

10.4" XGA LED BACKLIT TFT DISPLAY WITH NVIS CLASS B CAPABILITY

Sunlight Readability/1000:1 dimming/Cool operation

GENERAL DESCRIPTION

The ACD-2353 consists of the NEC NL10276BC20-18/18C/18F XGA TFT display modified with a high performance LED backlight capable of Day and NVIS Full Color Operation.

Customer Consigned Panel

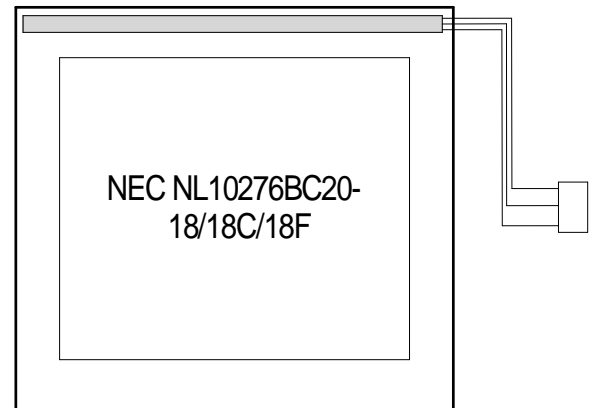
Performance at given brightness levels

1500 cd/m² with 14.9 watts LED power (Day)
5.0 cd/m² with 2.4 watts LED power (NVIS)

Display outline identical to standard LED equipped panel

For many applications, satisfies sunlight readability goals

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LCD PANEL HIGHLIGHTS

10.4" TFT Active Matrix Color

210.432 (H) mm x 157.824 (V) mm viewable area

XGA 1024 x 768 pixels, 16.7 M colors

900:1 typical contrast ratio

40% color gamut (NTSC color space)

For complete LCD specification (standard panel), refer to the NEC NL10276BC20-18/18C/18F 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 one ACI-2354 Dual Mode Driver.

MAXIMUM RATINGS

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| Symbol | Parameter | Value | Unit |
|--------|--|------------|-------|
| Top | 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 | Display storage temperature | -30 to +80 | Deg-C |
| Ifwd | LED forward current (Day) | 105 | mA |
| Ifwd | LED forward current (NVIS) | 36 | mA |

*Maximum Ratings are those values beyond which damage may occur

PANEL/BACKLIGHT OPTICAL CHARACTERISTICS

Ifwd(Day) = 87.5mA per bank, 2 banks per rail, 1 rail per display, Ifwd(NVIS) = 30mA per bank, 1 bank per rail, 1 rail per display, LED rails: ACR-2377, Ta = +25 Deg-C, LCD unpowered

| Symbol | Parameter | Test Conditions | Min | Typ | Max | Unit |
|--------|-------------------------------|-----------------|------|-------|------|-------------------|
| Bpd | Panel Brightness (Day) | | 1350 | 1500 | 1650 | cd/m ² |
| Bpn | Panel Brightness (NVIS) | | 3.7 | 4.6 | 5.5 | cd/m ² |
| Xd | White X coordinate (Day mode) | | | 0.259 | | - |
| Yd | White Y coordinate (Day mode) | | | 0.288 | | - |
| XN | White X coordinate (NVIS) | | | 0.272 | | - |
| YN | White Y coordinate (NVIS) | | | 0.475 | | - |

LED EDGE-LIGHT ELECTRICAL CHARACTERISTICS

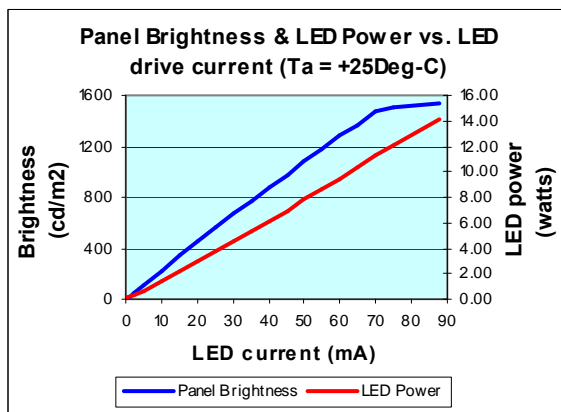
Ifwd(Day) = 87.5mA, Ifwd(NVIS) = 30mA, Top = +25Deg-C

| 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) | | 72 | 80 | 88 | Vdc |

TYPICAL LCD/LED BACKLIGHT PERFORMANCE GRAPHS

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Day mode



NVIS

