

19" SXGA LED BACKLIT TFT DISPLAY WITH NVIS CLASS B CAPABILITY

GENERAL DESCRIPTION

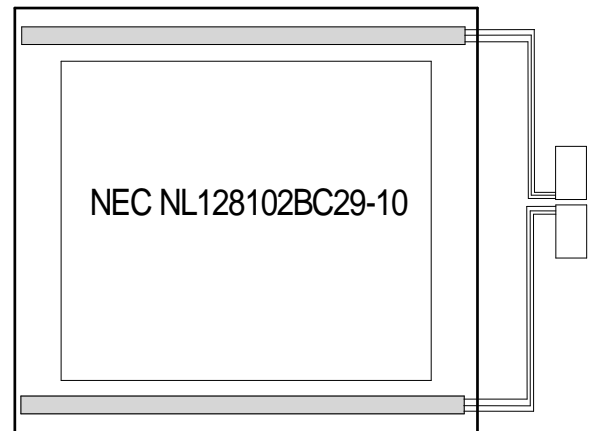
5/23/2014

The ACD-2403 consists of the NEC NL128102BC29-10 SXGA TFT display modified with a high performance LED backlight capable of Day and NVIS Class B operation.

Customer Consigned Panel

Performance at given brightness levels

800 cd/m² with 50.4 watts LED power (Day)
10.0 cd/m² with 8.5 watts LED power (NVIS)



LCD PANEL HIGHLIGHTS

19" TFT Active Matrix Color
376.32 (H) mm x 301.056 (V) mm viewable area
SXGA 1280 x 1024 pixels
16.2 M (8 bit/color)
800:1 typical contrast ratio
Display Mode Normally Black
RoHs compliant

For complete LCD specification (standard panel), refer to the NEC NL128102BC29-10 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 two ACI-2404 Dual Mode Driver.

ACD-2403

MAXIMUM RATINGS

05/23/2014

| Symbol | Parameter | Value | Unit |
|--------|--|------------|-------|
| Top | Operating temperature of display (center of panel surface) | 0 to +55 | Deg-C |
| Tled | Operating temperature of LED edge light (light rail contact) | -40 to +85 | Deg-C |
| Tstg | Display storage temperature | -20 to +60 | Deg-C |
| Ifwd | LED forward current (Day) | 90 | mA |
| Ifwd | LED forward current (NVIS) | 30 | mA |

*Maximum Ratings are those values beyond which damage may occur

PANEL/BACKLIGHT OPTICAL CHARACTERISTICS

Ifwd(Day) = 75mA per bank, 4 banks per rail, 2 rails per display, Ifwd(NVIS) = 25mA per bank, 2 banks per rail,
LED rail: ACR-2498, Ta = +25Deg-C, LCD powered

| Symbol | Parameter | Test Conditions | Min | Typ | Max | Unit |
|--------|-------------------------------|-----------------|-----|-------|------|-------------------|
| Bpd | Panel Brightness (Day) | | 720 | 800 | 880 | cd/m ² |
| Bpn | Panel Brightness (NVIS) | | 9.0 | 10.0 | 11.0 | cd/m ² |
| Xd | White X coordinate (Day mode) | | | 0.262 | | - |
| Yd | White Y coordinate (Day mode) | | | 0.284 | | - |
| XN | White X coordinate (NVIS) | | | 0.280 | | - |
| YN | White Y coordinate (NVIS) | | | 0.647 | | - |

LED EDGE-LIGHT ELECTRICAL CHARACTERISTICS

Ifwd(Day) = 75mA, Ifwd(NVIS) = 25mA, Top = +25Deg-C

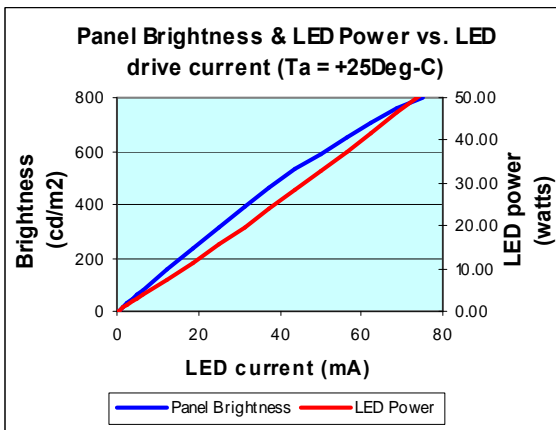
| Symbol | Parameter | Test Conditions | Min | Typ | Max | Unit |
|--------|--|-----------------|-----|-----|-----|------|
| Vfwd | LED rail forward voltage drop (Day mode) | | 76 | 84 | 92 | Vdc |
| Vfwd | LED rail forward voltage drop (NVIS) | | 77 | 85 | 93 | Vdc |

ACD-2403

TYPICAL LCD/LED BACKLIGHT PERFORMANCE GRAPHS

5/23/2014

Day mode



NVIS

