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ACD-1946

PRODUCT DATA SHEET – PAGE 1 OF 3

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

Sunlight Readability/NVIS full color/Cool operation

GENERAL DESCRIPTION

The ACD-1946 consists of the NEC NL10276BC30-18C XGA TFT display modified with a high performance LED backlight capable of Day and NVIS full color operation. The resulting performance provides a brightness of over 2350 cd/m² in direct sunlight.

Performance at given brightness levels

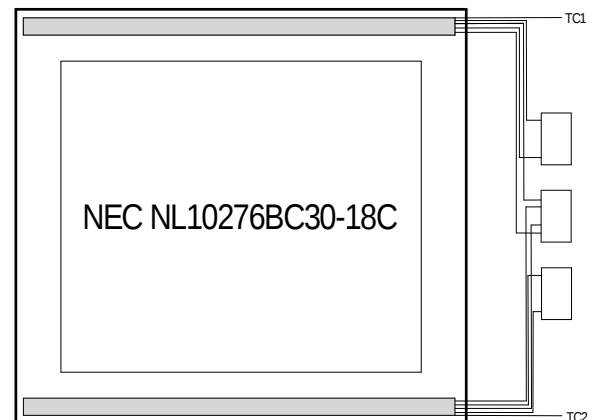
1250 cd/m² with 22.5 watts LED power (Day)

14 cd/m² with 3.0 watts LED power (NVIS)

Outdoor performance in direct sunlight

2350 cd/m² with 22.5 watts LED power (Day)

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LCD PANEL HIGHLIGHTS

15.0" TFT Active Matrix Color

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

XGA 1024 x 768 pixels, 16,777,216 colors

600:1 typical contrast ratio

40% color gamut (NTSC color space)

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

LED BACKLIGHT FEATURES

White and NVIS LED edge-light rail

Two wire connection (Typically 11 inches long), allows simple interconnect with LED driver¹

Projected lifetime > 75,000 hours

50,000:1 or better dimming ratio (Day)¹

Minimum NVIS intensity equal to 0.003 cd/m² or less¹

¹ For best power transfer and control, use two ACI-C120125-1764 (Day mode) and one ACI-C120033-1761 (NVIS Mode) LED drivers.

MAXIMUM RATINGS*

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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 +80	Deg-C
Tstg	Display storage temperature	-20 to +80	Deg-C
Ifwd	LED forward current (Day)	75	mA
Ifwd	LED forward current (NVIS)	20	mA

*Maximum Ratings are those values beyond which damage may occur

PANEL/BACKLIGHT OPTICAL CHARACTERISTICS

Ifwd(Day) = 62.5mA per bank, 2 banks per rail, 2 rails per display, Ifwd(NVIS) = 16.5mA per bank, 1 banks per rail, (LED rails: one ACR-1921 and one ACR-1941), Ta = +25Deg-C, LCD unpowered

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Bpd	Panel Brightness (Day)		1125	1250	1375	cd/m ²
Bpn	Panel Brightness (NVIS)		12	14	16	cd/m ²
Bpsun	Panel Brightness (direct sun)	Direct sunlight + Day mode		2350		cd/m ²
Xd	White X coordinate (Day mode)			0.306		-
Yd	White Y coordinate (Day mode)			0.376		-
XN	White X coordinate (NVIS)			0.248		-
YN	White Y coordinate (NVIS)			0.362		-

LED EDGE-LIGHT ELECTRICAL CHARACTERISTICS

Ifwd(Day) = 62.5mA, Ifwd(NVIS) = 16.5mA, Top = +25Deg-C

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Vfwd	LED rail forward voltage drop (Day mode)		81	91	101	Vdc
Vfwd	LED rail forward voltage drop (NVIS)		81	92	101	Vdc

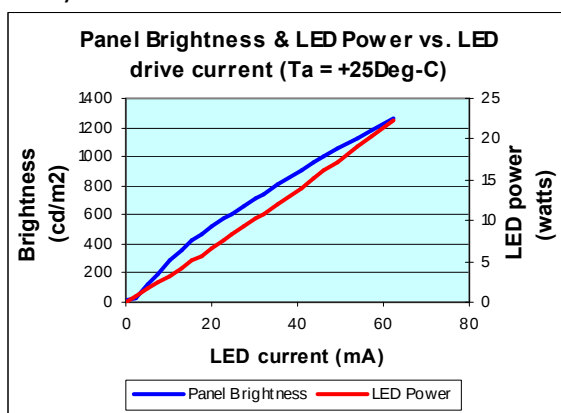
THERMOCOUPLE CHARACTERISTICS

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
TC1,TC2	"K" style thermocouple sensitivity	Ta = 20 Deg-C		41		uV/ Deg-C

TYPICAL LCD/LED BACKLIGHT PERFORMANCE GRAPHS

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Day mode



NVIS

