NEC Exclusive Representative for NEC LCD Technologies, Ltd.

RENESAS

Natural Light TFT (NLT) Technology

Bright, clear displays in any ambient-light environment

To address the growing need for displays viewable in a variety of ambient-light environments, NEC LCD Technologies has developed two proprietary transflective LCD technologies: Super-Reflective NLT (SR-NLT) and Super-Transmissive NLT (ST-NLT).

Unaffected by changes in outdoor-light environments to ensure natural color anytime!

SR-NLT Technology

SR-NLT technology allows users to change backlight modes (on/off) in response to changes in the outdoor light environment.

NEC LCD Technologies' (NEC) SR-NLT technology gives customers a choice of two operating modes depending on the outdoor-light environment: the trans-missive mode, which uses the module's backlight as a light source, and the reflective mode, which employs ambient light as the light source. To change modes, just turn the backlight ON or OFF. Due to NEC's proprietary optical design, this type of LCD module features a high-level combination of transmissivity in the trans-missive mode and reflectivity in the reflective mode—for maximum visibility under any and all outdoor light conditions. In reflective mode the display uses ambient light as its light source instead of the module backlight —thereby saving on battery life in mobile terminals and handsets.

ST-NLT Technology

ST-NLT technology assures bright, natural display viewing under any ambient-light condition.

ST-NLT technology is another innovative technology incorporating NEC LCD Technologies' proprietary optical design. The technology boosts the efficiency of the backlight's light utilization and minimizes the surface reflection of ambient light. It is a transmissive LCD module that produces high-contrast images even in bright outdoor light found on sunny afternoons and features a wider color reproduction range than reflective LCDs, making it the ideal choice for bright, vibrant color displays. NEC's extensive lineup of ST-NLT products ranges in size from 5.5-inch QVGA to 15.0-inch XGA. Due to new, advanced optical technology, the ST-NLT LCD modules are ideal for ATMs, measuring devices, vending machines and other industrial devices subject to use in bright sunlight.

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ENVIRONMENTAL INITIATIVES

Our products are RoHS compliant

Out of concern for the environment, NEC LCD Technologies began reducing the use of hazardous substances in our LCD modules prior to the RoHS Directive. We have eliminated the six substances targeted in the RoHS Directive as well as other substances we have identified as potentially hazardous so that our products are now RoHS-compliant.

Products Featuring SR-NLT Technology

Size	Resolution	Part Number	Additional Attributes	Availability
2.7-inch	QVGA	NL2432HC17-04A	140 cd/m², CR 150:1 (on), 35% RR	Now
		NL2432HC17-04B	120 cd/m², CR 150:1 (on), 35% RR, w/ touch	
3.5-inch	QVGA	NL2432HC22-40A	220 cd/m², CR 150:1 (on), LED, 15% RR	Now
		NL2432HC22-41B	200 cd/m², CR 150:1 (on), LED, w/ touch, 15% RR	
		NL2432HC22-42B	200 cd/m², CR 130:1 (on), LED, w/ touch, 15% RR	
		NL2432HC22-45A	100 cd/m², CR 150:1 (on), LED, 16% RR	
		NL2432HC22-50A	220 cd/m², CR 150:1 (on), LED, 15% RR	
		NL2432HC22-50B	180 cd/m², CR 150:1 (on), LED, 20% RR	Samples July 2010 MP Target Sept 2010
	VGA	NL4864HL11-01B	200 cd/m², CR 180:1 (on), LED, w/ touch, VIT	Now
		NL4864HL11-02A	220 cd/m², CR 180:1 (on), LED	
6.5-inch	SVGA	NL8060BC16-01	300 cd/m², CR 150:1 (on), 35% RR	TBD
10.4-inch	XGA	NL10276BC20-10	175 cd/m², CR 150:1 (on), LED, 35% RR	Now

Products Featuring ST-NLT Technology

Size	Resolution	Part Number	Additional Attributes	Availability
5.5-inch	QVGA	NL3224BC35-22	750 cd/m², CR 500:1	Now
6.5-inch	VGA	NL6448BC20-20	650 cd/m², CR 600:1	Now
		NL6448BC20-21C	800 cd/m², CR 600:1, LED	
		NL6448BC20-30C	900 cd/m², CR 600:1, LED, LVDS	Samples July 2010 MP Target Nov 2010
	XGA	NL10276BC13-01C	650 cd/m², CR 500:1, LED, LVDS	Now
7.0-inch	WVGA	NL8048BC19-02C	350 cd/m², CR 800:1, LED, LVDS	
8.4-inch	VGA	NL6448BC26-09C	750 cd/m², CR 600:1	Now
	SVGA	NL8060BC21-03	650 cd/m², CR 600:1, LVDS	Now
	SVGA	NL8060BC21-11C	800 cd/m², CR 600:1, LED	Samples June 2010 MP Target July 2010
10.4-inch	VGA	NL6448BC33-63C	450 cd/m², CR 600:1, LVDS	Now
		NL6448BC33-64C	450 cd/m², CR 600:1	
		NL6448BC33-70C	900 cd/m², CR 600:1, LED	
	SVGA	NL8060BC26-30C	550 cd/m², CR 900:1, LVDS	
		NL8060BC26-35C	800 cd/m², CR 1000:1, LED, LVDS	Samples Aug 2010 MP Target Nov 2010
	XGA	NL10276BC20-04C	300 cd/m², CR 300:1, LVDS	Now
12.1-inch	SVGA	NL8060BC31-32	400 cd/m², CR 600:1	Now
		NL8060BC31-41C	550 cd/m², CR 600:1, LVDS	
	XGA	NL10276BC24-13C	400 cd/m², CR 600:1, LVDS	
15-inch	XGA	NL10276BC30-18C	600 cd/m², CR 600:1, LVDS	Now

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Note:
Renesas Electronics America Inc. is the exclusive representative of NEC LCD Technologies in the Americas.

Printed on Recycled Paper. Document No. 51035-5