

12.1" XGA LED BACKLIT TFT DISPLAY WITH NVIS CLASS B CAPABILITY

Sunlight Readability/1000:1 dimming/Cool operation

GENERAL DESCRIPTION

The ACD-2315 consists of the NEC NL10276BC24-21F XGA TFT display modified with a high performance LED backlight capable of Day and NVIS (Class B green).

Performance at given brightness levels

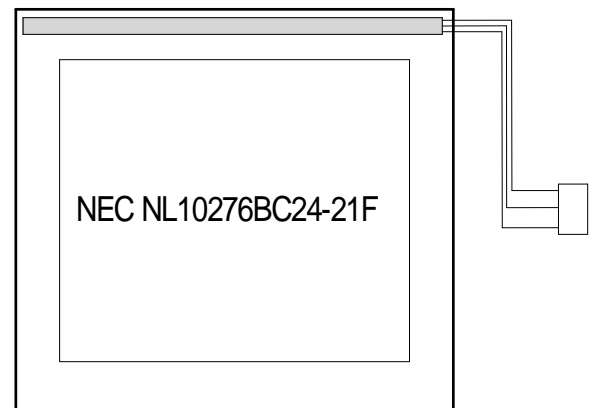
1200 cd/m² with 8.3 watts LED power (Day)

5 cd/m² with 2.1 watts LED power (NVIS)

Display outline identical to standard LED equipped panel

For many applications, satisfies sunlight readability goals

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LCD PANEL HIGHLIGHTS

12.1" TFT Active Matrix Color

245.76 (H) mm x 184.32 (V) mm viewable area

XGA 1024 x 768 pixels, 16.7 M colors

900:1 typical contrast ratio

40% color gamut (NTSC color space)

For complete LCD specification (standard panel), refer to the NEC NL10276BC24-21F datasheet

LED BACKLIGHT FEATURES

White and NVIS LED edge-light rail

Three 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 one ACI-2313 Dual Mode Driver.

ACD-2315

MAXIMUM RATINGS

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Symbol	Parameter	Value	Unit
Top	Operating temperature of display (center of panel surface)	-30 to +80	Deg-C
Tled	Operating temperature of LED edge light (light rail contact)	-30 to +85	Deg-C
Tstg	Display storage temperature	-30 to +80	Deg-C
Ifwd	LED forward current (Day)	60	mA
Ifwd	LED forward current (NVIS)	30	mA

*Maximum Ratings are those values beyond which damage may occur

PANEL/BACKLIGHT OPTICAL CHARACTERISTICS

Ifwd(Day) = 50mA per bank, 2 banks per rail, 1 rail per display, Ifwd(NVIS) = 25mA per bank, 1 bank per rail, 1 rail per display, LED rails: ACR-2308, Ta = +25Deg-C, LCD unpowered

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Bpd	Panel Brightness (Day)		1080	1200	1320	cd/m ²
Bpn	Panel Brightness (NVIS)		4.5	5	5.5	cd/m ²
Xd	White X coordinate (Day mode)			0.269		-
Yd	White Y coordinate (Day mode)			0.299		-
XN	White X coordinate (NVIS)			0.297		-
YN	White Y coordinate (NVIS)			0.509		-

LED EDGE-LIGHT ELECTRICAL CHARACTERISTICS

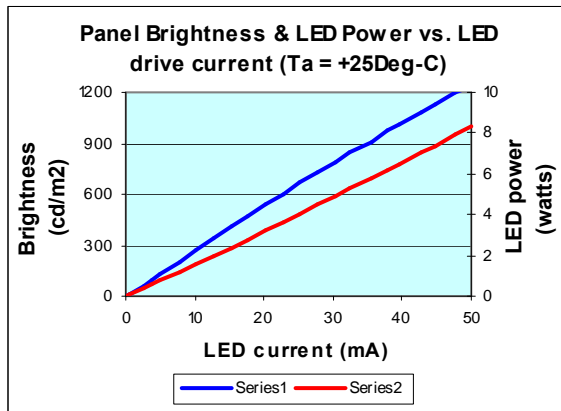
Ifwd(Day) = 50mA, Ifwd(NVIS) = 25mA, Top = +25Deg-C

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Vfwd	LED rail forward voltage drop (Day mode)		73	81	89	Vdc
Vfwd	LED rail forward voltage drop (NVIS)		76	84	92	Vdc

TYPICAL LCD/LED BACKLIGHT PERFORMANCE GRAPHS

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Day mode



NVIS

