

## NEC LCD Technologies' New High Luminance 21.3-Inch Monochrome UXGA LCD Module for Medical Use

**DUESSELDORF (Germany) and TOKYO (Japan); September 29, 2006** --- NEC LCD Technologies, Ltd. today announced that it will begin shipping samples of its new 21.3-inch (54-centimeters-diagonal) monochrome ultra extended graphics array (UXGA), amorphous silicon, thin film transistor liquid crystal display (TFT LCD) module, part number NL160120AM27-13A, at the end of October. The new LCD module is extremely suitable for medical use including diagnosis of radiogram interpretation of X-ray images.

This new LCD, an upgraded model of NL160120AM27-06A launched in April 2005, boasts the highest luminance level in the UXGA and above monochrome class at 1700cd/m<sup>2</sup> due to a combination of NEC LCD Technologies' own unique super-advanced, super-fine TFT (SA-SFT) technology and a high-intensity, direct back-light system. Furthermore, the new product realizes high contrast performance and brightness uniformity as a result of innovative modification of the LCD panel design.

The main characteristics of the new model are as follows:

### 1. High Luminance

The combination of NEC LCD Technologies' own unique super-advanced, super-fine TFT (SA-SFT) technology and a high-intensity, direct back-light system achieve a luminance of 1700cd/m<sup>2</sup>, the highest luminance level in the UXGA and above monochrome class. This brightness level is exceeded in the case of image diagnosis with X-ray film on a light box. In addition, if the level of luminance is suppressed, stable luminance levels can be preserved over a long period of time.

### 2. High Contrast Performance

A review in panel design has achieved a reduction in the level of black brightness by at least 30% as compared with the conventional model, NL160120AM27-06A, although both are equipped with a high-intensity, direct back-light system. As a result, a high contrast ratio of 850:1, the highest ratio in the UXGA and above monochrome class, is realized. In addition, optimization of the optical design inhibits a "washed-out black" phenomenon that occurs when the viewing angle is enlarged - currently a common issue with in-plane switching (IPS) type LCD modules - leading to enhanced viewing angle performance of the contrast ratio.

### 3. High Brightness Uniformity

A review in the panel design and optical design has reduced the brightness difference of the screen, realizing high brightness uniformity of the entire screen, a feature that has long-been sought after in medical image diagnosis.

NEC LCD Technologies has continuously focused on R&D pursuing better picture quality based on its proprietary SFT technology in response to the advanced needs of a wide variety of professional fields, including the medical field. "We are confident that our new 21.3-inch monochrome LCD will fulfill the current needs of the medical market. It not only tops its class in terms of high luminance and color contrast, but answers demands for UXGA LCDs for image diagnosis that can maintain high brightness uniformity over long periods of time," said Hidetoshi Usui, department manager in charge of product planning and marketing, NEC LCD Technologies,

Ltd. "At NEC LCD Technologies we aim to leverage our years of technological know-how to synergize excellent picture quality with adaptive design technologies, bringing the best product to market every time."

NEC LCD Technologies will continue to pursue an even higher level of picture quality to supply products unrivaled in the medical field. This new product will be displayed at FPD International 2006, which is being held in Pacifico Yokohama, Japan, from October 18 - 20.

\* Please see the attachment for the main specifications of the new 21.3-inch LCD.

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#### **About NEC Electronics (Europe) GmbH**

NEC Electronics (Europe) GmbH, headquartered in Duesseldorf, Germany, is a leading developer and supplier of semiconductor products in Europe. Committed to meeting customers' cost, performance and time-to-market requirements, the company offers solutions ranging from standard products to system-on-a-chip (SoC) solutions, as well as customized products for next-generation designs. Our customers also benefit from state-of-the-art manufacturing from the global production network of our parent company, NEC Electronics Corporation. Additionally, NEC Electronics (Europe) GmbH is the exclusive European sales and marketing channel of LCD modules from NEC LCD Technologies Ltd.. For more information visit <http://www.eu.necel.com>.

#### **About NEC LCD Technologies, Ltd.**

NEC LCD Technologies, Ltd. is one of the world's leading providers of high-quality, innovative, active-matrix liquid crystal display (AM-LCDs) modules for the industrial and high-end monitor markets. The company focuses its development on three core technology areas: ultra-wide viewing angle SFT technology with high luminance and fast response; transfective NLT technology; and adaptive design technology that meet a variety of specialized needs for the flat panel display markets. NEC LCD Technologies' worldwide support includes sales and marketing affiliates NEC Electronics America, Inc. ([www.am.necel.com](http://www.am.necel.com)) and NEC Electronics Europe ([www.eu.necel.com](http://www.eu.necel.com)) that offer specialized display solutions to their respective markets. NEC LCD Technologies employs approximately 1,200 people worldwide and offers one of the broadest product portfolios for the medical, factory automation, test and measurement, entertainment, kiosk, POS and ATM markets. Additional information can be found at <http://www.nec-lcd.com/english/index.html>

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**Attachment**
**Main Specifications of the New 21.3-Inch LCD Module**

<b>Part number:</b>	NL160120AM27-13A
<b>Drive system:</b>	Amorphous silicon TFT active matrix
<b>Display area:</b>	432.0mm x 324.0 mm Diagonal screen size of 21.3-inches (54cm)
<b>Pixel:</b>	1600(H) x 1200(V) pixels
<b>Pixel arrangement:</b>	LCR vertical stripe
<b>Pixel pitch:</b>	0.27(H) mm x 0.27(V) mm
<b>Display color:</b>	256 gray scales per 1 sub-pixel 766 gray scales per 1 pixel
<b>Luminance:</b>	1700cd/m <sup>2</sup> (typ.)
<b>Contrast ratio:</b>	850:1 (typ.)
<b>Viewing angle:</b>	Vertical : Up 85 degrees, down 85 degrees Horizontal : Right 85 degrees, left 85 degrees (Contrast ratio at over 10:1)
<b>Response time:</b>	45ms (typ.) (T <sub>ON</sub> + T <sub>OFF</sub> : from 10% to 90%)
<b>Interface:</b>	2port LVDS LCR (8 bits each)
<b>Operating temperature:</b>	0 degrees C to + 55 degrees C
<b>Storage temperature:</b>	-20 degrees C to + 60 degrees C
<b>Polarizer surface:</b>	Antiglare
<b>Module size:</b>	457.0mm (typ.) x 350.0mm (typ.) x 37.0mm (max.)
<b>Weight:</b>	2,900g (typ.)
<b>Inverter:</b>	Built in
<b>Power supply voltage:</b>	12.0V
<b>Power consumption:</b>	63.7 W (typ.)

**Note:**

Please note that the press release and other information in this file may be out of date on observation. Please refer to other parts of NEC LCD Technologies' website for more current information concerning it and its current business activities.

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