

PRODUCT DATA SHEET

17.0" SXGA DUAL MODE (DAY & NVIS) ENHANCED LED BACKLIT DISPLAY SOLUTION

Sunlight Readability/MIL-STD-3009 NVIS Green B Operation/Very Wide Range Dimming

GENERAL DESCRIPTION

The ACD-NVIS170-3200 consists of the AUO G170EG01 V1 17.0" SXGA TFT display, modified with a high performance LED backlight capable of Day and NVIS Green B Operation.

Performance at given luminance levels

1000 cd/m² with 40.0 watts LED power (Day)

7.5 cd/m² with 4.7 watts LED power (NVIS)

The "NVIS Green B" enhancement portion of this display solution is intended to be capable of compliance per MIL-STD-3009 for Special Lighting Components where increased display emphasis by highly saturated (monochromatic) color is necessary. Other post enhancements placed in front of the LCD glass, can have an affect on the final Luminance & Chromaticity results.

LCD PANEL HIGHLIGHTS

17.0" TFT Active Matrix Color

337.920mm(H) x 270.336mm(V) viewable area

358.5mm(W) x 296.5mm(H) x 18.0mm(D) physical size

SXGA 1280 x 1024 pixels, 16.7M colors

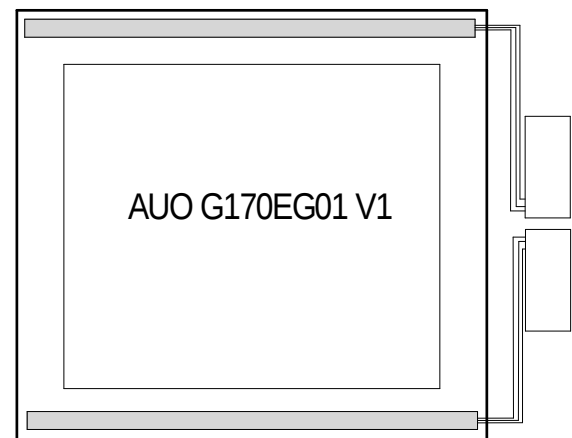
800:1 typical contrast ratio

Display Mode, Normally White

Anti-glare type, Hardness 3H

For complete LCD specification (standard panel), refer to the datasheet AUO G170EG01 V1

6/13/2022



LED BACKLIGHT FEATURES

Dual Edge Day and NVIS LED rails

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 2 ACI-2719 Dual Mode LED Drivers.

PRODUCT DATA SHEET

MAXIMUM RATINGS*

6/13/2022

Symbol	Parameter	Value	Unit
Top ¹	Operating temperature of display (center of panel surface)	-30 to +85	Deg-C
Tled	Operating temperature of LED edge light (light rail contact)	-30 to +85	Deg-C
Tstg ¹	Display storage temperature	-30 to +85	Deg-C
IfwdD	LED forward current (Day)	120	mA
IfwdN	LED forward current (NVIS)	30	mA

*Maximum Ratings are those values beyond which damage may occur

¹Per Manufacturer's Specification

PANEL/BACKLIGHT OPTICAL CHARACTERISTICS

Ifwd(Day) = 100mA per bank, 2 banks per rail, 2 rails per display, Ifwd(NVIS) = 25mA per bank, 1 bank per rail, 2 rails per display, LED rails: ACR-3201, 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)		800	1000		cd/m ²
Bpn	Panel Luminance (NVIS)			7.5		cd/m ²
u'd	White u' coordinate (DAY)			0.190		-
v'd	White v' coordinate (DAY)			0.427		-
Rd	White radius error (DAY)				0.040	-
u'n	Green B u' coordinate (NVIS)			0.131		-
v'n	Green B v' coordinate (NVIS)			0.623		-
Rn	Green B radius error (NVIS)				0.057	-

LED EDGE-LIGHT ELECTRICAL CHARACTERISTICS

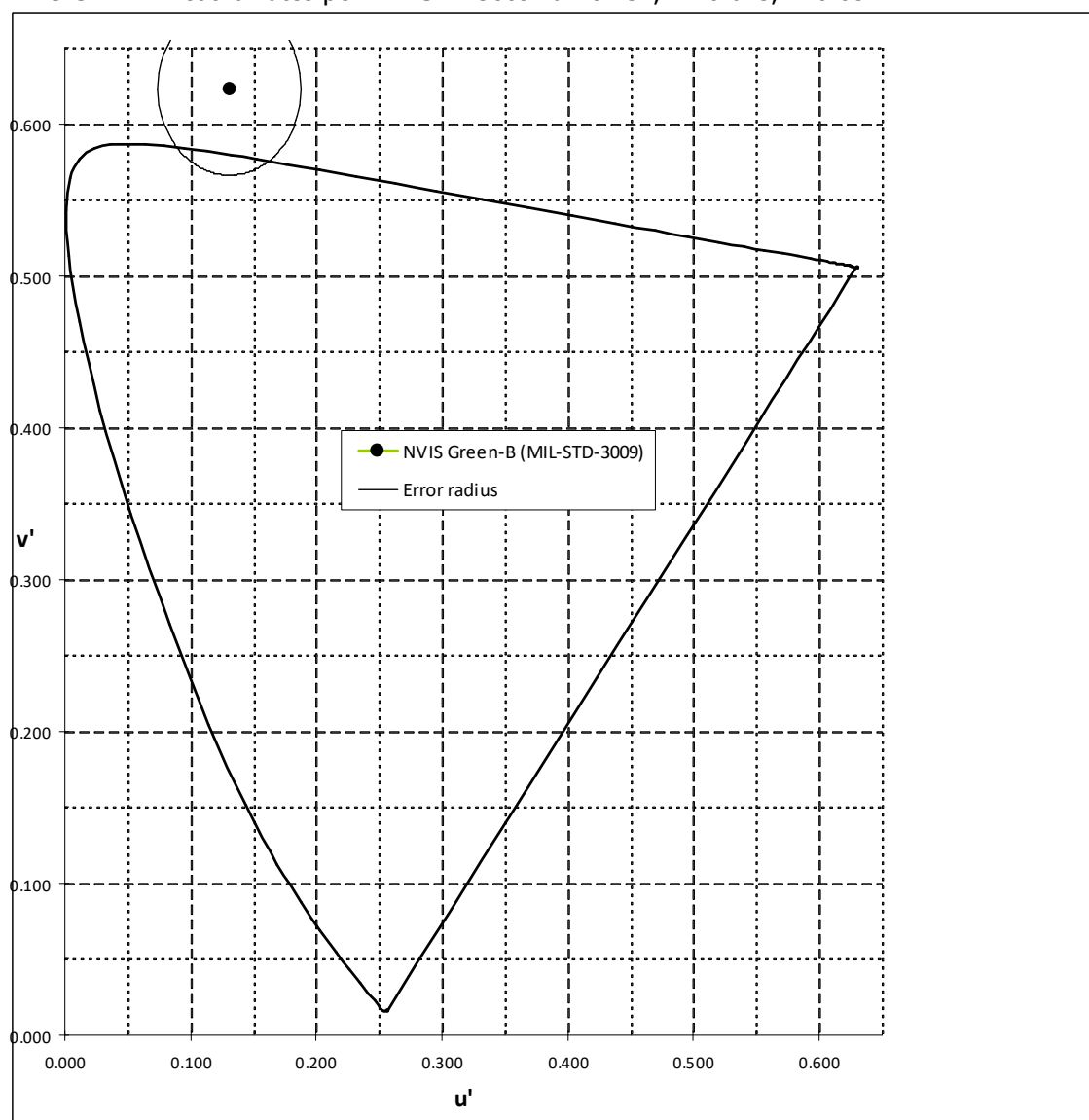
Ifwd(Day) = 100mA, Ifwd(NVIS) = 25mA, Top = +25Deg-C

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Vfwd	LED rail forward voltage drop (Day mode)		90	100	110	Vdc
Vfwd	LED rail forward voltage drop (NVIS)		85	94	103	Vdc

CIE 1976 UCS CHROMATICITY DIAGRAM

6/13/2022

NVIS GREEN B coordinates per MIL-STD-3009: $u'=0.131$, $v'=0.623$, $r=0.057$

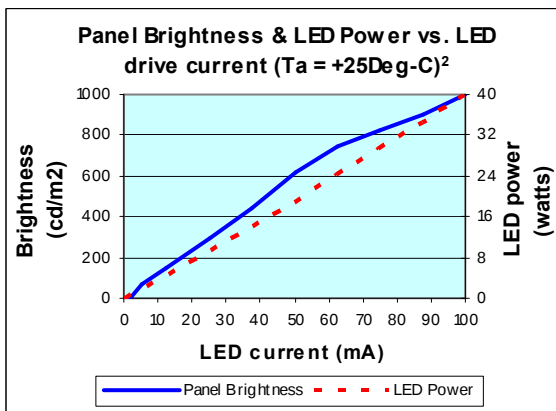


PRODUCT DATA SHEET

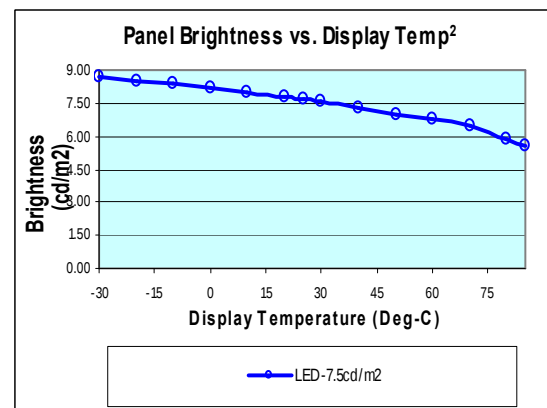
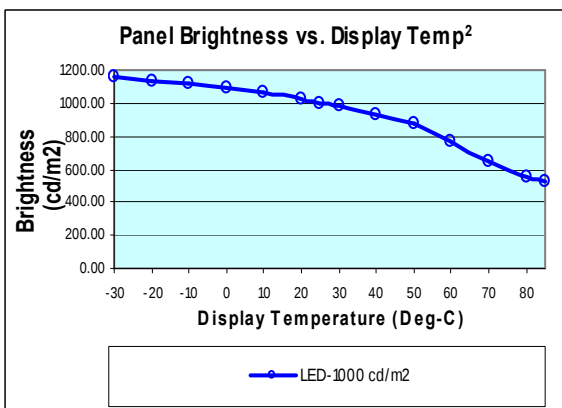
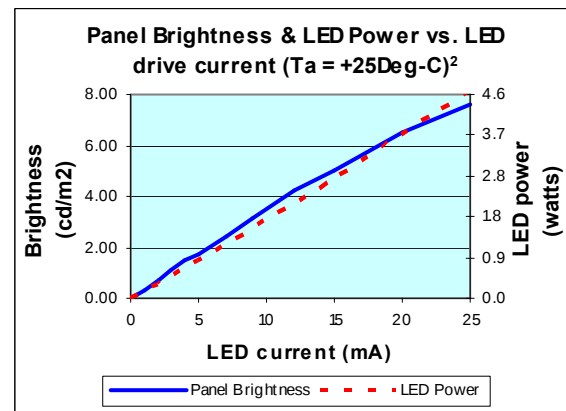
TYPICAL LCD/LED BACKLIGHT PERFORMANCE GRAPHS

6/13/2022

Day



NVIS



² Moving air (36.0 CFM)