

NEC LCD Technologies to Launch Ultra High Luminance 12.1-Inch TFT Color LCD Module for Industrial Use

DUESSELDORF (Germany) and TOKYO (Japan); October 9, 2006 – NEC LCD Technologies, Ltd. today announced that it will begin shipping samples of its new 12.1-inch (31-centimeters-diagonal) super video graphics array (SVGA), amorphous silicon, thin film transistor liquid crystal display (TFT LCD) module, part number NL8060BC31-36. The new LCD enables display of vivid colors even in environments with high ambient light such as outdoors in sunny weather or indoors in direct sunlight.

This new 12.1-inch model boasts a high-intensity back-light system and improved efficiency of back-light use due to optimized design, resulting in luminance of 1100cd/m², the highest luminance level in the class of color LCD modules for industrial use. Accordingly, high brightness can be maintained even when a touch panel is installed. Furthermore, it achieves a wide operating-temperature range of -10 degrees Celsius to +70 degrees Celsius. These new enhanced features make this new model ideal for installation in ATMs, vending machines, point-of-sales systems for gas-stations and GPS navigators.

NEC LCD Technologies has long been addressing the challenge of securing high visibility of LCDs for industrial use in environments with high ambient light and has succeeded in overcoming such issues through application of its proprietary ST-NLT technology (suppresses surface reflection of the LCD screen and improves efficiency of back-light use) and SR-NLT technology (based on transfective LCD technology). However, in cases where a touch panel is required there is often a decrease of light-transmittance and surface reflection causing deterioration in LCD screen visibility.

“Our newest 12.1-inch TFT LCD for industrial use achieves exceptionally high brightness of 1100cd/m², the highest in its class, solving conventional issues of low visibility when LCDs are subject to high ambient light, even when the LCD is equipped with a touch panel,” said Masaaki Hiroshima, department manager in charge of product planning and marketing, NEC LCD Technologies, Ltd. “At NEC LCD Technologies we continue to build on our years of technological know-how to achieve products of only the highest quality and innovation.”

NEC LCD Technologies will also begin selling another three new amorphous silicon TFT color LCD modules. The new products comprise of a 12.1-inch (31cm-diagonal) super video graphics array (SVGA) TFT color LCD module, part number NL8060BC31-42D, an 8.4-inch (21cm-diagonal) super video graphics array (SVGA) TFT color LCD module, part number NL8060BC21-

04 and a 7.0-inch (18cm-diagonal) wide quarter video graphics array (WQVGA) TFT color LCD module, part number NL4823BC37-05. All three new models achieve high brightness of 400cd/m², a high contrast ratio of 600:1, a wide viewing angle of 160 degrees horizontally and 140 degrees vertically (contrast ratio greater than 10:1), a quick response time of 25ms and a wide operating-temperature range of -20 degrees Celsius to +70 degrees Celsius.

All of the new models including NL8060BC31-36 will be displayed at FPD International 2006, which is being held at Pacifico Yokohama, Japan, from October 18 - 20.

NEC LCD Technologies takes into account the special needs of all of its target markets to create products through its own unique technology and know-how that it has cultivated over the years. It will continue to further strengthen its product lineup aiming at exploitation of new fields and markets.

* Please see the attachment for the main specifications of all four new LCD modules.

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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) and NEC Electronics Europe (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>

Media Contact

NEC Electronics (Europe) GmbH
Oliver Lüttgen
+ 49-211-6503-1469
pr@eu.necel.com

Main Specifications of the New 12.1-Inch LCD Module

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|------------------------|--|
| Part number: | NL8060BC31-36 |
| Drive system: | Amorphous silicon TFT active matrix |
| Display area: | 246.0mm x 184.5 mm Diagonal screen size of 12.1-inches (31cm) |
| Pixel: | 800(H) x 600(V) pixels |
| Pixel arrangement: | RGB vertical stripe |
| Pixel pitch: | 0.308(H) mm x 0.308(V) mm |
| Display color: | 262K colors |
| Luminance: | 1100cd/m ² (typ.) |
| Contrast ratio: | 600:1 (typ.) |
| Viewing angle: | Vertical : Up 45 degrees, down 55 degrees Horizontal : Right 70 degrees, left 70 degrees (Contrast ratio at over 10:1) |
| Response time: | 33ms (typ.) (TON + TOFF: from 10% to 90%) |
| Interface: | CMOS RGB (6 bits each) |
| Operating temperature: | -10 degrees C to + 70 degrees C |
| Storage temperature: | -20 degrees C to + 80 degrees C |
| Polarizer surface: | Clear |
| Module size: | 280.0mm (typ.) x 209.0mm (typ.) x 17.0mm (max.) |
| Weight: | 900g (typ.) |
| Inverter: | - |
| Power supply voltage: | 3.3V / 5.0V |
| Power consumption: | 13.7 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.

Attachment 2
Main Specifications of the New 12.1-Inch LCD Module

| | |
|------------------------|--|
| Part number: | NL8060BC31-42D |
| Drive system: | Amorphous silicon TFT active matrix |
| Display area: | 246.0mm x 184.5 mm Diagonal screen size of 12.1-inches (31cm) |
| Pixel: | 800(H) x 600(V) pixels |
| Pixel arrangement: | RGB vertical stripe |
| Pixel pitch: | 0.308(H) mm x 0.308(V) mm |
| Display color: | 262K colors |
| Luminance: | 400cd/m ² (typ.) |
| Contrast ratio: | 600:1 (typ.) |
| Viewing angle: | Vertical : Up 80 degrees, down 60 degrees TYP. Horizontal : Right 80 degrees, left 80 degrees TYP. (Contrast ratio at over 10:1) |
| Response time: | 25ms (typ.) (TON + TOFF: from 10% to 90%) |
| Interface: | CMOS RGB (6 bits each) |
| Operating temperature: | -20 degrees C to + 70 degrees C |
| Storage temperature: | -30 degrees C to + 80 degrees C |
| Polarizer surface: | Antiglare |
| Module size: | 280.0mm (typ.) x 210.0mm (typ.) x 11.5mm (max.) |
| Weight: | 670g (typ.) |
| Inverter: | 121PW181 |
| Power supply voltage: | 3.3V / 5.0V |
| Power consumption: | 6.9 W (typ.) (Power dissipation of the inverter is not included.) |

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Attachment 3
Main Specifications of the New 8.4-Inch LCD Module

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|------------------------|--|
| Part number: | NL8060BC21-04 |
| Drive system: | Amorphous silicon TFT active matrix |
| Display area: | 170.4mm x 127.8 mm Diagonal screen size of 8.4-inches (21cm) |
| Pixel: | 800(H) x 600(V) pixels |
| Pixel arrangement: | RGB vertical stripe |
| Pixel pitch: | 0.213(H) x 0.213(V) mm |
| Display color: | 262K colors |
| Luminance: | 400cd/m ² (typ.) |
| Contrast ratio: | 600:1 (typ.) |
| Viewing angle: | Vertical : Up 80 degrees, down 60 degrees Horizontal : Right 80 degrees, left 80 degrees (Contrast ratio at over 10:1) |
| Response time: | 25ms (typ.) (TON + TOFF: from 10% to 90%) |
| Interface: | CMOS RGB (6 bits each) |
| Operating temperature: | -20 degrees C to + 70 degrees C |
| Storage temperature: | -30 degrees C to + 80 degrees C |
| Polarizer surface: | Clear |
| Module size: | 200.0mm (typ.) x 152.0mm (typ.) x 11mm (max.) |
| Weight: | 330g (typ.) |
| Inverter: | 84PW031 / 84PW041 |
| Power supply voltage: | 3.3V / 5.0V |
| Power consumption: | 5.5 W (typ.) (Power dissipation of the inverter is not included.) |

Note:

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Main Specifications of the New 7.0-Inch LCD Module

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|------------------------|--|
| Part number: | NL4823BC37-05 |
| Drive system: | Amorphous silicon TFT active matrix |
| Display area: | 154.08 mm x 87.048 mm Diagonal screen size of 7.0-inches (18cm) |
| Pixel: | 480(H) x 234(V) pixels |
| Pixel arrangement: | RGB vertical stripe |
| Pixel pitch: | 0.321(H) x 0.372(V) mm |
| Display color: | 262K colors |
| Luminance: | 400cd/m ² (typ.) |
| Contrast ratio: | 600:1 (typ.) |
| Viewing angle: | Vertical : Up 60 degrees, down 80 degrees Horizontal : Right 80 degrees, left 80 degrees (Contrast ratio at over 10:1) |
| Response time: | 25ms (typ.) (TON + TOFF: from 10% to 90%) |
| Interface: | CMOS RGB (6 bits each) |
| Operating temperature: | -20 degrees C to + 70 degrees C |
| Storage temperature: | -30 degrees C to + 80 degrees C |
| Polarizer surface: | Clear |
| Module size: | 174.5mm (typ.) x 105.5mm (typ.) x 11mm (max.) |
| Weight: | 205g (typ.) |
| Inverter: | 70PW021 |
| Power supply voltage: | 3.3V |
| Power consumption: | 2.9 W (typ.) (Power dissipation of the inverter is not included.) |

Note:

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