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ACD-2148

Product Datasheet

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

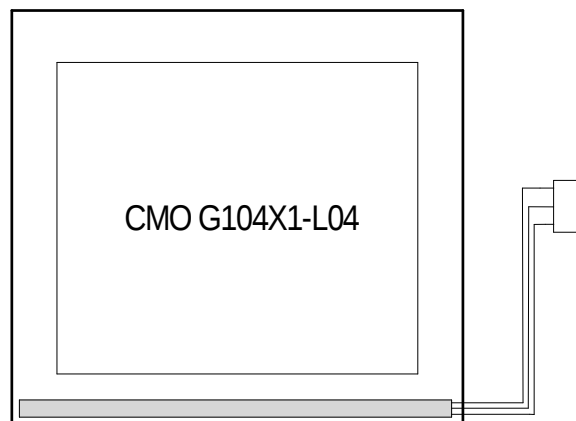
GENERAL DESCRIPTION

The ACD-2148 consists of the Chi Mei G104X1-L04 XGA TFT display modified with a high performance LED backlight capable of Day and NVIS full color operation.

Performance at given brightness levels

650 cd/m² with 12.6 watts LED power (Day)
1.75 cd/m² with 1.8 watts LED power (NVIS)

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LCD PANEL HIGHLIGHTS

10.4" TFT Active Matrix Color
210.4 (H) mm x 157.8 (V) mm viewable area
225.5(H) mm x 176.3(V) mm x 8.7(D) physical size
XGA 1024 x 768 pixels, 16.2 M colors
1200:1 typical contrast ratio
Display Mode, Normally Black
Surface Treatment: Anti-Glare

For complete LCD specification (standard panel), refer to the CMO G104X1-L04 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-2146D Dual Mode Driver.

MAXIMUM RATINGS

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Symbol	Parameter	Value	Unit
Top	Operating temperature of display (center of panel surface)	-30 to +70	Deg-C
Tled	Operating temperature of LED edge light (light rail contact)	-40 to +85	Deg-C
Tstg	Display storage temperature	-30 to +80	Deg-C
Ifwd	LED forward current (Day)	96	mA
Ifwd	LED forward current (NVIS)	30	mA

*Maximum Ratings are those values beyond which damage may occur

PANEL/BACKLIGHT OPTICAL CHARACTERISTICS

Ifwd(Day) = 80mA per bank, 2 banks per rail, 1 rails per display, Ifwd(NVIS) = 25mA per bank, 1 banks per rail,
LED rails: ACR-2152, Ta = +25Deg-C, LCD powered

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Bpd	Panel Brightness (Day)		585	650	715	cd/m ²
Bpn	Panel Brightness (NVIS)		1.3	1.75	1.93	cd/m ²
Xd	White X coordinate (Day mode)			0.275		-
Yd	White Y coordinate (Day mode)			0.295		-
XN	White X coordinate (NVIS)			0.310		-
YN	White Y coordinate (NVIS)			0.505		-

LED EDGE-LIGHT ELECTRICAL CHARACTERISTICS

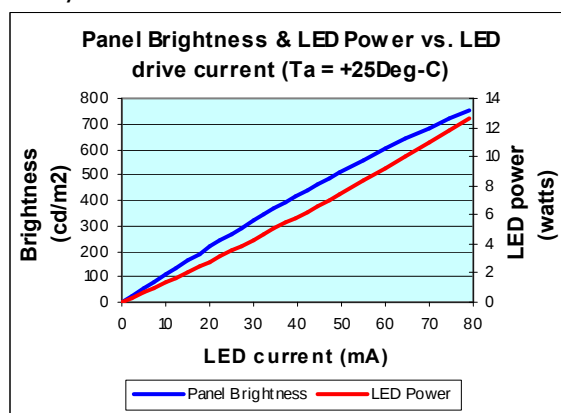
Ifwd(Day) = 80mA, Ifwd(NVIS) = 25mA, Top = +25Deg-C

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Vfwd	LED rail forward voltage drop (Day mode)		71	79	87	Vdc
Vfwd	LED rail forward voltage drop (NVIS)		77	75	83	Vdc

TYPICAL LCD/LED BACKLIGHT PERFORMANCE GRAPHS

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Day mode



NVIS

