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# ACD-AU121-3039

## PRODUCT DATA SHEET

12/10/2019

### 12.1" XGA LED BACKLIT TFT DISPLAY

*Sunlight Readability/1000:1 dimming/Cool operation*

#### GENERAL DESCRIPTION

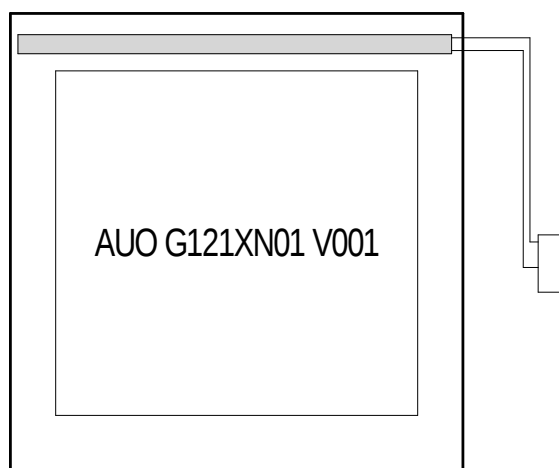
The ACD-AU121-3039 consists of the AUO G121XN01 V001 12.1" XGA TFT display modified with a high performance LED backlight.

#### Performance at given brightness levels

1200 cd/m<sup>2</sup> with 9.7 watts LED power

Display outline identical to standard LED equipped panel

For many applications, satisfies sunlight readability goals



#### LCD PANEL HIGHLIGHTS

12.1" TFT Active Matrix Color

245.76 (H) mm x 184.32 (V) mm viewable area

XGA 1024 x 768 pixels, 262K/16.7M colors

700:1 typical contrast ratio

Display Mode Normally White

Surface Treatment: Hard coating(3H), AG

*For complete LCD specification (standard panel), refer to AUO G121XN01 V001 data sheet.*

#### LED BACKLIGHT FEATURES

White LED edge-light rail

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

Projected lifetime > 75,000 hours

1000:1 or better dimming ratio, guaranteed<sup>1</sup>

<sup>1</sup> For best power transfer and control, use ACI-C120105-2893 LED driver. Do not set the driver output current (Ifwd) higher than the value specified in the Maximum Ratings table of this document. Please contact the factory for more specific use LED driver solutions if required.

### MAXIMUM RATINGS \*

| Symbol            | Parameter                                                    | Value      | Unit  |
|-------------------|--------------------------------------------------------------|------------|-------|
| Top <sup>1</sup>  | Operating temperature of display (center of panel surface)   | -30 to +85 | Deg-C |
| Tled              | Operating temperature of LED edge light (light rail contact) | -30 to +95 | Deg-C |
| Tstg <sup>1</sup> | Display storage temperature                                  | -30 to +85 | Deg-C |
| Ifwd              | Maximum LED edge-light forward current (DC)                  | 63         | mA    |

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

<sup>1</sup> Per Manufacture's Specification

### PANEL/BACKLIGHT OPTICAL CHARACTERISTICS

Ifwd = 52.5mA per bank, LED rail ACR-0932-2877, 2 banks per rail, 1 rail per display, Ta = +25Deg-C, moving air (36.0 CFM), min 2hr soak

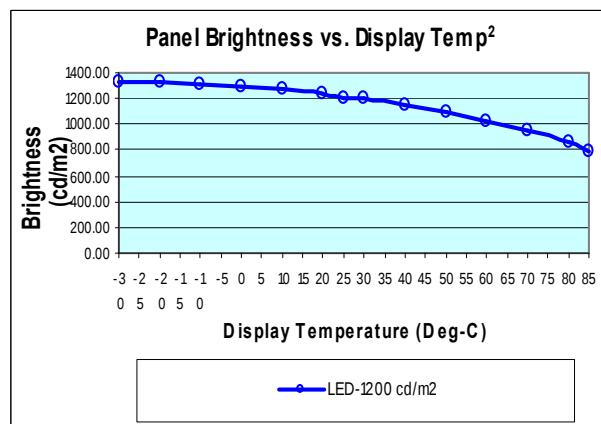
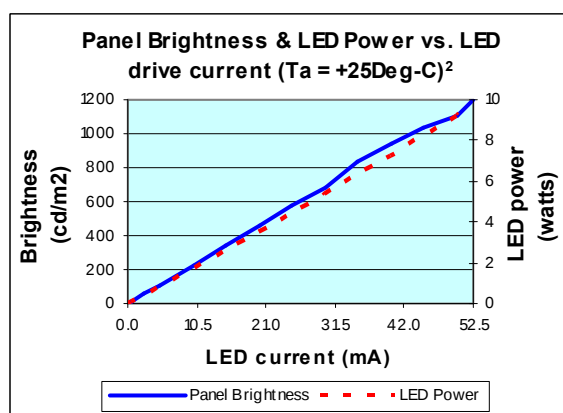
| Symbol | Parameter          | Test Conditions | Min  | Typ   | Max  | Unit              |
|--------|--------------------|-----------------|------|-------|------|-------------------|
| Bp     | Panel Brightness   |                 | 1080 | 1200  | 1320 | cd/m <sup>2</sup> |
| X      | White X coordinate |                 |      | 0.304 |      | -                 |
| Y      | White Y coordinate |                 |      | 0.351 |      | -                 |

### LED EDGE-LIGHT ELECTRICAL CHARACTERISTICS

Ifwd = 52.5mA per bank, 2 banks per rail, 1 rail per display, Top = +25Deg-C

| Symbol | Parameter                     | Test Conditions | Min | Typ | Max | Unit |
|--------|-------------------------------|-----------------|-----|-----|-----|------|
| Vfwd   | LED rail forward voltage drop |                 | 83  | 92  | 101 | Vdc  |

## TYPICAL LCD/LED BACKLIGHT PERFORMANCE GRAPHS



<sup>2</sup> Moving air (36.0 CFM)