



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

ACD-2854

PRODUCT DATA SHEET

06/05/2017

8.0" WVGA LED BACKLIT TFT DISPLAY

Sunlight Readability/1000:1 dimming/Cool operation/Integrated LED Driver

GENERAL DESCRIPTION

The ACD-2854 consists of the NLT NL8048AC21-01F WVGA TFT display modified with a high performance LED backlight and integrated LED driver.

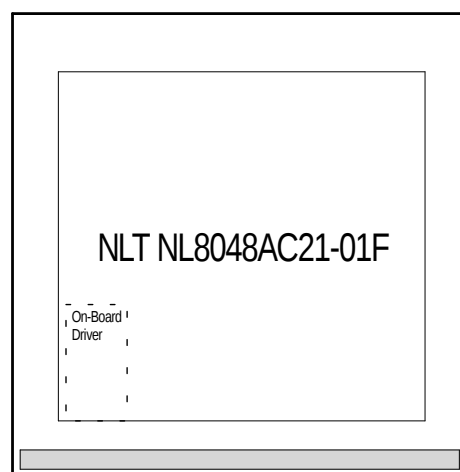
Customer Consigned Panel

Performance at given brightness levels

2200 cd/m² with 14 watts into On-Board LED Driver

Display outline identical to standard LED equipped panel

For many applications, satisfies sunlight readability goals



LCD PANEL HIGHLIGHTS

8.0" TFT Active Matrix Color

174.0 (H) mm x 104.4 (V) mm viewable area

WVGA 800 x 480 pixels, 262K colors

800:1 typical contrast ratio

70% color gamut (NTSC color space)

Display Mode Normally White

For complete LCD specification (standard panel), refer to NLT NL8048AC21-01F data sheet.

LED BACKLIGHT FEATURES

Projected lifetime > 75,000 hours

1000:1 or better dimming ratio, guaranteed¹

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 +95	Deg-C
Tstg ¹	Display/Driver storage temperature	-40 to +80	Deg-C
Vin	Driver Voltage (Referenced to Ground)	-0.7 to 18	Vdc
Vip	Voltage applied to any Driver Input Pin (Referenced to Ground)	-0.7 to 5.7	Vdc
Iop	Current sourced or sinked from any Driver Output Control Pin	+/- 10	mAdc

* Maximum Ratings are those values beyond which damage to the driver may occur

¹ Per Manufacture's Specification

PANEL/BACKLIGHT OPTICAL CHARACTERISTICS

Ta = +25Deg-C, moving air (36.0 CFM), min 2hr soak, Brightness at Full ON (Icntl=4.75V)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Bp	Panel Brightness		1980	2200	2420	cd/m ²
X	White X coordinate			0.267		-
Y	White Y coordinate			0.301		-

RECOMMENDED OPERATING CONDITIONS (DRIVER)

Symbol	Parameter	Min	Max	Unit
Vin**	Supply Voltage (Referenced to Ground)	10.0	15.0	Vdc
Icntl	LED Intensity Control Voltage	0.25	4.75	Vdc

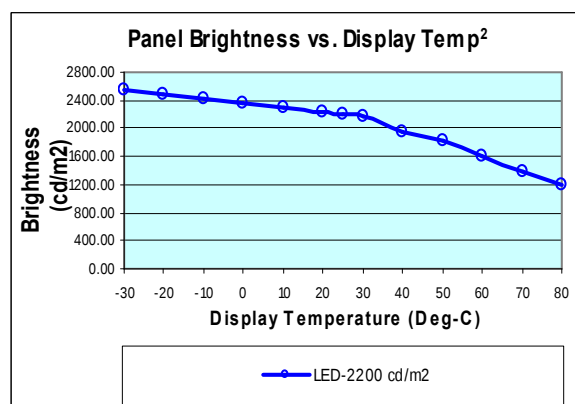
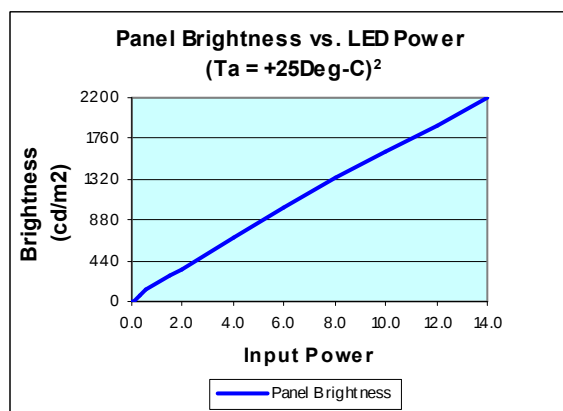
**Vin must be less than the minimum Forward-Drop Voltage (Vf).

ELECTRICAL CHARACTERISTICS (DRIVER)

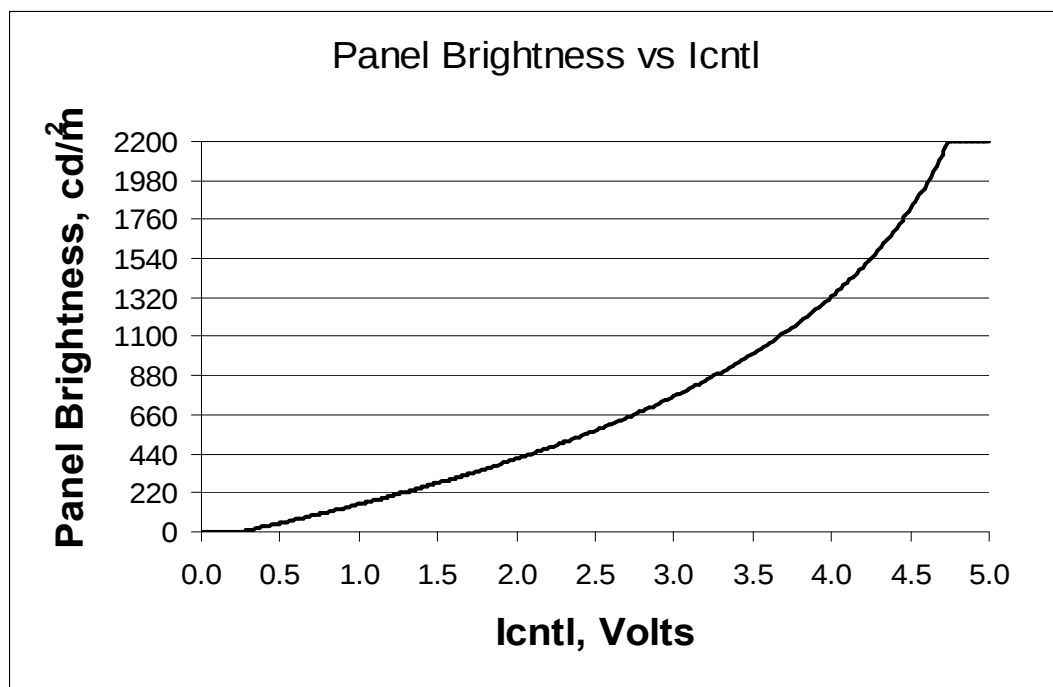
Vin = +12V, Icntl = +4.75V, Enable = +5V, unless otherwise specified.

Symbol	Parameter	Test Conditions (Con 1)	Min	Nom	Max	Unit
Iadj	Nominal Output Brightness Adjust Range	Icntl(Pin 6) <= +0.25V or PWMcntl(Pin 6) = 0%	0			cd/m ²
		Icntl(Pin 6) >= +4.75V or PWMcntl(Pin 6) = 100%			2200	cd/m ²
ENoff	Enable Control, Unit Off				0.5	Vdc
ENon	Enable Control, Unit ON		2.0			Vdc
+5Vref	+5V Output Reference Voltage	1K Ohm Load to Ground (Pin 7)	4.75	5.0	5.25	Vdc
Iin	Input Current Draw			1.3		Adc
Iind	Input Current Draw (Disabled)	Enable (Pin 5) = 0V			0.06	Adc
Eff	Electrical Efficiency			90		%

TYPICAL LCD/LED BACKLIGHT PERFORMANCE GRAPHS



² Moving air (36.0 CFM)



MECHANICAL CHARACTERISTICS

