

## NEC Electronics America Adds Four New Modules to "Sunlight-Readable" LCD Module Lineup

### ST-NLT Technology Ideal for Industrial Applications Used in High-Ambient-Light Environments

SANTA CLARA, Calif., May 7, 2007 – Responding to customer demand for systems that can clearly display vivid colors in environments with high ambient light, NEC Electronics America, Inc. today introduced four new amorphous-silicon thin-film-transistor (TFT) liquid crystal display (LCD) modules featuring NEC LCD Technologies' proprietary super-transmissive natural light TFT (ST-NLT) technology. The new products include two 10.4-inch modules with video graphics array (VGA) resolution, as well as 15- and 12.1-inch modules with extended graphics array (XGA) resolution. With wide operating temperature ranges, the new modules are well suited for use in automated teller and ticket machines, vending machines and point-of-sale (POS) systems.

LCD module developer and manufacturer, NEC LCD Technologies first introduced its ST-NLT technology in April 2005. ST-NLT technology capitalizes on NEC LCD Technologies' proprietary optical design and boosts the efficiency of the backlight's light utilization while minimizing the surface reflection of ambient light. The result is a transmissive display that features a wider color reproduction range than reflective LCDs and yields high contrast images even in bright outdoor light. NEC LCD Technologies has aggressively expanded its ST-NLT-based product line in response to the demand for LCD modules that can display vibrant colors, even in extremely bright outside light. NEC Electronics America currently offers nine ST-NLT products in a range of sizes, from a 5.5-inch LCD module with quarter video graphics array (QVGA) resolution to a 15-inch LCD module with XGA resolution.

"We have seen strong customer demand for sunlight-readable displays in a growing number of applications, especially in the industrial market where conventional display technologies fall short," said Dr. Shigehiko Satoh, associate vice president and general manager, displays strategic business unit, NEC Electronics America. "NEC's innovative ST-NLT technology allows us to provide premium products to our customers in the Americas, and we believe these four new models will boost our competitive edge in a market of ever-increasing and diversified needs."

Three of the new ST-NLT modules (NL10276BC30-18C, NL10276BC24-13C and NL6448BC33-63C), along with other sunlight-readable display modules for industrial applications, will be on display at Society for Information Display (SID) Symposium 2007 in Long Beach, California, in NEC Electronics America's booth #1234. The other modules on display at SID 2007 include a 6.5-inch module with VGA resolution, part number NL6448BC20-20, and a 15.3-inch prototype with wide XGA (WXGA) resolution that combines ST-NLT technology for outdoor viewability with NEC LCD Technologies' super-advanced, super-fine TFT (SA-SFT) technology to deliver high-contrast color and an ultra-wide viewing angle.

#### Availability

Samples of the ST-NLT LCD modules are available now. For pricing, customers can contact NEC Electronics America at 1-800-366-9782. Pricing and availability are subject to change without notice.

Four New ST-NLT Module Specifications				
Model number (resolution)	NL10276BC30-18C (XGA)	NL10276BC24-13C (XGA)	NL6448BC33-63C (VGA)	NL6448BC33-64C (VGA)
Size (diagonal measurement)	15.0-inch (38 cm diagonal)	12.1-inch (31 cm diagonal)	10.4-inch (26 cm diagonal)	10.4-inch (26 cm diagonal)
Luminance (Listed in candelas per square meter (cd/m <sup>2</sup> ))	600 cd/m <sup>2</sup> (typ.)	400 cd/m <sup>2</sup> (typ.)	450 cd/m <sup>2</sup> (typ.)	450 cd/m <sup>2</sup> (typ.)

Contrast ratio	600:1 (typ.)	600:1 (typ.)	600:1 (typ.)	600:1 (typ.)
Viewing angle	Vertical : 80/60 Horizontal : 80/80 (contrast ratio at over 10:1)	Vertical : 45/55 Horizontal : 70/70 (contrast ratio at over 10:1)	Vertical : 80/60 Horizontal : 80/80 (contrast ratio at over 10:1)	Vertical : 80/60 Horizontal : 80/80 (contrast ratio at over 10:1)
Interface	LVDS	LVDS	LVDS	CMOS
Response time	18 ms (typ.)	33 ms (typ.)	25 ms (typ.)	25 ms (typ.)
Operating temperature	-10 to +70°C	-10 to +70°C	-20 to +70°C	-20 to +70°C
Sample availability	Now	Now	Now	Now

#### **About NEC Electronics America's Display Products**

With an extensive lineup of 2.7 - to 23.0-inch AM-LCD panels and a network of distributors and value-added partners (VAPs), NEC Electronics America provides complete display module solutions from NEC LCD Technologies to the industrial and high-end monitor market. In addition to modules based on NEC LCD Technologies' super-fine technology (SFT) for ultra -wide viewing, NEC Electronics America also offers LCD modules that include ultra-high resolutions, wide temperature ranges, high contrast ratios, rich color gamuts, backward compatibility and transfective viewing for use in diverse lighting environments. More information about NEC Electronics America's display products can be found at <http://www.am.necel.com/display/>.

#### **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 North 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>.