

NEC LCD Technologies to Enhance Core Product Lineup of TFT LCD Modules for Industrial Use

DUESSELDORF (Germany) and TOKYO (Japan); April 12, 2006 – NEC LCD

Technologies today announced that it will begin successive shipment of five new amorphous silicon thin-film-transistor (TFT) liquid crystal display (LCD) samples by the end of June, 2006. All five new LCD modules are successor products of NEC LCD Technologies' core LCD module lineup for industrial use, and realize enhanced visibility and usability through a wider viewing angle, faster response time, and a wider operating-temperature range than predecessor products, while maintaining compatibility. The main features of the new products are as follows:

1. Model No. NL8060BC31-41D: 12.1-Inch (31cm Diagonal) TFT LCD

- Supports super video graphics array (SVGA) resolution
- Achieves high visibility
 - High brightness of 400cd/m² and high contrast ratio of 600:1
 - Wide viewing angle of 160 degrees horizontally and 140 degrees vertically (contrast ratio greater than 10:1)
 - Fast response time of 25ms.
- Boasts a wide operating-temperature range of -20 degrees Celsius to +70 degrees Celsius
- Supports a LVDS interface (RGB 8bits each/ 6bits each)

2. Model No. NL8060BC31-42: 12.1-Inch (31cm Diagonal) TFT LCD

- Supports super video graphics array (SVGA) resolution
- Achieves high visibility
 - High brightness of 400cd/m² and high contrast ratio of 600:1
 - Wide viewing angle of 160 degrees horizontally and 140 degrees vertically (contrast ratio greater than 10:1)
 - Fast response time of 25ms.

- Boasts a wide operating-temperature range of -20 degrees Celsius to +70 degrees Celsius
- Supports a CMOS interface (RGB 6bits each)

3. Model No. NL6448BC33-63D: 10.4-Inch (26cm Diagonal) TFT LCD

- Supports video graphics array (VGA) resolution
- Achieves high visibility
 - High brightness of 450cd/m² and high contrast ratio of 600:1
 - Wide viewing angle of 160 degrees horizontally and 140 degrees vertically (contrast ratio greater than 10:1)
 - Fast response time of 25ms.
- Boasts a wide operating-temperature range of -20 degrees Celsius to +70 degrees Celsius.
- Supports a LVDS interface (RGB 8bits each/ 6bits each)

4. Model No. NL6448BC33-64: 10.4-Inch (26cm Diagonal) TFT LCD

- Supports video graphics array (VGA) resolution
- Achieves high visibility
 - High brightness of 450cd/m² and high contrast ratio of 600:1
 - Wide viewing angle of 160 degrees horizontally and 140 degrees vertically (contrast ratio greater than 10:1)
 - Fast response time of 25ms
- Boasts a wide operating-temperature range of -20 degrees Celsius to +70 degrees Celsius
- Supports a CMOS interface (RGB 6bits each)

5. Model No. NL6448BC26-09: 8.4-Inch (21cm Diagonal) TFT LCD

- Supports a video graphics array (VGA) resolution
- Achieves a high visibility
 - High brightness of 450cd/m² and high contrast ratio of 600:1

- Wide viewing angle of 160 degrees horizontally and 140 degrees vertically (contrast ratio greater than 10:1)
- Fast response time of 25ms.
- Boasts a wide operating-temperature range of -20 degrees Celsius to +70 degrees Celsius.
- Supports a CMOS interface (RGB 6bits each)

The industrial sector increasingly calls for screens that realize high levels of visibility for clear display of a variety of information, facilitating ease of reading. Tolerance of multiple environments is also essential to enable accurate and vivid display in high or low temperature environments.

“All five new upgraded models respond to the multiple needs of the industrial sector, including clear display of information, wide operating-temperature range and remarkably high visibility. Needs like these have escalated in recent years with the diversity of installation locations and environments where devices are used,” said Hidetoshi Usui, department manager in charge of product planning and marketing, NEC LCD Technologies, Ltd. “In addition, all of the new LCDs maintain high compatibility with their predecessor products, enabling ease of upgrading or replacement by manufacturers. NEC LCD Technologies remains committed to fulfilling the needs of its current and potential customers.”

NEC LCD Technologies will continue to pursue an even higher level of picture quality to supply products unrivaled in the market for small LCD modules for mobile terminals, and will continue to contribute to the evolution of next-generation mobile devices and the development of new fields.

All of the new models will be displayed at Display 2006, which is being held at Tokyo Big Sight, Japan, from April 19 - 21.

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>

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>.

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(Attachment)

Main Specifications of the New 12.1-Inch LCD Module

Part number:	NL8060BC31-41D
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:	16.77M colors / 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.) (T _{ON} + T _{OFF} : from 10% to 90%)
Interface:	LVDS RGB (8 bits each / 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:	675g (typ.)
Inverter:	121PW181
Power supply voltage:	3.3V
Power consumption:	6.8 W (typ.) (Power dissipation of the inverter is not included.)

- More -

(Attachment)

Main Specifications of the New 12.1-Inch LCD Module

Part number:	NL8060BC31-42
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.) (T _{ON} + T _{OFF} : 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:	280.0mm (typ.) x 210.0mm (typ.) x 11.5mm (max.)
Weight:	675g (typ.)
Inverter:	121PW181
Power supply voltage:	3.3V / 5.0V
Power consumption:	6.8 W (typ.) (Power dissipation of the inverter is not included.)

- More -

(Attachment)

Main Specifications of the New 10.4-Inch LCD Module

Part number:	NL6448BC33-63D
Drive system:	Amorphous silicon TFT active matrix
Display area:	211.2mm x 158.4 mm Diagonal screen size of 10.4-inches (26cm)
Pixel:	640(H) x 480(V) pixels
Pixel arrangement:	RGB vertical stripe
Pixel pitch:	0.33(H) mm x 0.33(V) mm
Display color:	16.77M colors / 262K colors
Luminance:	450cd / 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.) (T _{ON} + T _{OFF} : from 10% to 90%)
Interface:	LVDS RGB (8 bits each / 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:	243.0mm (typ.) x 185.1mm (typ.) x 11.0mm (max.)
Weight:	475g (typ.)
Inverter:	104PW201
Power supply voltage:	3.3V
Power consumption:	6.4 W (typ.) (Power dissipation of the inverter is not included.)

- More -

(Attachment)

Main Specifications of the New 10.4-Inch LCD Module

Part number:	NL6448BC33-64
Drive system:	Amorphous silicon TFT active matrix
Display area:	211.2 mm x 158.4 mm Diagonal screen size of 10.4-inches (26cm)
Pixel:	640(H) x 480(V) pixels
Pixel arrangement:	RGB vertical stripe
Pixel pitch:	0.33(H) mm x 0.33(V) mm
Display color:	262K colors
Luminance:	450cd / 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.) (T _{ON} + T _{OFF} : 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:	243.0mm (typ.) x 185.1mm (typ.) x 11.0mm (max.)
Weight:	475g (typ.)
Inverter:	104PW201
Power supply voltage:	3.3V / 5.0V
Power consumption:	6.4 W (typ.) (Power dissipation of the inverter is not included.)

- More -

(Attachment)

Main Specifications of the New 8.4-Inch LCD Module

Part number:	NL6448BC26-09
Drive system:	Amorphous silicon TFT active matrix
Display area:	170.88mm x 128.16 mm Diagonal screen size of 8.4-inches (21cm)
Pixel:	640(H) x 480(V) pixels
Pixel arrangement:	RGB vertical stripe
Pixel pitch:	0.267(H) mm x 0.267(V) mm
Display color:	262K colors
Luminance:	450cd / 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.) (T _{ON} + T _{OFF} : 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 11.0mm (max.)
Weight:	330g (typ.)
Inverter:	84PW031 / 84PW041
Power supply voltage:	3.3V / 5.0V
Power consumption:	5.2 W (typ.) (Power dissipation of the inverter is not included.)

Note

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