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April 16, 2024

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# eLEAP Mass Production Update & Development of Ultra-High Brightness 1600 nit eLEAP for Notebook PCs

JDI is currently ramping up for December 2024 mass production of eLEAP, its revolutionary, next-generation OLED technology. eLEAP is the world's first OLED using photolithography for maskless deposition in order to overcome the low brightness and short lifetime weaknesses of conventional OLED technology.

As part of its eLEAP roll-out, JDI is developing a broad number of end-use applications. This includes the14-inch eLEAP display that JDI announced in August 2023, which was developed for use in notebook PCs in response to strong customer demand. With ongoing technical development, JDI has succeeded in creating an ultra-high brightness 14-inch eLEAP display that achieves a peak brightness of 1600 nits, three times higher than conventional OLED.

## 1. eLEAP Mass Production Update

Having started test production in October 2023, JDI is currently ramping up for December 2024 eLEAP mass production at its G6 fab in Mobara, Japan. The production ramp is well ahead of plan: eight months ahead of launch, JDI has already achieved a production yield of over 60%, underscoring that JDI has successfully overcome the key technical hurdles for launch. JDI will supply eLEAP for use in a wide array of end-use applications, including smartwatches & wearables, smartphones, notebook PCs, and automotive displays.

## 2. Ultra-High Brightness 14-inch eLEAP Performance

JDI's new ultra-high brightness 14-inch eLEAP display uses a single-stack structure to deliver brightness of 1600 nits, three times higher than conventional OLED. This extraordinary brightness allows for full display use even in sunny, outdoor environments. For conventional OLED to achieve similar brightness levels requires using a double-stack tandem structure, but this makes both the product and the manufacturing process more complex and results in higher costs. JDI's 14-inch eLEAP technology delivers customers what they want: higher performance at a lower cost.

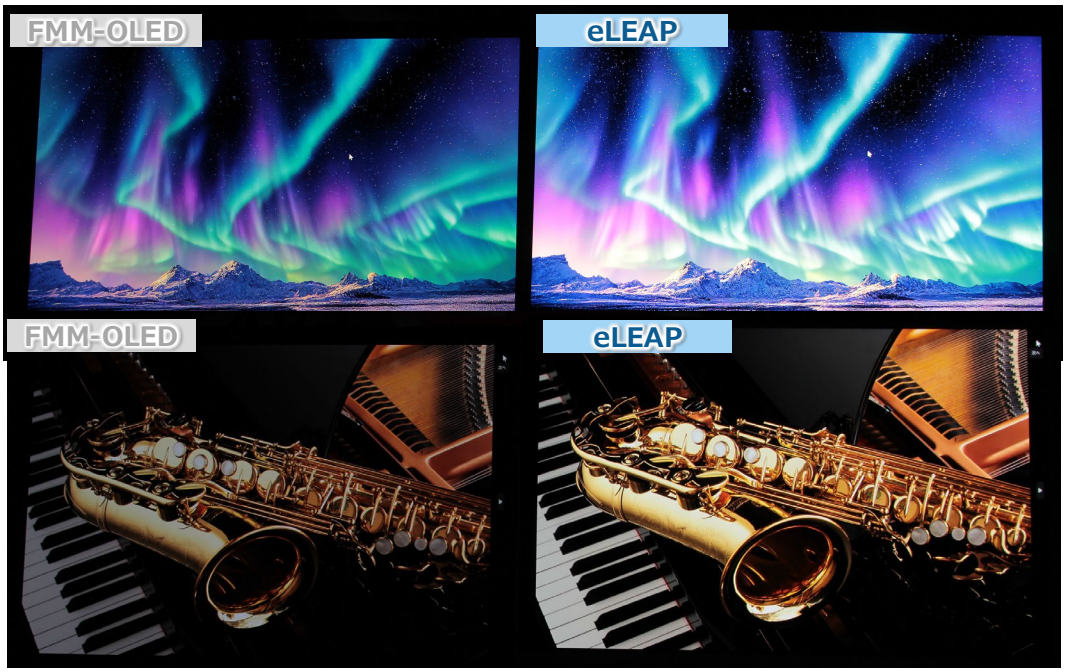
Furthermore, by employing a tandem structure, eLEAP can achieve brightness levels exceeding 3,000 nits, thus paving way for ultra-realistic, ultra-high brightness visual experiences.

### 3. World-Class Intellectual Property (IP) Portfolio

JDI has over 8,000 global OLED patents, and has filed for over 500 eLEAP patents. In addition, with its ability to draw upon its expertise in production equipment and processes, JDI continues to build out its world-class intellectual property portfolio.

eLEAP is a key growth driver for JDI's METAGROWTH 2026 growth strategy, which focuses on creating major breakthroughs in customer and social value via JDI's Global No. 1 technologies. eLEAP meets these important customer and social needs: it outperforms conventional OLED and is GreenTech that significantly reduces CO2 emissions during the manufacturing process. JDI is committed to leading a revolution in global display technology that serves customers and the world.

eLEAP vs. Conventional FMM-OLED – 14-Inch Display Comparison




Displays are arranged side by side and photographed simultaneously under the same conditions.

eLEAP

**e**nvironment positive

**L**ithography with maskless deposition

**E**xtreme long life, lower power, and high luminance

**A**ny shape **P**atterning

eLEAP is a revolutionary, next-generation OLED technology that uses photolithography instead of Fine Metal Masks (FMM) for pixel patterning. eLEAP more than doubles the OLED emission efficiency (aperture ratio) of FMM OLED to over 60% in order to overcome the low brightness and short lifetime weaknesses of conventional OLED technology.

eLEAP is a registered trademark of JDI

Link: JDI Develops eLEAP, World's First Maskless Deposition + Lithographic OLED Historic Breakthrough in Display Performance