

Epson Develops Long-life OLED Display System Capable of Reproducing 'the Ultimate Black'

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Seiko Epson Corp. has developed an organic light-emitting diode ("OLED") display system capable of producing "the ultimate black." Having resolved the problem of achieving long life for the device, a longstanding challenge with OLED, Epson has put into operation a manufacturing line for small-scale production of OLED for practical applications.

Epson will exhibit this new OLED display system at FPD International 2007, an international exhibition of display technologies to be held at Pacifico Yokohama from October 24. This new technology by Epson offers a new solution that makes effective use of advanced image

representation not possible with conventional flat panel displays (FPD).

The light emitting capabilities of OLED displays make possible such features as high contrast, wide viewing angles, and fast response times. In addition, the display can be made very thin and lightweight, making this new device a promising candidate for next-generation flat panel displays. However, in order to make the device viable for practical applications, it was critical to find a solution to a number of technical problems, including how to give the device a longer life.

As high-quality image representation lies at the heart of OLED displays, above and beyond what is possible with conventional flat panel displays, Epson determined that this was precisely the feature the company should pursue. To realize the requisite high-quality representation of textures, Epson has been uncompromising in its efforts to achieve "the ultimate black", since it is black that holds the key to overall image quality.

Furthermore, the problem of early stage brightness deterioration, until now a major obstacle to extending the life of the device, was solved by improving the light-emitting materials and through the development of Epson's own original element structure. As a result, Epson was successful in lengthening the life of the device to more than 50,000 hours, a level appropriate for practical application. Future plans call for Epson to develop various displays with OLED systems for different uses, and study their potential for commercialization.

Epson has already installed and commenced operations of a development and manufacturing line that is capable of small-scale production at its Fujimi Plant in Nagano prefecture, Japan.

From now on, Epson will accelerate its efforts to develop uses for OLED display systems that make use of advanced image representation and nurture them into businesses.

Source: Epson

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