

## ACD-2540

PRODUCT DATA SHEET – PAGE 1 OF 3

### 17" SXGA LED BACKLIT TFT DISPLAY WITH NVIS CLASS B CAPABILITY

#### GENERAL DESCRIPTION

The ACD-2540 consists of the Mitsubishi AA170ED01/AA170EB01 SXGA TFT display modified with a high performance LED backlight capable of Day and NVIS Class B operation.

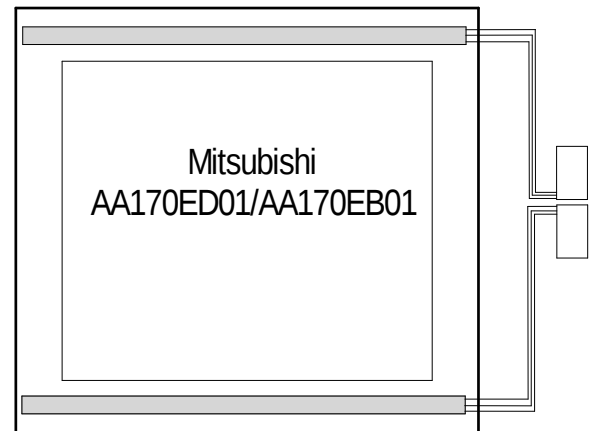
Customer Consigned Panel

##### Performance at given brightness levels

1200 cd/m<sup>2</sup> with 36.7 watts LED power (Day)

13 cd/m<sup>2</sup> with 5.8 watts LED power (NVIS)

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#### LCD PANEL HIGHLIGHTS

17" TFT Active Matrix Color

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

SXGA 1280 x 1024 pixels

262K (6 bit/color) ; 16.7 M (8 bit/color)

800:1 typical contrast ratio

Display Mode Normally White

RoHs compliant

*For complete LCD specification (standard panel), refer to the Mitsubishi AA170ED01/AA170EB01 datasheet*

#### LED BACKLIGHT FEATURES

White and NVIS LED edge-light rail

Three wire connection (Typically 11 inches long), allows simple interconnect with LED driver<sup>1</sup>

Projected lifetime > 75,000 hours

50,000:1 or better dimming ratio (Day)<sup>1</sup>

Minimum NVIS intensity equal to 0.003 cd/m<sup>2</sup> or less<sup>1</sup>

<sup>1</sup> For best power transfer and control, use two ACI-2383 Dual Mode Driver.

## MAXIMUM RATINGS

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| Symbol | Parameter                                                    | Value      | Unit  |
|--------|--------------------------------------------------------------|------------|-------|
| Top    | Operating temperature of display (center of panel surface)   | -20 to 70  | Deg-C |
| Tled   | Operating temperature of LED edge light (light rail contact) | -40 to +85 | Deg-C |
| Tstg   | Display storage temperature                                  | -20 to +80 | Deg-C |
| Ifwd   | LED forward current (Day)                                    | 108        | mA    |
| Ifwd   | LED forward current (NVIS)                                   | 36         | mA    |

\*Maximum Ratings are those values beyond which damage may occur

## PANEL/BACKLIGHT OPTICAL CHARACTERISTICS

Ifwd(Day) = 90mA per bank, 2 banks per rail, 2 rails per display, Ifwd(NVIS) = 30mA per bank, 1 bank per rail, 2 rails per display LED rail: ACR-2387, Ta = +25Deg-C, LCD un-powered

| Symbol | Parameter                     | Test Conditions | Min  | Typ   | Max  | Unit              |
|--------|-------------------------------|-----------------|------|-------|------|-------------------|
| Bpd    | Panel Brightness (Day)        |                 | 1080 | 1200  | 1320 | cd/m <sup>2</sup> |
| Bpn    | Panel Brightness (NVIS)       |                 | 11.7 | 13.0  | 14.3 | cd/m <sup>2</sup> |
| Xd     | White X coordinate (Day mode) |                 |      | 0.253 |      | -                 |
| Yd     | White Y coordinate (Day mode) |                 |      | 0.266 |      | -                 |
| XN     | White X coordinate (NVIS)     |                 |      | 0.245 |      | -                 |
| YN     | White Y coordinate (NVIS)     |                 |      | 0.725 |      | -                 |

## LED EDGE-LIGHT ELECTRICAL CHARACTERISTICS

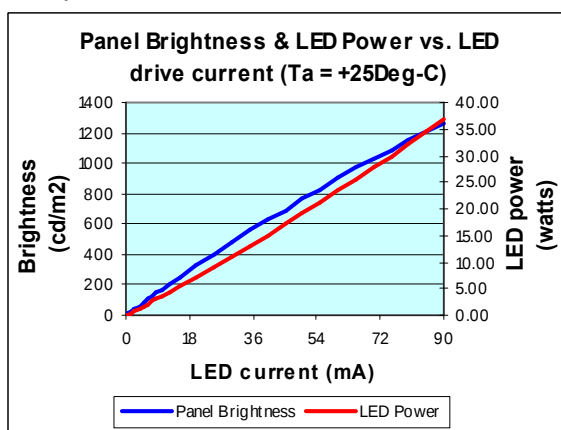
Ifwd(Day) = 90mA, Ifwd(NVIS) = 30mA, Top = +25Deg-C

| Symbol | Parameter                                | Test Conditions | Min | Typ | Max | Unit |
|--------|------------------------------------------|-----------------|-----|-----|-----|------|
| Vfwd   | LED rail forward voltage drop (Day mode) |                 | 92  | 102 | 112 | Vdc  |
| Vfwd   | LED rail forward voltage drop (NVIS)     |                 | 88  | 97  | 106 | Vdc  |

## TYPICAL LCD/LED BACKLIGHT PERFORMANCE GRAPHS

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Day mode



NVIS

