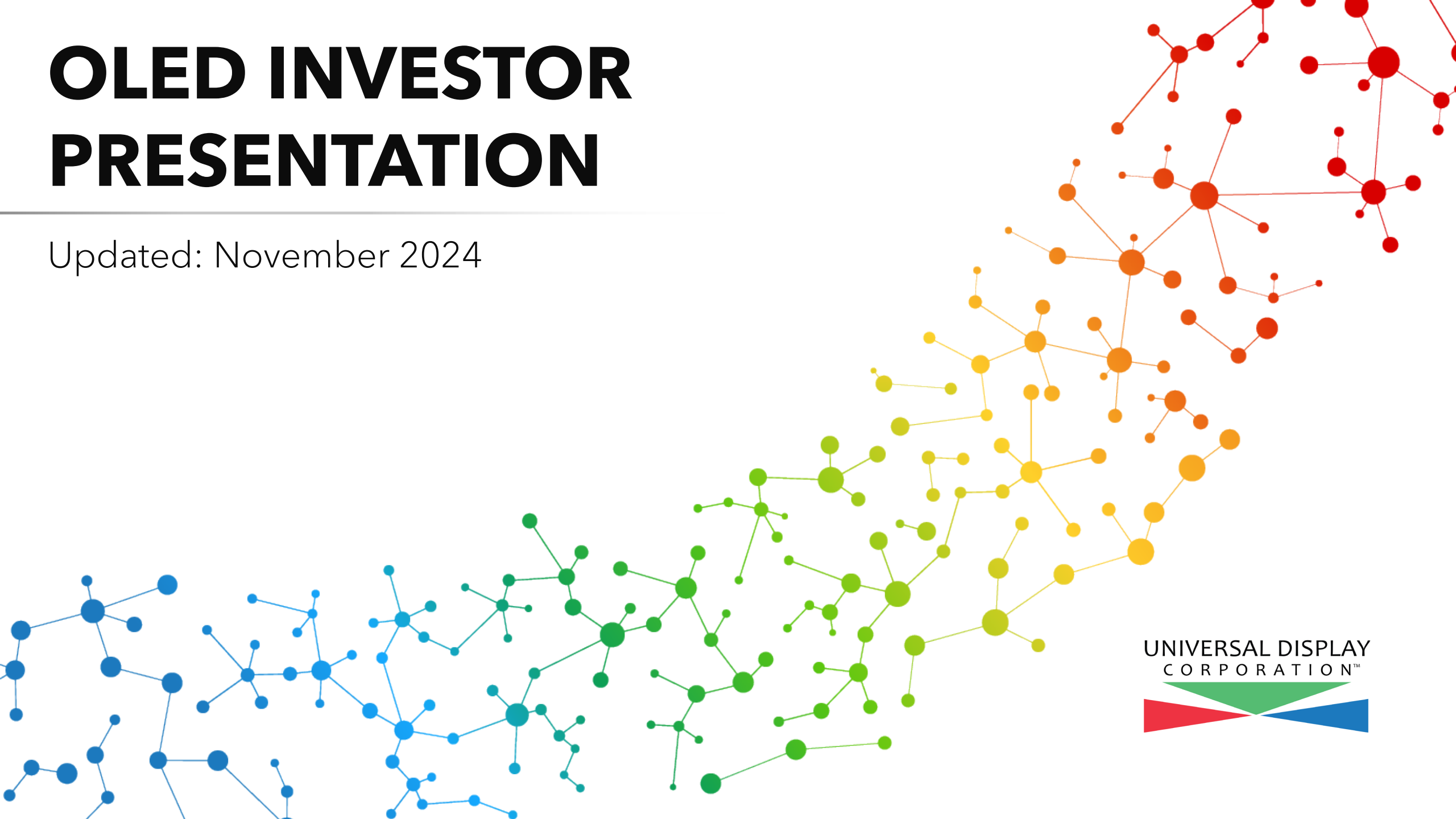


OLED INVESTOR PRESENTATION

Updated: November 2024



Forward-Looking Statements

All statements in this document that are not historical, such as those relating to the projected adoption, development and advancement of the Company's technologies, and the Company's expected results and future declaration of dividends, as well as the growth of the OLED market and the Company's opportunities in that market, are forward-looking financial 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, 2023. Universal Display Corporation disclaims any obligation to update any forward-looking statement contained in this document.

Universal Display Corporation (UDC) Overview

Who We Are

UDC (Nasdaq: OLED) is a leader in the research, development & commercialization of OLED technologies and materials for use in display and solid-state lighting applications.

- Founded in 1994
- Subsidiaries and offices around the world
- Since inception, UDC's innovation strategy has centered on building a strong foundation of best-in-class OLED materials and technologies.



OLED Pioneer Enabling Industry Growth



Leading Global Supplier of Energy-Efficient PHOLED Materials



Innovator with Robust IP Portfolio of 6,000+ Patents Issued and Pending Worldwide*



Key Industry Partner Providing Support with 30-Years of OLED Expertise

UDC: Strong Corporate Citizen



UDC's Energy-Efficient Phosphorescent Materials

- ① 100% UniversalPHOLED® emitters save energy
- ① UDC's emitters do not use conflict minerals

Diverse & Inclusive Workplace

- ① Geographic: from over 25 countries
- ① Gender: 22% female and 78% male¹
- ① Cultural diversity

Diverse Board of Directors²

- ① 40% female and 60% male²
- ① Named a 2024 Champion of Board Diversity by The Forum of Executive Women

Community Outreach

- ① Foster educational STEM initiatives
- ① Support community organizations
- ① Employee charity matching program

ISO Certifications

- ① ISO 9001:2015 (quality)
- ① ISO 14001:2015 (environment)
- ① ISO 45001:2018 (health/safety)

Recognitions

- ① *Newsweek*: America's Greenest Companies 2024
- ① *Fast Company*: Best Workplaces for Innovators, Science & Technology List

UDC's Global Footprint

United States

UDC HQ (NJ)
Adeis, Inc. (DE)
OVJP Corporation (CA)
UDC Ventures LLC (NY)
PPG (PA & OH)

UDC China

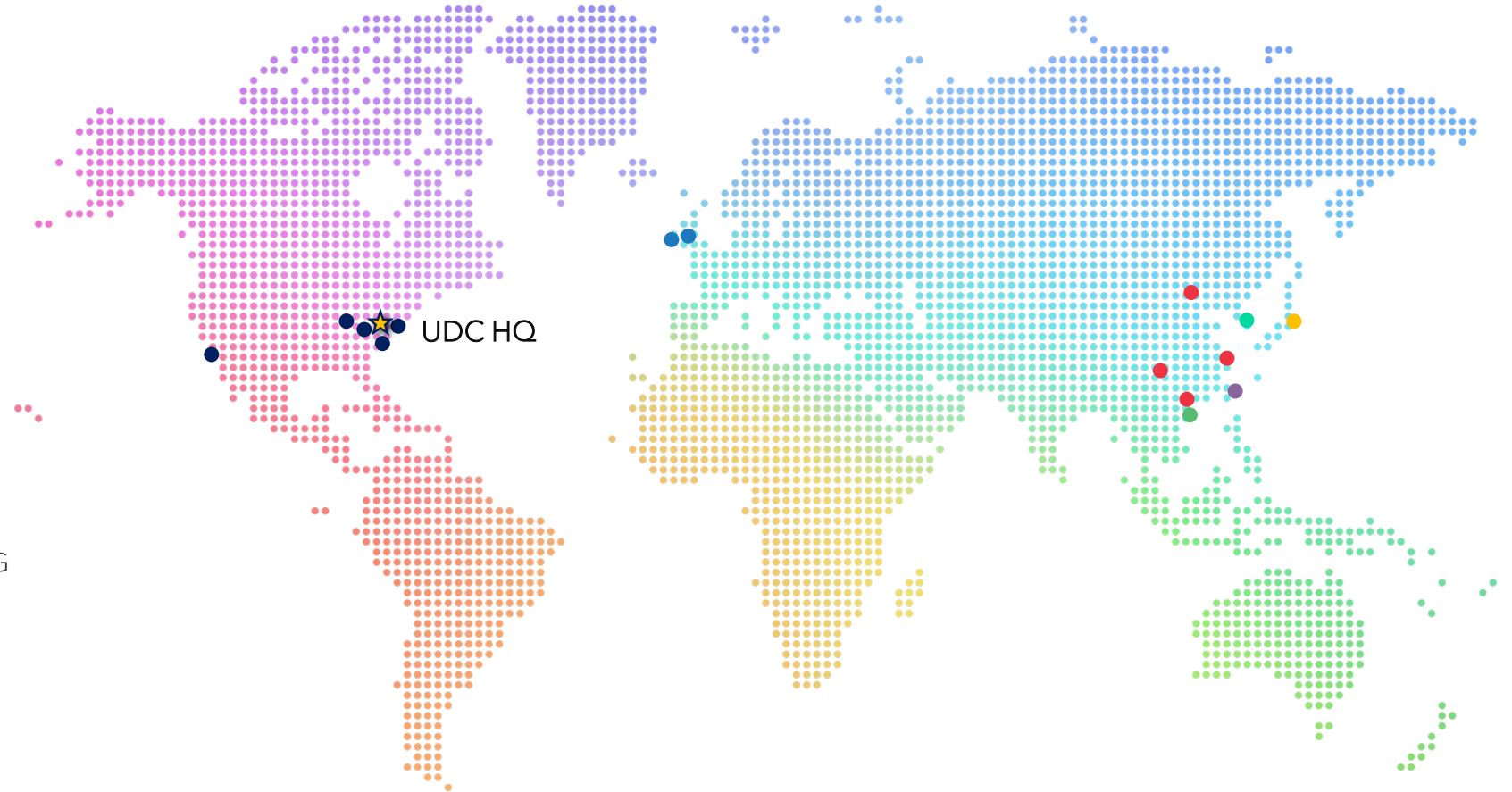
UDC Hong Kong

UDC Ireland
OLED Material Manufacturing Ltd (OM²) & PPG

UDC Japan

UDC Korea

UDC Taiwan



More Than
470
Employees

Including more than
320
Scientists, engineers and technicians

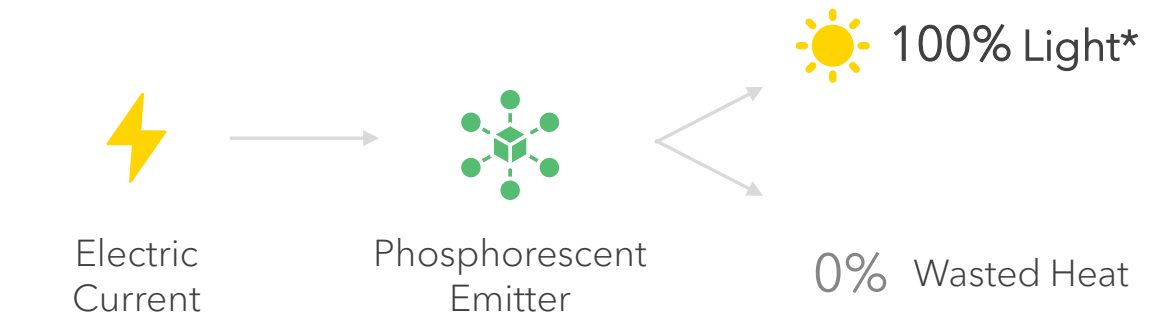
UniversalPHOLED® = Energy Efficiency

UDC's patented and award-winning phosphorescent OLED technology and materials are integral to enabling low power consumption in OLED displays and lighting.

Key Benefits of Phosphorescent Emitters

- Enable energy efficiency
- Reduce requirements for heat dissipation components
- Increase lifetime
- Lower product cost

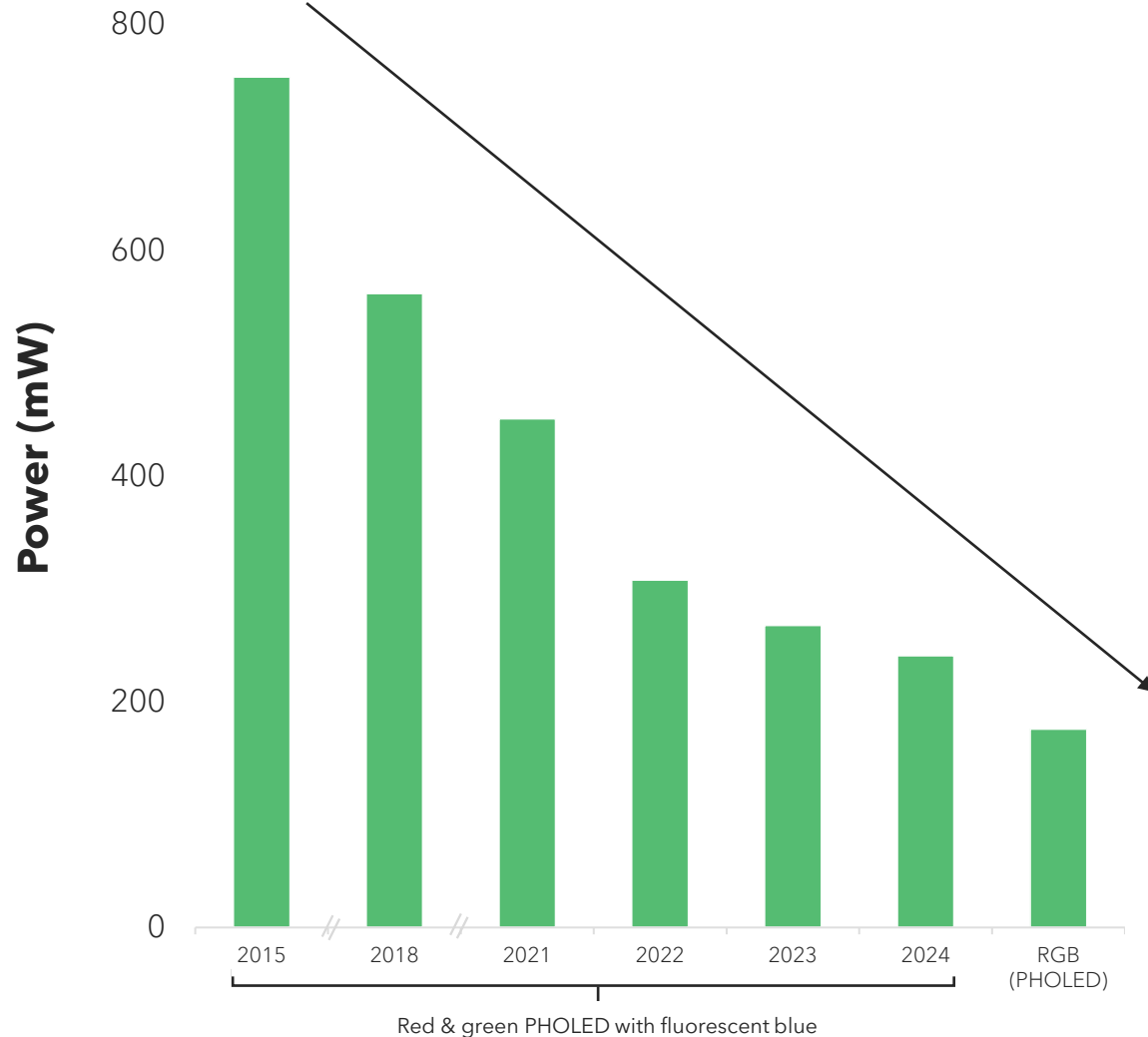
Cornerstone: Phosphorescent OLED (PHOLED) Innovation Energy Efficiency



With trailblazing energy efficiency:
Up to **4x** the efficiency of fluorescent OLED

*100% Internal Quantum Efficiency
Baldo et. al., Nature, 395, 151 (1998)

UniversalPHOLED® Energy Efficiency Innovation



Smartphone Display Power Consumption

Current performance (2024)

Red & green PHOLED w/ fluorescent blue



~68%

Energy consumption compared to 2015

Projected additional performance improvement

Full red, green & *blue* PHOLED vs. Prior devices containing fluorescent blue



~25%

Energy consumption compared to 2024

Based on a 5.0" OLED display operating at 600 cd/m² with video (50% pixels on). PHOLED data is based on UDC estimates. PHOLED=Phosphorescent

Phosphorescent OLED Carbon Savings



Calculated assumptions

There are at least 1.8 billion active OLED smartphones using UDC's PHOLED materials and technology in the world today and, assuming:



Average use is 4 hours per day



Average luminance at 600 nits with 50% pixels on



Power savings is 30% over LCD



Power savings



Power saving per display is 0.46W



Total savings per year is an estimated 1,216 GW-h per year

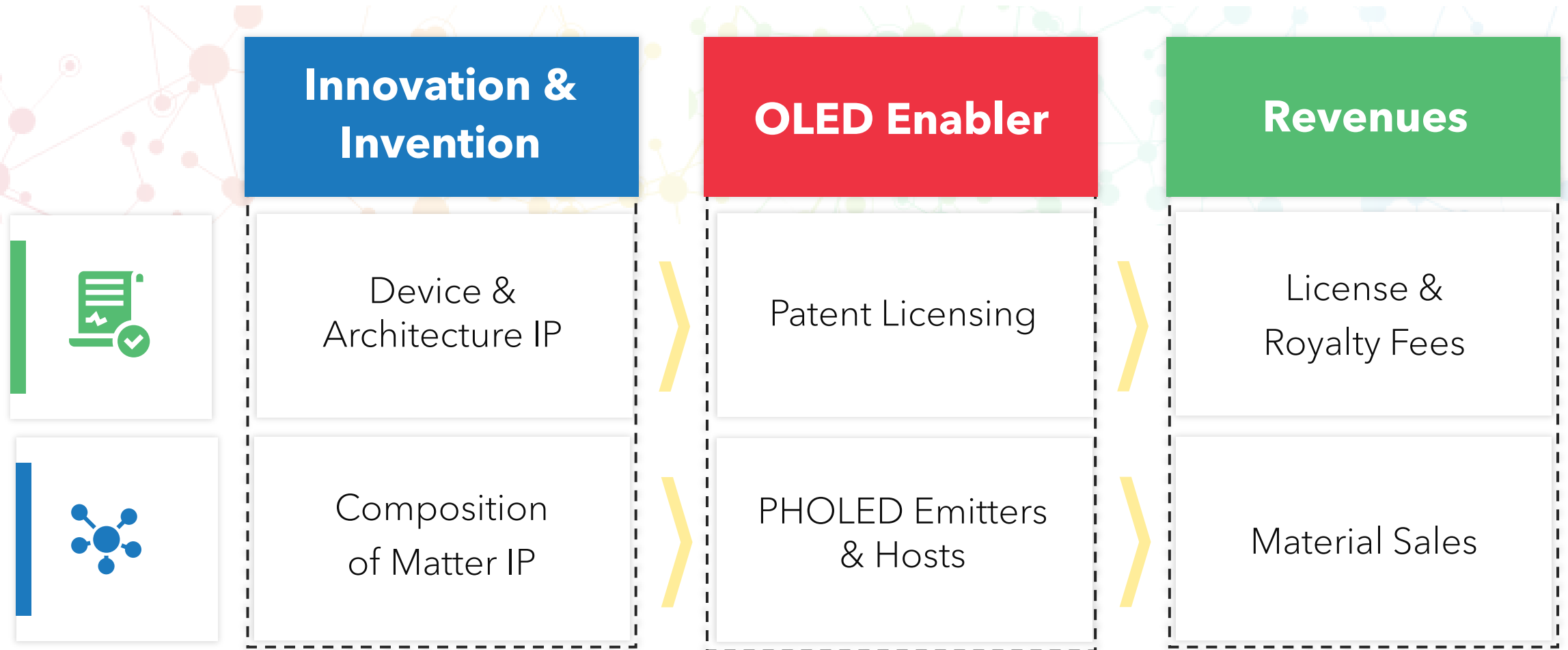


861,758 Metric tons of carbon dioxide (CO₂) equivalent avoided per year¹

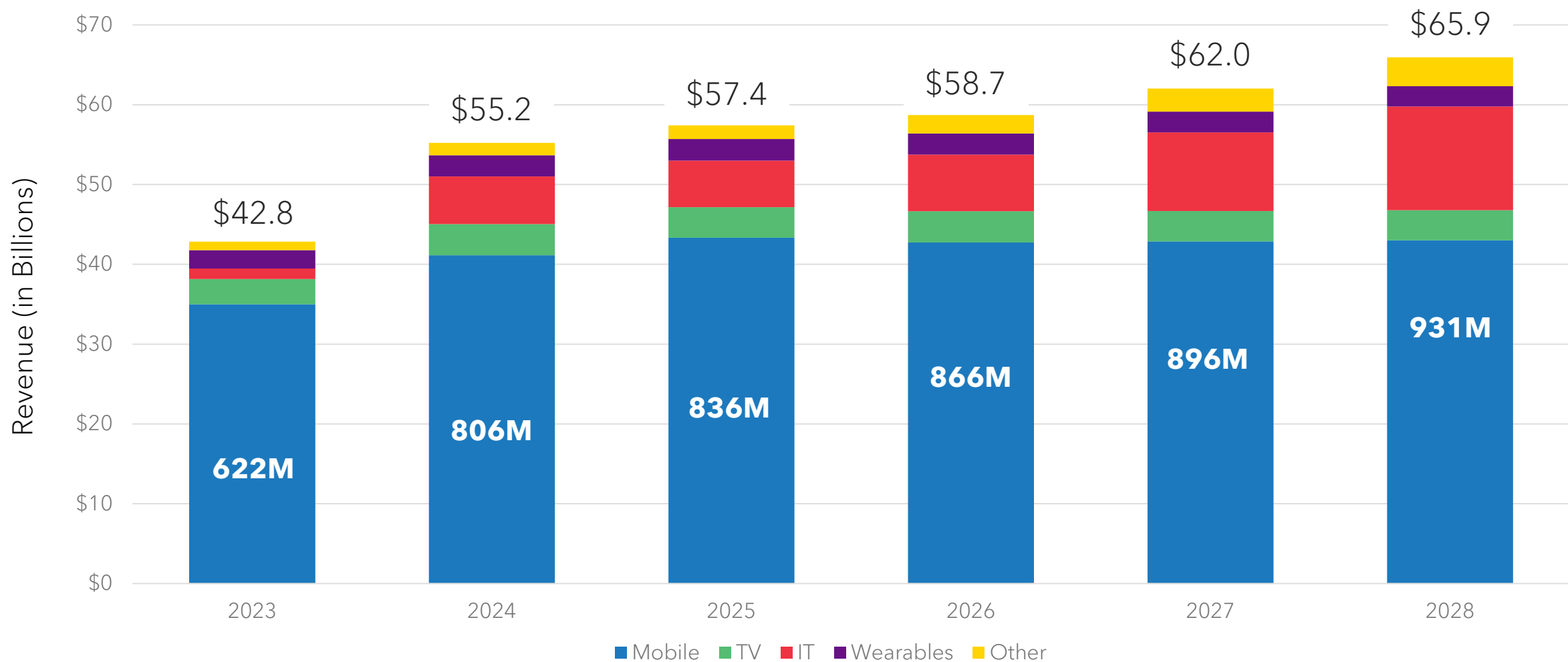


Equivalent to carbon sequestered by 14,249,241 tree seedlings grown for 10 years¹

UDC's Business Model



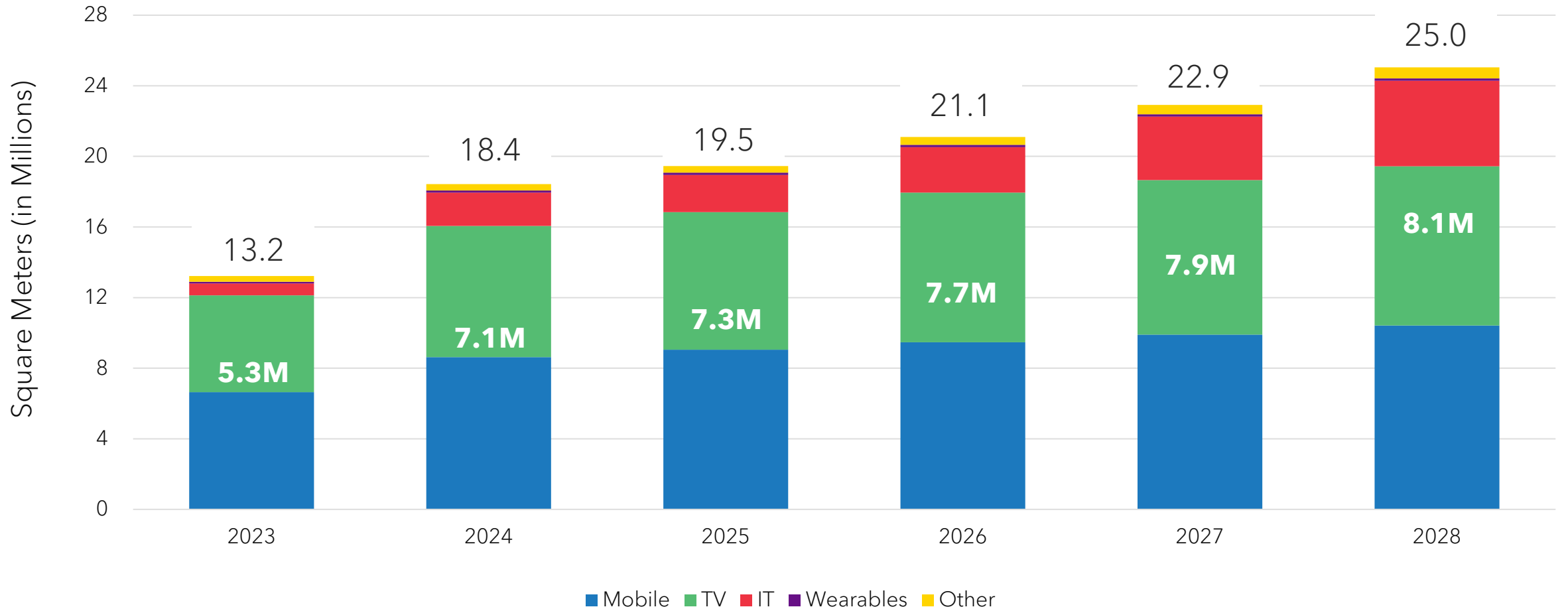
OLED Display Market Potential



Unit numbers are for OLED smartphones only

Source: Omdia OLED Display Market Tracker - Q2 2024 (September 2024)

OLED Display Panel Demand



Unit numbers are for OLED TVs only
Source: Omdia OLED Display Market Tracker - Q2 2024 (September 2024)

Strong OLED Display Market Drivers

Lower Power Usage



- **RED** Phosphorescence reduces power consumption by 25%
- Add **GREEN**: 45% cumulative reduction
- Add **BLUE**: 75% cumulative reduction
- Enabled by PHOLEDs

Superior Aesthetics



- Improved image quality
- Thin and Light
- 180 degree viewing angle
- Near infinite contrast ratio (true black)
- Real-time video speeds (great for 3D)
- Self-emissive display
- Low UV output
- Minimal bezel
- Flexible

More Cost Effective



- Fewer manufacturing process steps
- Lower bill-of-materials
 - No backlight required
 - No color filter required
 - No liquid crystal required
 - Reduced driver IC costs
- Enables non-glass substrates

OLED Smartwatches & Smartphones



Samsung Galaxy Watch7



OPPO Watch X



Honor Watch 5



OPPO Reno12



vivo V40



Samsung Galaxy S24



iPhone 16 Pro



Apple Watch Series 10



Xiaomi Watch S3



Garmin Venu 3



Honor 200



Motorola ThinkPhone



Google Pixel 9



Tecno Pova 6



Meizu Lucky 08



HTC U24 Pro



OnePlus Nord 4



Xiaomi 14

OLED TVs and AR/VR



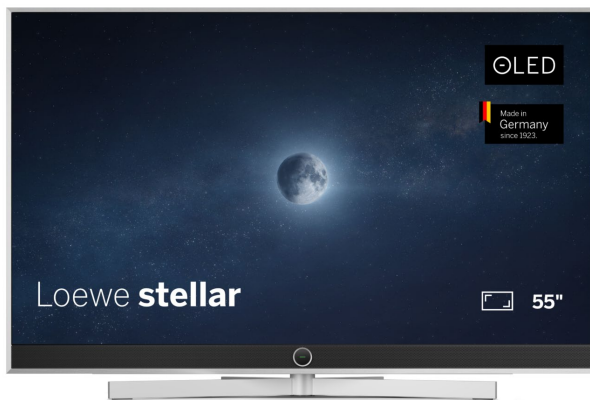
LG OLED evo G4



Samsung S95D



BRAVIA XR Class A95L QD-OLED



Loewe Stellar 55 DR+



LG 4K Transparent OLED T TV



Apple Vision Pro



PlayStation VR2

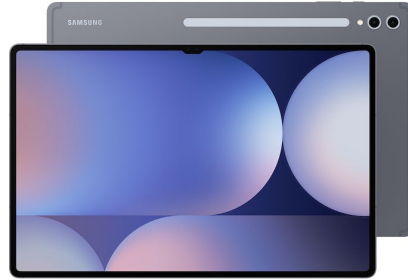
OLED IT Products



Apple iPad Pro



Honor MagicPad2



Samsung Galaxy Tab
S10 and S10+



Microsoft Surface Pro



ASUS Zenbook 16 Air



DELL XPS 13 OLED



Samsung Galaxy
Chromebook Plus



Samsung 32\" Odyssey
OLED G8



LG 39\" UltraGear™ OLED
curved gaming monitor

Automotive OLED Displays & Lighting



2025 Audi SQ5



BYD's Yangwang U8
Premium Edition Hybrid



2025 Hongqi
Guoya



2025 Hyundai Genesis
GV80



Mercedes EQS
OLED MBUX Hyperscreen



2025 MINI
Countryman SE EV



Zeekr Luxury Sedan



LCD vs. OLED



- ④ Lower BOM (bill of materials)
- ④ Better Performance, More Efficient
- ④ Thinner and Flexible Form Factor
- ④ Vivid Colors and Superior Contrast Ratio

Image based on illustration from LG

Form Factor: Flexible, Foldable, Rollable



Samsung Display Flex Note
Extendable (CES 2024)



LG 42-Inch OLED Flex TV
with Bendable Screen



Asus Zenbook 17 Fold



Google Pixel
Pro Fold



Samsung Galaxy
Z Fold SE



Samsung Galaxy
Z Fold6



Samsung Galaxy
Z Flip6



vivo X Fold3
Pro



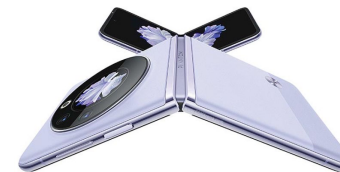
OPPO Find
N3



Xiaomi MX
Flip



Honor Magic
V3



Tecno Phantom
V Flip

Groundbreaking Organic Vapor Jet Printing (OVJP)



Organic Vapor Jet Printing enables deposition of patterned organic films without a fine metal mask



OLED materials and substrate are the same as in today's proven mass production VTE process

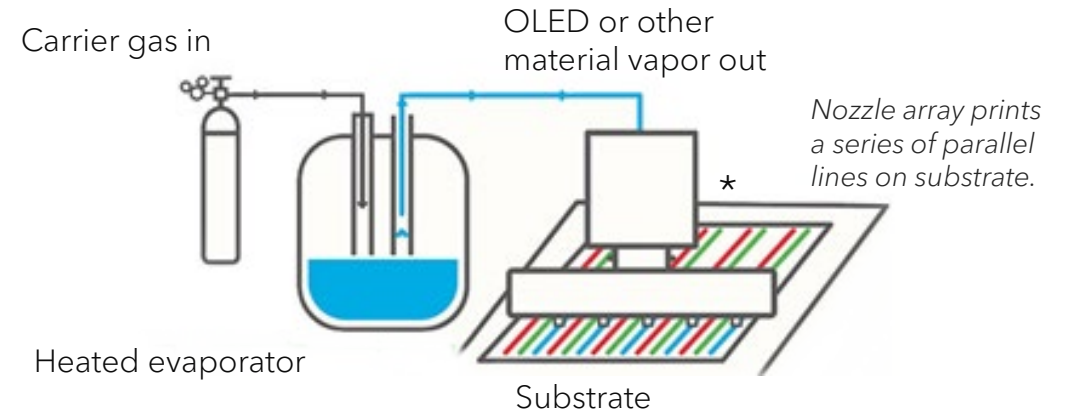


Direct pattern RGB SBS Top Emission

- Lower manufacturing cost
- VTE equivalent device performance
- Meets Advance TV Requirements



Enables advanced device layer architecture to support TV roadmap



* Image depicts printing of blue after dry printing red and green using OVJP.

Supports 4K and 8K resolution
Applies to thermally vaporizable organic molecules

Benefits:

- Cost-effective
- High throughput
- Dry printing
- Highly scalable
- Digitally controlled patterning
- Precise thickness control
- Co-deposition and multilayer printing
- Multiple deposition layers in one chamber

Strong OLED Lighting Market Drivers

Energy-efficient & environmentally friendly



- Low drive voltage
- Low operating temperatures, cool to touch
- Long lifetime
- Easy to control

Highly desirable color quality



- Wide range of CCT, high CRI possible
- Color tunable
- Instant "ON" , Dimmable without flicker
- No glare, no noise
- Low UV content

Form factor & low-cost potential

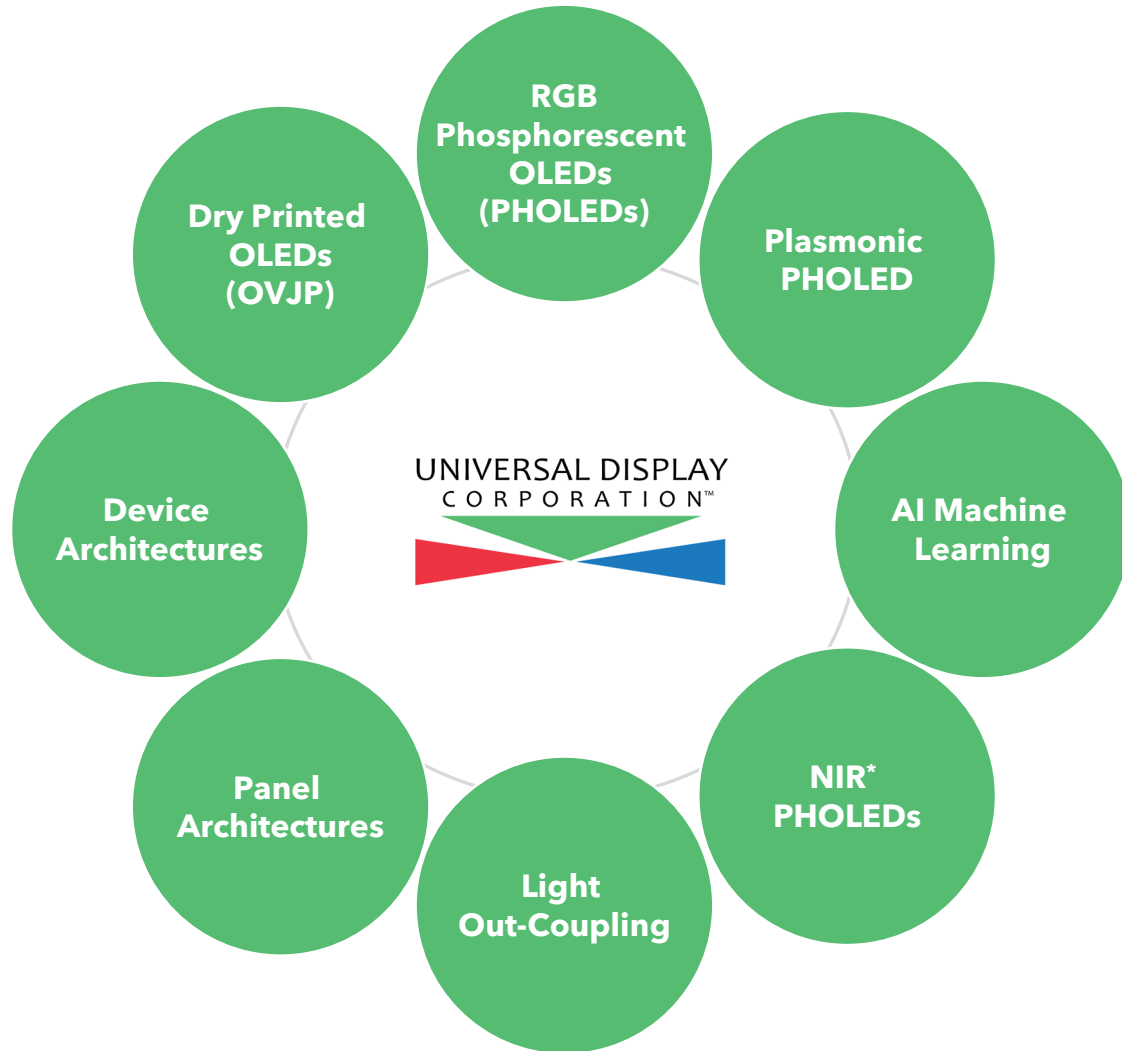


- Thin and lightweight
- Transparent
- Non-breakable, Conformable, Flexible, Foldable, Rollable
- Scaling advantage
- Roll-to-roll process

OLED Lighting Around the World



Strong, Broad & Deep Patent Portfolio



- We develop and license enabling technologies that are at the heart of consumer OLED products worldwide, from AR/VR, smartwatches, smartphones, IT (tablets, laptops, monitors), automotive and TVs to lighting products.
- We believe that our extensive portfolio of patents, trade secrets and know-how enable our leadership position in the OLED ecosystem.
- Our R&D innovations allow us to continuously bolster the depth and breadth of our global OLED intellectual property framework, which currently stands at more than 6,000 issued and pending patents worldwide (as of Sept 30, 2024).

Global Patent Portfolio

6,000+ Worldwide Patents Issued & Pending*

- China
- South Korea
- Europe
- Taiwan
- Japan
- United States



* as of September 30, 2024

Strategic Display & Lighting Partnerships

AUO



BOE



SHARP



Lumiotec



INNOLUX



TCL CSOT



KANEKA

SAMSUNG DISPLAY

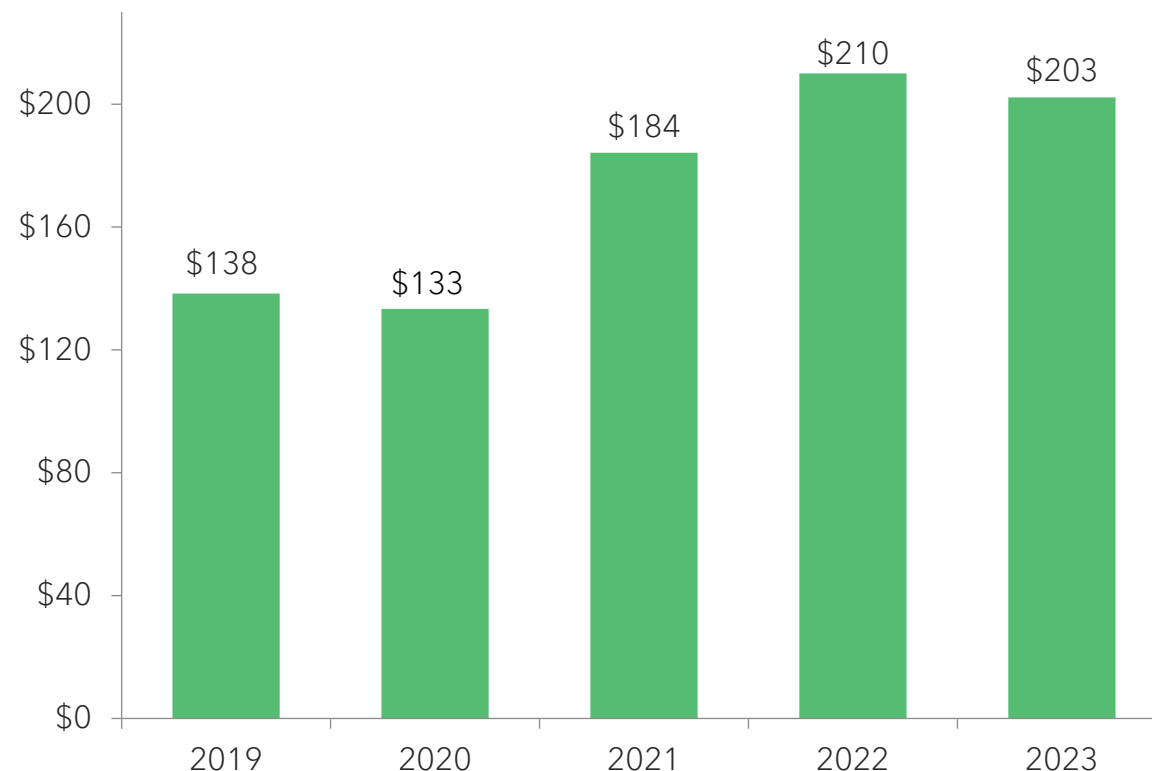
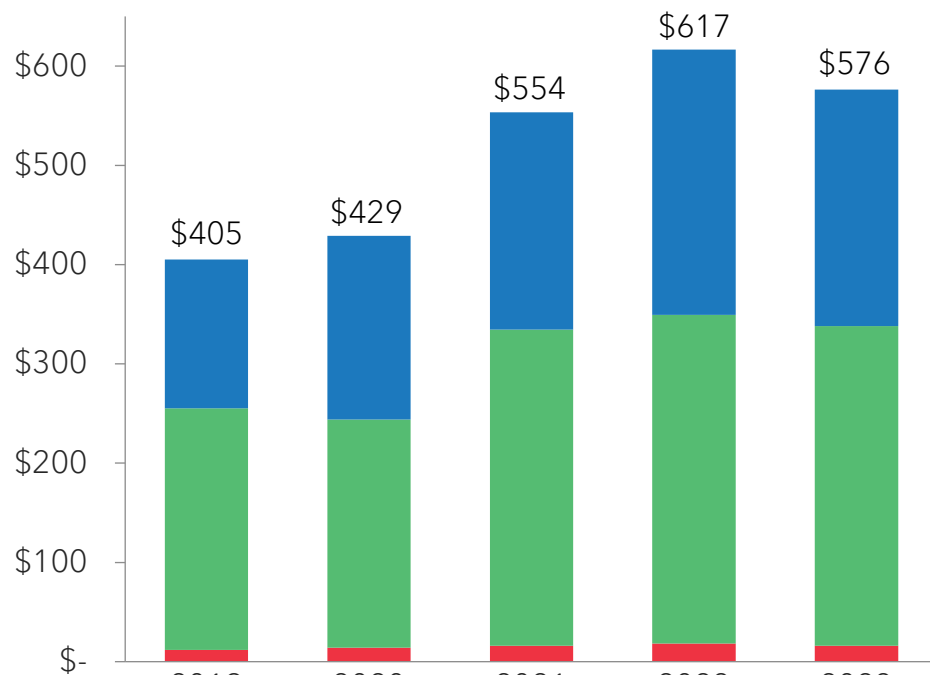
Visionox

Historical Financial Performance

Revenue

Income

(\$ in millions)



	2019	2020	2021	2022	2023
Royalty & License	\$150	\$185	\$219	\$267	\$238
OLED Materials	\$243	\$230	\$319	\$331	\$322
Contract Research Services	\$12	\$14	\$16	\$18	\$16

Robust Capital Structure

In thousands, except share data

	September 30, 2024
Cash, Cash Equivalents, Short-Term and Long-Term Investments*	\$930,363
Total Assets	\$1,810,882
Long-Term Debt	--
A/P and Accrued Liability	\$77,653
Deferred Revenue	\$49,769
Shareholders' Equity	\$1,586,750
Total Shares Outstanding	47,669,439

*Please refer to our recent 10-K filing for information regarding minority investments.

Company Summary

Lighting up the OLED Revolution

OLED Leader

- Inventing, Developing and Commercializing Proprietary Phosphorescent OLED Technologies & Materials to enable *Display* and *Lighting* Manufacturers
- Fabless Model; Partnering w/ PPG for 20+ Years
- ~471 Employees (327 R&D, 145 PhDs); Largest Global PHOLED Team*

Strong Financials

- \$930M Cash, No Debt*
- \$19.52 in Cash/Share*
- High Margin Business
- Lean Operating Model

Comprehensive & Robust IP

- Largest Phosphorescent OLED (PHOLED) Technology & Materials Portfolio
- More than 6,000 Issued & Pending Patents Worldwide* and Growing

Blue-Chip Customer Base

- Displays: Samsung, LG Display, BOE, Tianma, TCL CSOT, Visionox, JDI
- Lighting: Kaneka, Konica Minolta, Lumiotech, OLEDWorks, Sumitomo Chemical
- Partnering with *more than 25* companies

*As of September 30, 2024