Applied Concepts
INNOVATION IN POWER CONVERSION TECHNOLOGY
397 Route 281
Tully, New York 13159
Phone: 315 696-6676
Fax: 315 696 9923
Email: sales@acipower.com
www.acipower.com

ACD-2916

PRODUCT DATA SHEET

15.0" XGA DUAL MODE (DAY & NVIS) ENHANCED LED BACKLIT DISPLAY SOLUTION

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

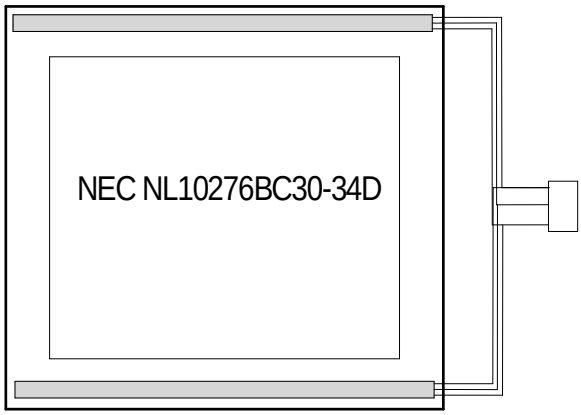
02/15/19

GENERAL DESCRIPTION

The ACD-2916 consists of the NEC NL10276BC30-34D XGA TFT display, modified with a high performance LED backlight capable of Day and NVIS White Operation.

Performance at given brightness levels
1450 cd/m^2 with 29.8 watts LED power (Day)
4.1 cd/m^2 with 1.4 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

15" TFT Active Matrix Color

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

XGA 1024 x 768 pixels, 16.7 M colors

600:1 typical contrast ratio

50% color gamut (NTSC color space)

RoHS Compliant

Display Mode Normally White

For complete LCD specification (standard panel), refer to the NEC NL10276BC30-34D datasheet

LED BACKLIGHT FEATURES

Day and NVIS LED edge-light rail

Three wire connection (Typically 11 inches long), allows simple interconnect with LED driver[1]

Projected lifetime > 75,000 hours

[1] *For best power transfer and control, use ACI-2917 Dual Mode LED Driver.*

Applied Concepts
INNOVATION IN POWER CONVERSION TECHNOLOGY
397 Route 281
Tully, New York 13159
Phone: 315 696-6676
Fax: 315 696 9923
Email: sales@acipower.com
www.acipower.com

ACD-2916

PRODUCT DATA SHEET

02/15/19

MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
Top[1]	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[1]	Display storage temperature	-30 to +80	Deg-C
Ifwd	LED forward current (Day)	105	mA
Ifwd	LED forward current (NVIS)	10	mA

*Maximum Ratings are those values beyond which damage may occur

[1]Per Manufacturerôs Specification

PANEL/BACKLIGHT OPTICAL CHARACTERISTICS

Ifwd(Day) = 87.5mA per bank, 2 banks per rail, 2 rails per display, Ifwd(NVIS) = 9mA per bank, 1 bank per rail, 2 rails per display, LED rails: ACR-2908, Ta = +25 Deg-C, moving air (36.0 CFM), min 2hr soak

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Bpd	Panel Brightness (Day)		1305	1450	1595	cd/m^2
Bpn	Panel Brightness (NVIS)			4.1		cd/m^2
u'd	White X coordinate (DAY)			0.189		-
v'd	White Y coordinate (DAY)			0.465		-
Rd	White radius error (DAY)				0.04	-
u'n	White X coordinate (NVIS)			0.190		-
v'n	White Y coordinate (NVIS)			0.490		-
Rn	White radius error (NVIS)				0.04	-

LED EDGE-LIGHT ELECTRICAL CHARACTERISTICS

Ifwd(Day) = 87.5mA, Ifwd(NVIS) = 9mA, Top = +25Deg-C

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Vfwd	LED rail forward voltage drop (Day mode)		76	85	94	Vdc
Vfwd	LED rail forward voltage drop (NVIS)		69	77	85	Vdc

Applied Concepts
INNOVATION IN POWER CONVERSION TECHNOLOGY

397 Route 281
Tully, New York 13159
Phone: 315 696-6676
Fax: 315 696 9923
Email: sales@acipower.com
www.acipower.com

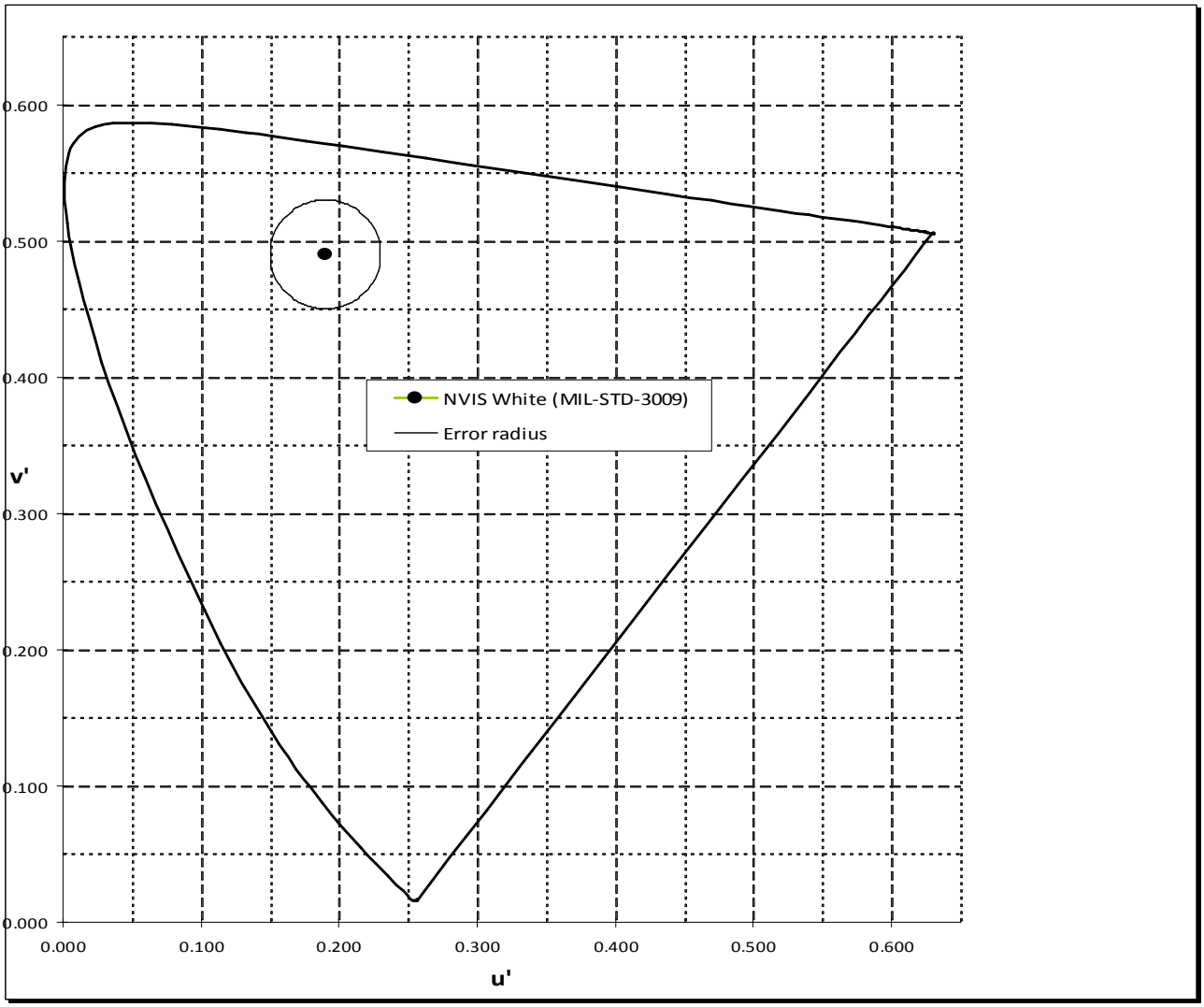
ACD-2916

PRODUCT DATA SHEET

02/15/19

CIE 1976 UCS CHROMATICITY DIAGRAM

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



Applied Concepts
INNOVATION IN POWER CONVERSION TECHNOLOGY
397 Route 281
Tully, New York 13159
Phone: 315 696-6676
Fax: 315 696 9923
Email: sales@acipower.com
www.acipower.com

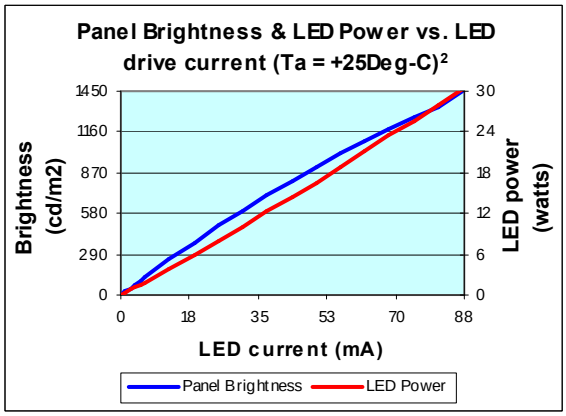
ACD-2916

PRODUCT DATA SHEET

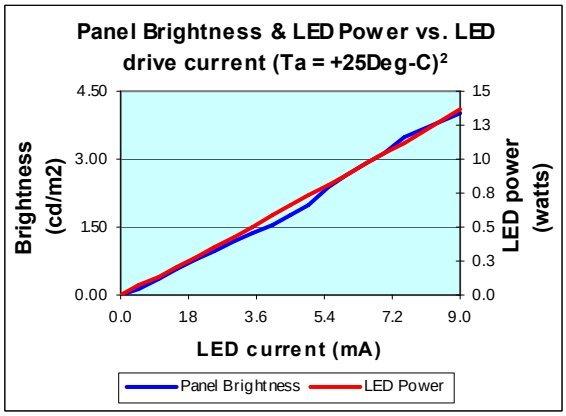
TYPICAL LCD/LED BACKLIGHT PERFORMANCE GRAPHS

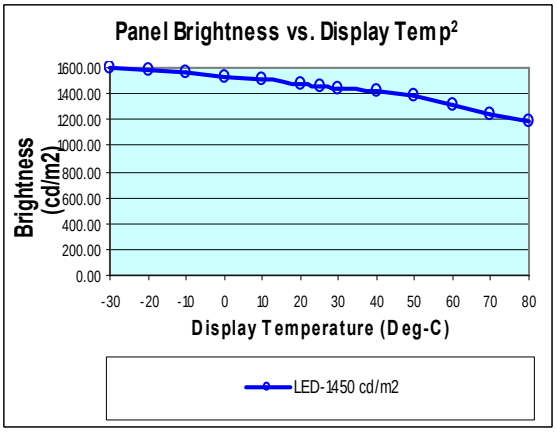
02/15/19

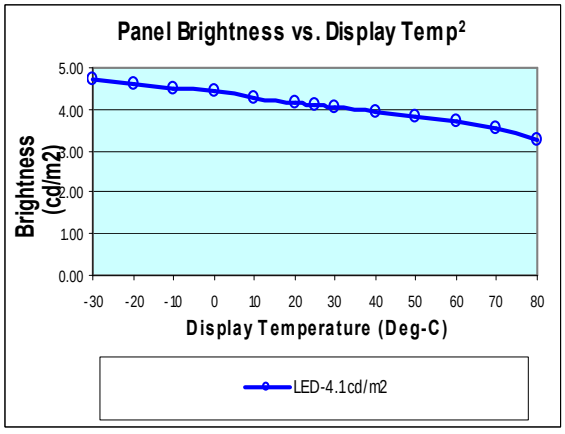
DAY



NVIS







[2] Moving air (36.0 CFM)