

## **NEC LCD Technologies Announces New 7.0-inch Wide-Format LCD Modules Featuring White LED Backlight System**

**DUESSELDORF (Germany) and TOKYO (Japan), March 28, 2008**—NEC LCD Technologies, together with its sales and marketing channels in the Americas and Europe, NEC Electronics America and NEC Electronics (Europe) GmbH, today introduced a new 7.0-inch (18 centimeters diagonal) amorphous-silicon thin-film-transistor (TFT) liquid crystal display (LCD) module, part number NL8048BC19-02, with wide video graphics array (WVGA) resolution. The new module is an enhancement to NEC's lineup of LCD modules featuring white LED backlight systems, a lineup that was launched May 2007 with NEC's 6.5-inch LCD module, part number NL10276BC13-01C. Equipped with a long-life (approximately fifty thousand hours) white LED as the light source for its backlight system, the new 7.0-inch module has a longer life span than modules equipped with conventional white LED backlight systems. In addition to its low power consumption, the new module comes in a slim-line package that, while lightweight, is highly resistant to shock and vibration. Moreover, the module has been designed with wide-format resolution to meet the rising demand for such in various industrial applications.

The main characteristics of the module are as follows.

### **1. Long-life white LED backlight system**

By incorporating highly luminescent, highly efficient white LEDs into the backlight system, which eliminates the need for an inverter circuit, NEC has been able to reduce power consumption in the new module by more than 30% compared to modules that use a cold-cathode fluorescent lamp (CCFL). The white LED backlight system also enables thickness and weight to be reduced by more than 15% compared to conventional modules equipped with CCFL-based backlight systems.

Furthermore, the risk of damage to an LCD due to shock and vibration is small compared to a CCFL with a glass tube structure, because the white LED is face mounted, making the module small, light and more reliable.

### **2. High levels of visibility**

The module attains wide viewing angles of 160 degrees both horizontally and vertically, high contrast ratio of 1000:1 and fast response time of 18 milliseconds. These features enable information to be reproduced on screen quickly, precisely and without stress.

-more-

## **NEC LCD Technologies Announces New 7.0-inch Wide-Format LCD Modules Featuring White LED Backlight System**

### **3. Wide operating-temperature range**

A wide operating temperature range, from -20 to +70 degrees Celsius, guarantees operation even in the most extreme conditions.

Recently, the demand for LCD modules equipped with white LEDs in the backlight system has risen rapidly in various industrial fields. Since most portable terminals are battery-powered, they require low power consumption and compact, lightweight displays that are durable enough for use in severe environments, such as outdoors or in vehicles. Meanwhile, the demand for wide-format displays also has been rising rapidly, even in the industrial segment. Those requirements are based on the need "to display as much information using as little space as possible" and "to display the touch panel on the screen without sacrificing conventional information in the display area." The need for LCDs with white LED-based backlight systems that can be used in measurement equipment is also increasing, because white LEDs do not require an inverter circuit, which generates high-frequency noise and harmonic current and can hinder precise testing results. NEC's new 7.0-inch LCD module has been developed to meet all of those requirements and more.

NEC LCD Technologies will continue to enhance its lineup of LCD modules featuring white LED-based backlight systems to address the needs of a variety of industrial applications. In addition, the company aims to improve the range of environments where LCD modules can be used through continued performance enhancement of its broad range of LCD modules. In addition to the new 7.0-inch module, NEC LCD Technologies also offers a new 6.5-inch color TFT LCD module, part number NL10276BC13-01D, with extended graphics array (XGA) resolution. Both products will be showcased in NEC LCD Technologies' booth #40-4 and #40-10 at "Display 2008", which is being held from April 16-18 in Tokyo Big Sight, Japan.

*Please see the attachments for the main specifications of the two new LED LCD modules.*

###

*NEC Electronics is either a registered trademark or trademark of NEC Electronics Corporation in the United States and/or other countries. All other registered trademarks or trademarks are property of their respective owners.*

###

# **NEC LCD Technologies Announces New 7.0-inch Wide-Format LCD Modules Featuring White LED Backlight System**

## **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 four core technology areas: ultra-wide viewing angle SFT technology with high luminance, wide color gamut and fast response; NLT technology for high visibility in any kind of ambient light environment; VIT technology to add extra value to LCD modules; and adaptive design technology, which together 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/en/index.html>.

## **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 Electronics America, Inc.**

NEC Electronics America, Inc., headquartered in Santa Clara, California, is a wholly owned subsidiary of NEC Electronics Corporation (TSE: 6723), a leading provider of semiconductor products encompassing advanced technology solutions for the broadband and communications markets; system solutions for the mobile, PC, automotive and digital consumer markets; and platform solutions for a wide range of customer applications. NEC Electronics America offers a local manufacturing facility in Roseville, California, and the global manufacturing capabilities of its parent company. NEC Electronics America is also the American marketing and sales channel, specializing in industrial applications, for active-matrix LCDs from NEC LCD Technologies, Ltd., a global leader in innovative display technologies. More information about the products offered by NEC Electronics America, Inc. can be found at <http://www.am.necel.com>.

###

## **Media Contacts**

### **Europe**

Oliver Lüttgen  
NEC Electronics Europe  
+ 49-211-6503-1469  
[oliver.luetting@eu.necel.com](mailto:oliver.luetting@eu.necel.com)

### **Americas**

Denise Garibaldi  
NEC Electronics America, Inc.  
+1-408-588-6620  
[denise.garibaldi@am.necel.com](mailto:denise.garibaldi@am.necel.com)

### **Japan / Asia**

Mitsumasa Fukumoto  
NEC Corporation  
+81-3-3798-6511  
[m-fukumoto@db.jp.necel.com](mailto:m-fukumoto@db.jp.necel.com)

## NEC LCD Technologies Announces New 7.0-inch Wide-Format LCD Modules Featuring White LED Backlight System

< ATTACHMENT 1 >

### Main Specifications of the New 7.0-Inch LCD Module

Part number:	NL8048BC19-02
Resolution:	800(H) x 480(V) pixels
Display area:	152.4(H) x 91.44(V) mm Diagonal screen size of 7.0-inches (18cm)
Drive system:	Amorphous silicon TFT active matrix
Display color:	16.77M colors / 262K colors
Pixel arrangement:	RGB vertical stripe
Pixel pitch:	0.1905(H) x 0.1905(V) mm
Luminance:	400 cd/m <sup>2</sup> (typ.)
Contrast ratio:	1000:1 (typ.)
Viewing angle:	Vertical : Up 80 degrees, down 80 degrees Horizontal : Left 80 degrees, right 80 degrees (contrast ratio at over 10:1)
Response time:	18 ms (typ.) (TON + TOFF: from 10% to 90%)
Interface:	LVDS (RGB 8 bits each / 6 bits each)
Power supply voltage:	3.3 V
Power consumption:	3.4 W (typ.)
Operating temperature:	-20 degrees C to + 70 degrees C
Storage temperature:	-30 degrees C to + 80 degrees C
Polarizer surface:	Clear
Module size:	170.0 (typ.) x 111.0 (typ.) x 9.0 (max.) mm
Weight:	165 g (typ.)
Backlight	White LED
Inverter:	Unnecessary

*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.*

**NEC LCD Technologies Announces New 7.0-inch Wide-Format LCD Modules  
Featuring White LED Backlight System**

< ATTACHMENT 2 >

Main Specifications of the New 6.5-Inch LCD Module

Part number:	NL10276BC13-01
Resolution:	1024(H) x 768(V) pixels
Display area:	132.096(H) x 99.072(V) mm Diagonal screen size of 6.5-inches (17cm)
Drive system:	Amorphous silicon TFT active matrix
Display color:	16.77M colors / 262K colors
Pixel arrangement:	RGB vertical stripe
Pixel pitch:	0.129(H) x 0.129(V) mm
Luminance:	500 cd/m <sup>2</sup> (typ.)
Contrast ratio:	500:1 (typ.)
Viewing angle:	Vertical : Up 80 degrees, down 60 degrees Horizontal : Left 80 degrees, right 80 degrees (contrast ratio at over 10:1)
Response time:	25 ms (typ.) (TON + TOFF: from 10% to 90%)
Interface:	LVDS (RGB 8 bits each / 6 bits each)
Power supply voltage:	3.3 V
Power consumption:	3.9 W (typ.)
Operating temperature:	-20 degrees C to + 70 degrees C
Storage temperature:	-30 degrees C to + 80 degrees C
Polarizer surface:	Clear
Module size:	153.0 (typ.) x 118.0 (typ.) x 9.5 (max.) mm
Weight:	170 g (typ.)
Backlight	White LED
Inverter:	Unnecessary

*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.*