Industrial Mobile Displays

Higher LCD performance in a small package

Historically, small-sized LCD modules, ranging in sizes from 1.x-inch to 4.x-inch, have been used in consumer electronic applications such as digital cameras, cell phones and portable media players. Products within this space change frequently as consumers demand more sophisticated, feature-rich products. Thus, within the consumer space, the displays become obsolete. Due to this rapid product turnover in the consumer space and the rapid obsolescence of LCD modules designed for the consumer market, medical and industrial applications have been slower to adopt portable handheld equipment designed to use small-sized LCD displays.

NLT Technologies, Ltd. (NLT) has leveraged its experience with mid- to large-sized LCD modules designed for medical and industrial applications and applied their knowledge of the market requirements to the design of small-sized TFT LCD modules. NLT offers a variety of small-size amorphous silicon (a-Si) TFT LCD products as well as low-temperature polysilicon (LTPS) TFT LCD products specifically for use in portable industrial and medical applications. NLT's product offerings are designed for applications requiring robust feature sets and long-term product support.

Amorphous Silicon (A-Si) Mobile Displays

LCD modules used for industrial-type mobile applications must meet very specific design constraints and provide high levels of brightness and contrast required to clearly display information and facilitate easy reading in multiple ambient-light environments. Our small-sized LCD modules address these market demands with high luminance levels and contrast ratios, optimized designs and advanced features that contribute to significantly reduced form factors in portable devices.

Low-temperature Polysilicon (LTPS) Mobile Displays

With the addition of the LTPS displays to its product offerings, NLT expanded its core technologies to include value-integrated TFT (VIT™) technology. By applying its VIT technology, which integrates peripheral circuitry on the glass substrate of the LCD module using LTPS technology, NLT Technologies, Ltd. achieves a significant reduction in the peripheral wiring of the glass substrate and in the number of connections with external circuits. This results in pixel density that is four times higher than that of conventional 3.5-inch quarter VGA (QVGA) modules, making the new module ideal for a wide variety of portable devices, including personal digital assistants (PDAs) and navigation devices. The VIT technology on the system-on-glass module also significantly improves pixel aperture ratio and backlight efficiency while yielding an overall higher level of balance among attributes.

ENVIRONMENTAL INITIATIVES

Our products are RoHS compliant

Out of concern for the environment, NLT 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.

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NEC
NEC LCD Technologies, Ltd.

New name
Same company
Same support

NLT Technologies

As of July 1, 2011, NEC LCD Technologies, Ltd. is now known as NLT Technologies, Ltd.

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

A-Si Mobile Display Modules

Size	Resolution	Part Number	Additional Attributes	Availability
2.7″	QVGA	NL2432HC17-07A	550 cd/m^2, CR 400:1, LED, portrait view	Now
2.7″	QVGA	NL2432HC17-07B	500 cd/m^2, CR 400:1, LED, with touch	Now
2.7″	QVGA	NL2432HC17-10B	500 cd/m^2, CR 400:1, LED, with touch, extended FPC	Now
3.5″	QVGA	NL2432HC22-40A	220 cd/m^2, CR 150:1 (on), LED, SR-NLT, 15% reflection ratio	Now
3.5″	QVGA	NL2432HC22-41B	200 cd/m^2, CR 150:1 (on), LED, with touch, SR-NLT, 15% reflection ratio	Now
3.5″	QVGA	NL2432HC22-42B	200 cd/m^2, CR 150:1 (on), LED, with touch,SR-NLT, 15% reflection ratio	Now
3.5″	QVGA	NL2432HC22-45A	100 cd/m^2, CR 150:1 (on), LED, SR-NLT, 16% reflection ratio	Now
3.5″	QVGA	NL2432HC22-50A	220 cd/m^2, CR 150:1 (on), LED, SR-NLT, 20% reflection ratio	Now
3.5″	QVGA	NL2432HC22-50B	200 cd/m^2, CR 150:1 (on), LED, SR-NLT, 15% reflection ratio	Now
4.2″	VGA	NL4864HC13-01A	280 cd/m^2, CR 200:1, LED, SR-NLT, 14% reflection ratio	Now
4.3″	WQVGA	NL4827HC19-05A	600 cd/m^2, CR 500:1, LED, 8-bit RGB	Now
4.3″	WQVGA	NL4827HC19-05B	500 cd/m^2, CR 500:1, with touch, LED, 8-bit RGB	Now

LTPS Mobile Display Modules (VIT)

Size	Resolution	Part Number	Additional Attributes	Availability
2.7″	QHD	NL9654HL06-01J	300 cd/m^2, CR 500:1, LED, 960x540 pixels	Now
3.5″	VGA	NL4864HL11-01B	200 cd/m^2, CR 180:1 (on), LED, portrait w/ touch, SR-NLT, 7% reflection ratio	Now
3.5″	VGA	NL4864HL11-02A	220 cd/m^2, CR 180:1 (on), LED, SR-NLT, 7% reflection ratio	Now
4.1″	WVGA	NL8048HL11-01A	400 cd/m^2, CR 450:1, LED, 8-bit RGB	Now
4.1″	WVGA	NL8048HL11-01B	350 cd/m^2, CR 400:1, with touch, LED	Now

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