

PRODUCT DATA SHEET

24" WUXGA DUAL MODE (DAY & NVIS) ENHANCED LED BACKLIT DISPLAY SOLUTION

MIL-STD-3009 NVIS White Operation/Very Wide Range Dimming

GENERAL DESCRIPTION

The ACD-NVIS240-3226 consists of the AUO G240UAN01.2 24" WUXGA TFT display, modified with a high performance LED backlight capable of Day and NVIS White Operation.

Performance at given luminance levels

300 cd/m² with 27.0 watts LED power (Day)
1.71 cd/m² with 1.6 watts LED power (NVIS)

The "NVIS White" enhancement portion of this display solution, is intended to be capable of compliance per MIL-STD-3009 for Electronic and electro-optical displays (multi-color), Type 1, Class A or Class B. Other post enhancements placed in front of the LCD glass, can have an affect on the final Luminance & Chromaticity results.

LCD PANEL HIGHLIGHTS

24" TFT Active Matrix Color

24" diagonal viewable area (Aspect ratio 16:10)

546.4mm(W) x 352.0mm(H) x 17.2mm(D) physical size

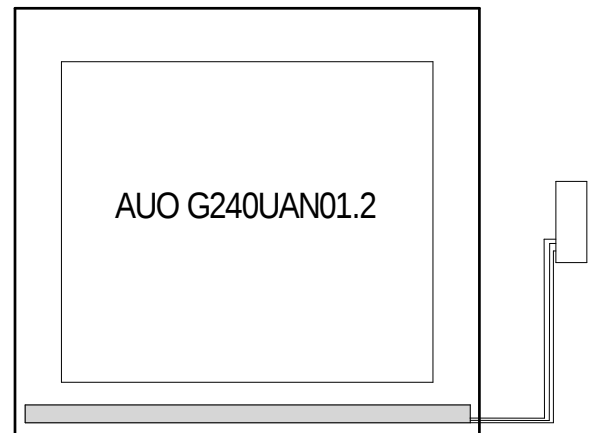
WUXGA 1920 x 1200 pixels, 1.07B colors

1800:1 typical contrast ratio

Display Mode, Normally Black

For complete LCD specification (standard panel), refer to the datasheet AUO G240UAN01.2

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LED BACKLIGHT FEATURES

Single Edge Dual Mode DAY/NVIS Rail

Single connector allows simple interconnect with LED driver¹

Projected lifetime > 75,000 hours

Designed to be driven by constant current, selectable dual output LED backlight driver ¹

¹ For best power transfer and control, use ACI-3225 Dual Mode LED Driver.

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MAXIMUM RATINGS*

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Symbol	Parameter	Value	Unit
Top ¹	Operating temperature of display (center of panel surface)	-0 to +50	Deg-C
Tled	Operating temperature of LED edge light (light rail contact)	-30 to +95	Deg-C
Tstg ¹	Display storage temperature	-20 to +60	Deg-C
IfwdD	LED forward current (Day)	120	mA
IfwdN	LED forward current (NVIS)	15	mA

*Maximum Ratings are those values beyond which damage may occur

¹Per Manufacturer's Specification

PANEL/BACKLIGHT OPTICAL CHARACTERISTICS

Ifwd(Day) = 100mA per bank, 3 banks per rail, 1 rail per display, Ifwd(NVIS) = 12.5mA per bank, 2 banks per rail, 1 rail per display, LED rail: ACR-3227, Ta = +25 Deg-C moving air (36 CFM), LCD displaying full-white image, minimum 2 hour soak.

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Bpd	Panel Luminance (Day)		270	300	330	cd/m ²
Bpn	Panel Luminance (NVIS)			1.71		cd/m ²
u'd	White u' coordinate (DAY)			0.191		-
v'd	White v' coordinate (DAY)			0.442		-
Rd	White radius error (DAY)				0.40	-
u'n	White u' coordinate (NVIS)			0.190		-
v'n	White v' coordinate (NVIS)			0.490		-
Rn	White radius error (NVIS)				0.040	-

LED EDGE-LIGHT ELECTRICAL CHARACTERISTICS

Ifwd(Day) = 100mA, Ifwd(NVIS) = 12.5mA, Top = +25Deg-C

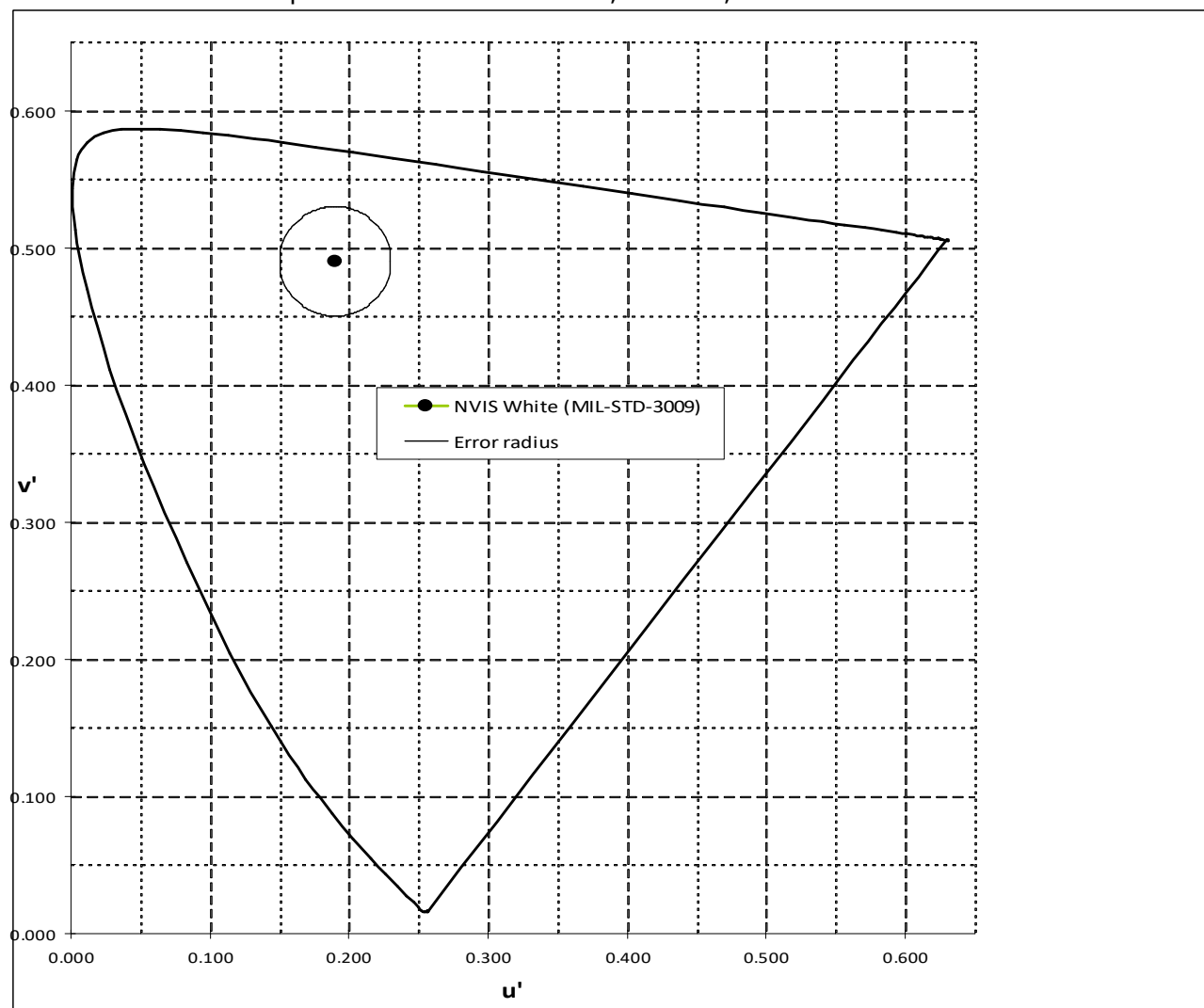
Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Vfwd	LED rail forward voltage drop (Day mode)		81	90	99	Vdc
Vfwd	LED rail forward voltage drop (NVIS)		58	65	72	Vdc

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CIE 1976 UCS CHROMATICITY DIAGRAM

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NVIS WHITE coordinates per MIL-STD-3009: $u'=0.190$, $v'=0.490$, $r=0.04$

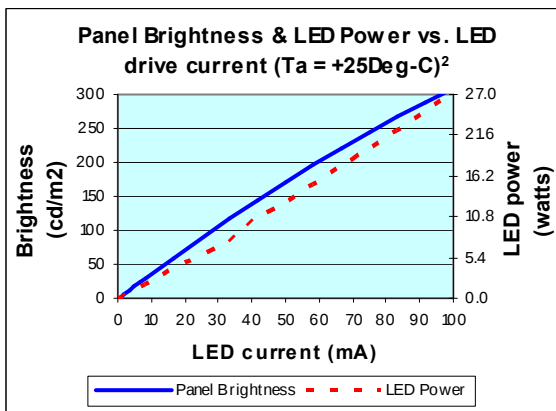


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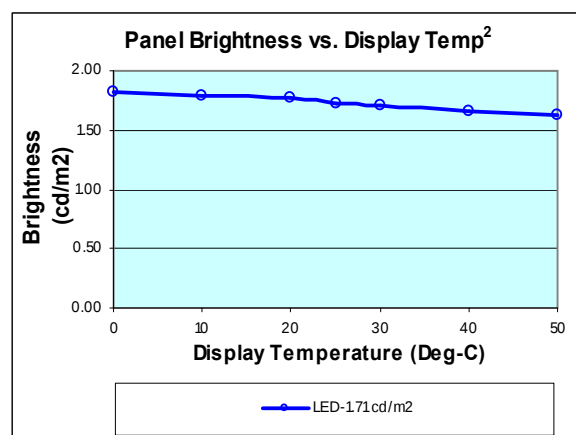
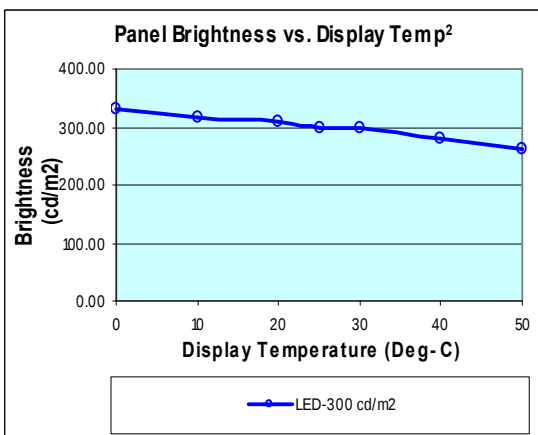
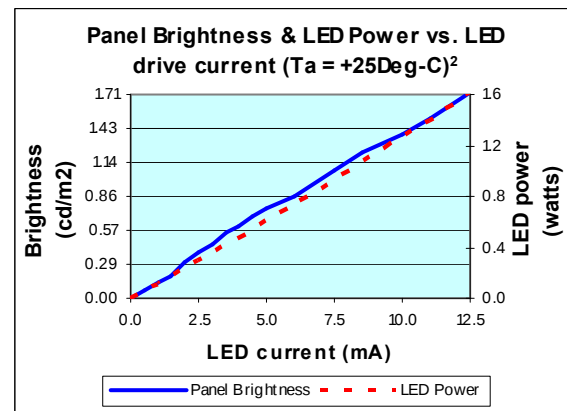
TYPICAL LCD/LED BACKLIGHT PERFORMANCE GRAPHS

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Day



NVIS



² Moving air (36.0 CFM)