

## 15.0+XGA LED BACKLIT TFT DISPLAY WITH NVIS CAPABILITY & AR BONDED GLASS

Sunlight Readability/NVIS full color/Cool operation

### GENERAL DESCRIPTION

07/15/13

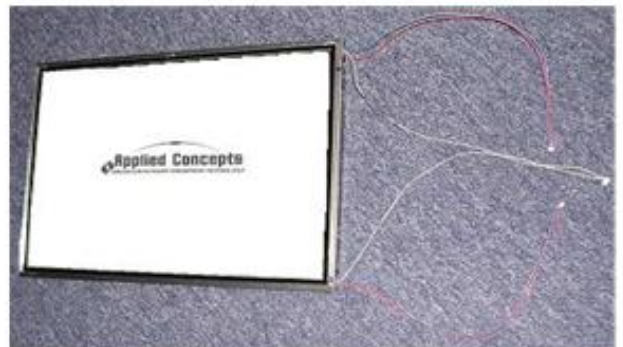
The ACD-1808 consists of the NEC NL10276BC30-18C XGA TFT transfective display modified with a high performance LED backlight capable of Day and NVIS full color operation. The resulting performance provides a brightness of over 2400 cd/m<sup>2</sup> in direct sunlight.

#### Performance at given brightness levels

1300 cd/m<sup>2</sup> with 24.5 watts LED power (Day)  
10.2 cd/m<sup>2</sup> with 3.4 watts LED power (NVIS)

#### Outdoor performance in direct sunlight

2400 cd/m<sup>2</sup> with 24.5 watts LED power



### LED BACKLIGHT FEATURES

White and NVIS LED edge-light rail

Two wire connection (Typically 10 inches long), allows simple interconnect with LED driver<sup>1</sup>

0.125 inch thick Anti-Reflective glass bonded to the face of the panel

Projected lifetime > 75,000 hours

20000:1 or better dimming ratio (Day), guaranteed<sup>1</sup>

2500:1 or better dimming ratio (NVIS), guaranteed<sup>1</sup>

<sup>1</sup> For best power transfer and control, use ACI-C120125-1764 and ACI-C120033-1761 LED drivers. Do not set the driver output current (Ifwd) higher than the value specified in the Maximum Ratings table of this document. Please contact the factory for more specific use LED driver solutions if required.

### LCD PANEL HIGHLIGHTS

15.0+TFT Active Matrix Color

304.128 (H) mm x 228.096 (V) mm viewable area

XGA 1024 x 768 pixels, 16.7M colors

600:1 typical contrast ratio

40% color gamut (NTSC color space)

For complete LCD specification (standard panel), refer to NEC datasheet NL10276BC30-18C

## MAXIMUM RATINGS

07/15/13

Symbol	Parameter	Value	Unit
Top	Operating temperature of display (center of panel surface)	-10 to +70	Deg-C
Tled	Operating temperature of LED edge light (light rail contact)	-20 to +75	Deg-C
Tstg	Display storage temperature	-20 to +80	Deg-C
Ifwd(Day)	Maximum LED edge-light forward current (DC) (Day)	125	Ma
Ifwd(NVIS)	Maximum LED edge-light forward current (DC) (NVIS)	40	Ma

## PANEL/BACKLIGHT OPTICAL CHARACTERISTICS

Ifwd(Day) = 121mA, Ifwd(NVIS) = 20mA, (LED rail ACR-1012-1763, 2 rails per display), Ta = +25Deg-C, LCD un-powered

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Bpd	Panel Brightness (Day mode)		1170	1300	1430	cd/m <sup>2</sup>
Bpn	Panel Brightness (NVIS)		9.2	10.2	11.2	cd/m <sup>2</sup>
Bpsun	Panel Brightness (direct sun)	Direct Sunlight + Day Mode		2400		cd/m <sup>2</sup>
Xd	White X coordinate (Day mode)			0.329		
Yd	White Y coordinate (Day mode)			0.392		
Xn	White X coordinate (NVIS)			0.367		
Yn	White Y coordinate (NVIS)			0.413		

## LED EDGE-LIGHT ELECTRICAL CHARACTERISTICS

Ifwd(day) = 121mA, Ifwd(NVIS) = 20mA, Top = +25Deg-C

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Vfwd	LED rail forward voltage drop (Day mode)		91	101	111	Vdc
Vfwd	LED rail forward voltage drop (NVIS)		78	87	96	Vdc

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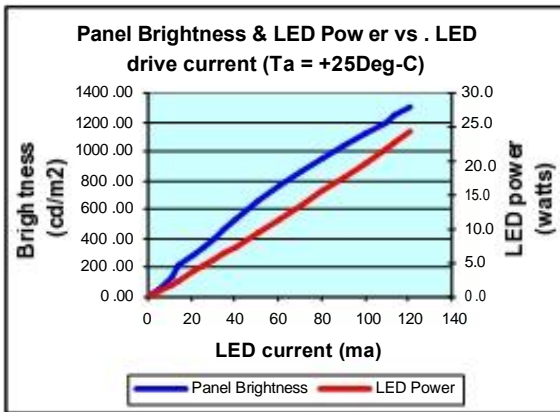
# ACD-1808

PRODUCT DATA SHEET - PAGE 3 OF 3

07/15/13

## TYPICAL LED DAY/NVIS BACKLIGHT PERFORMANCE GRAPHS

Day mode



NVIS

