



American Opto Plus LED Corp.
4.0" Case mold Type LED Display
C/A4001SR-5 G/W

● **EDIT HISTORY**

Version A: Jun. 27, 2012

Preliminary Spec.

| Manufacture | Examination | Approving |
|-------------|-------------|-----------|
| | | |



American Opto Plus LED Corp.

4.0" Case mold Type LED Display

C/A4001SR-5 G/W

● FEATURES

- 4.00 inch (101.60 mm) Digit Height.
- Low current operation..
- Case mold type.
- Gray face, White segment.
- RoHS compliant, Pb Free.

● DESCRIPTION

The C/A4001SR-5 G/W is a 4.00 inch (101.60 mm) height single 7-segment display. This device utilizes Super Red LED chip which are made from AlGaInP on a transparent GaAs .The display has Gray face and White segment.

● DEVICE

| PART NO | DESCRIPTION |
|---------------|----------------|
| Super Red | |
| A4001SR-5 G/W | Common Anode |
| C4001SR-5 G/W | Common Cathode |

RoHS Compliance



Pb free.



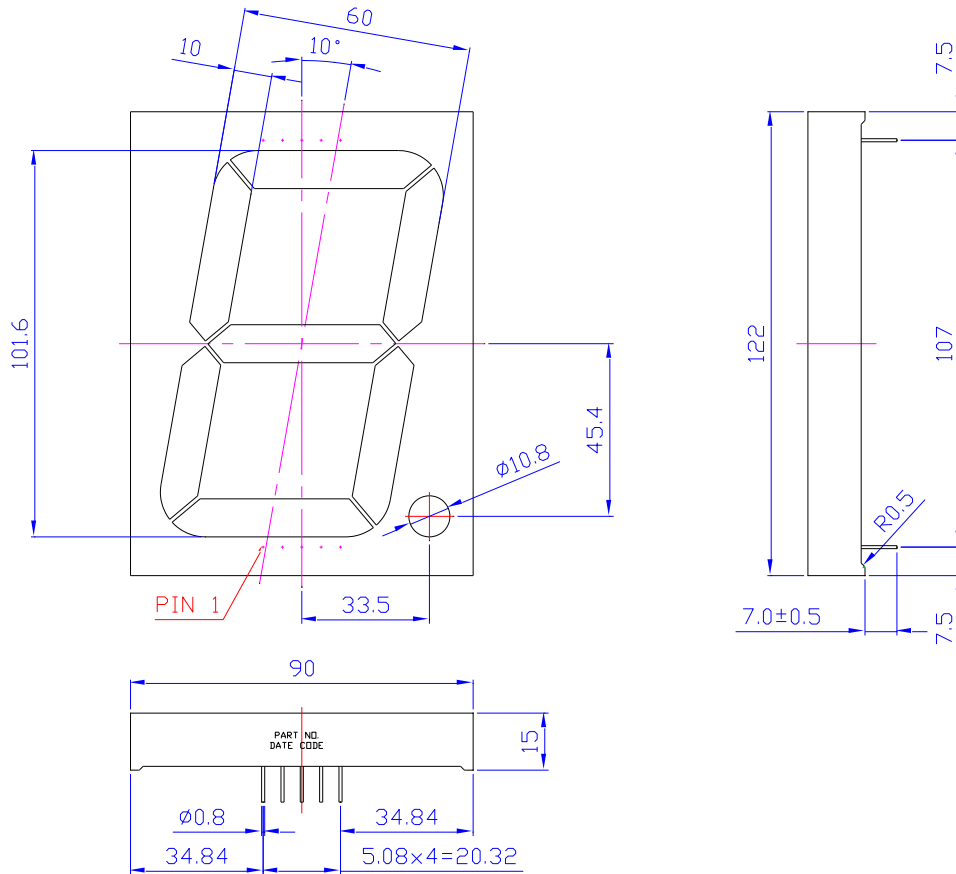


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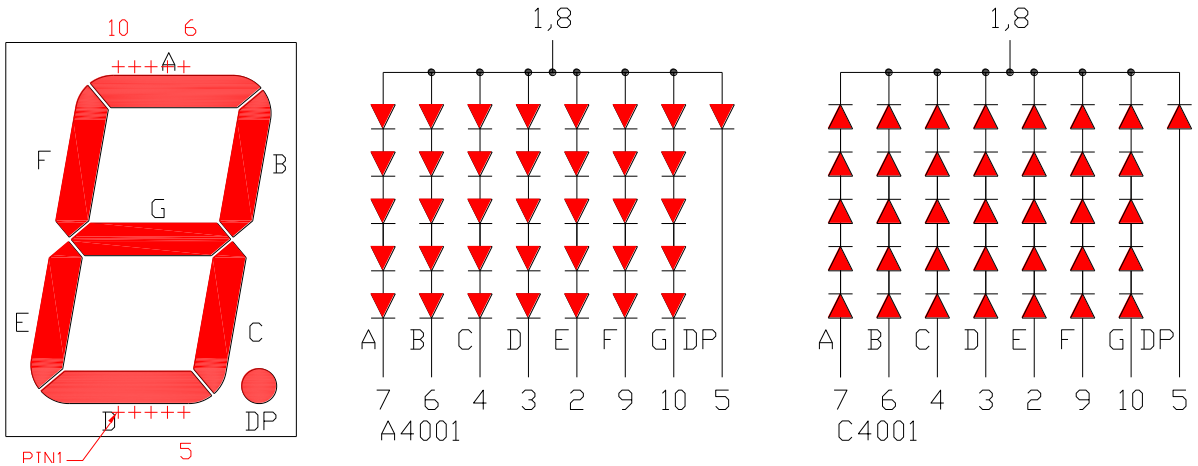
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MECHANICAL DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerances are ± 0.25 mm unless otherwise noted.

TYPICAL INTERNAL EQUIVALENT CIRCUIT





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● **SR: SUPER RED (AlGaInP/GaAs)**

ABSOLUTE MAXIMUM RATING AT $T_a=25^{\circ}\text{C}$

| Parameter | Symbol | Super Red | Unit |
|---|-----------|------------|-------|
| Power dissipation per dice | P_{AD} | 75 | mW |
| Derating Liner from 25°C per dice | - | 0.42 | mA/°C |
| Continuous forward current per dice | I_{AF} | 30 | mA |
| Peak current per dice (duty cycle 1/10, 1kHz) | I_{PF} | 200 | mA |
| Reverse voltage per dice | V_R | 5 | V |
| Operating temperature | T_{OPR} | -25 to +85 | °C |
| Storage temperature | T_{STG} | -25 to +85 | °C |

ELECTRICAL - OPTICAL CHARACTERISTICS AT $T_a=25^{\circ}\text{C}$

| Characteristic | Symbol | Condition | Min. | Typ. | Max. | Unit |
|----------------------------------|-----------------|---------------------------------------|------|---------------|---------------|---------------|
| Forward voltage per Segment (DP) | V_F | $I_F=20\text{mA}$ | - | (2.1) 10.5 | (2.3) 11.5 | V |
| Reverse current per Segment (DP) | I_R | $(V_R=5\text{V})$ $V_R=25\text{V}$ | - | - | 10 | μA |
| Peak Wavelength | λ_P | $I_F=20\text{mA}$ | - | 650 | - | nm |
| Dominant Wavelength | λ_d | $I_F=20\text{mA}$ | - | 639 | - | nm |
| Average Luminous Intensity | I_V | $I_F=20\text{mA}$ | - | 180 | - | mcd |
| Spectrum Radiation Bandwidth | $\Delta\lambda$ | $I_F=20\text{mA}$ | - | 20 | - | nm |



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● **SR: SUPER RED (AlGaInP/GaAs)**

Typical Electro-optical Characteristic Curves
(25 °C Free Air Temperature Unless Otherwise Specified)

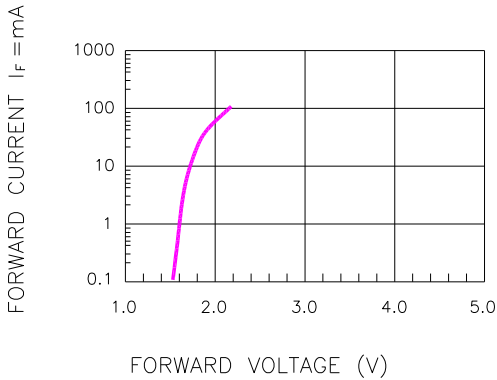


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

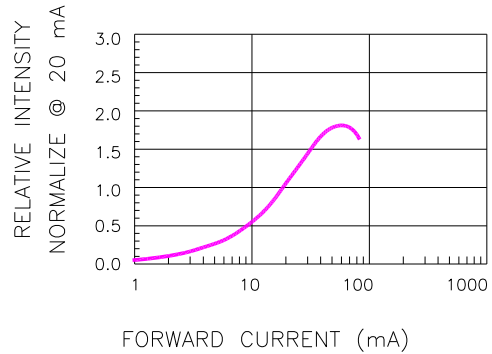


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

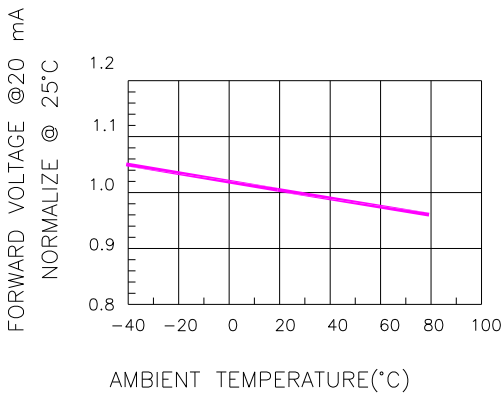


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

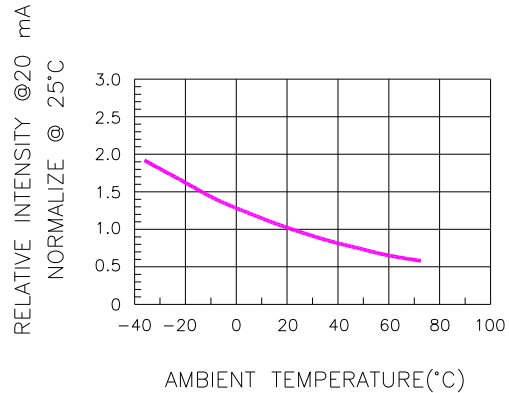


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

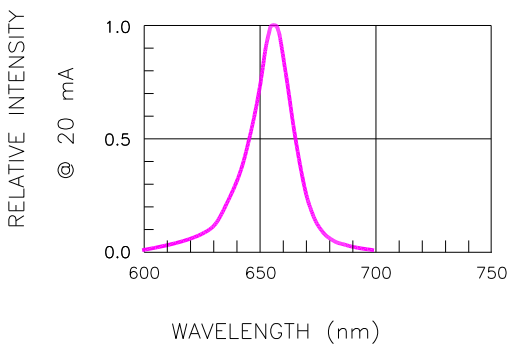


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

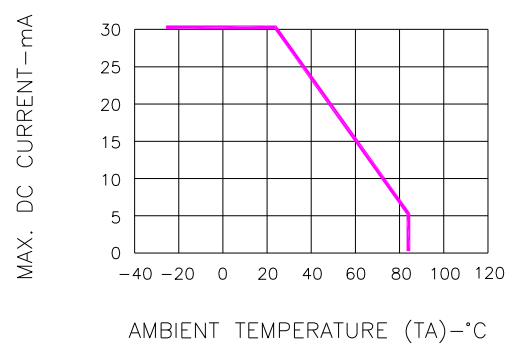


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



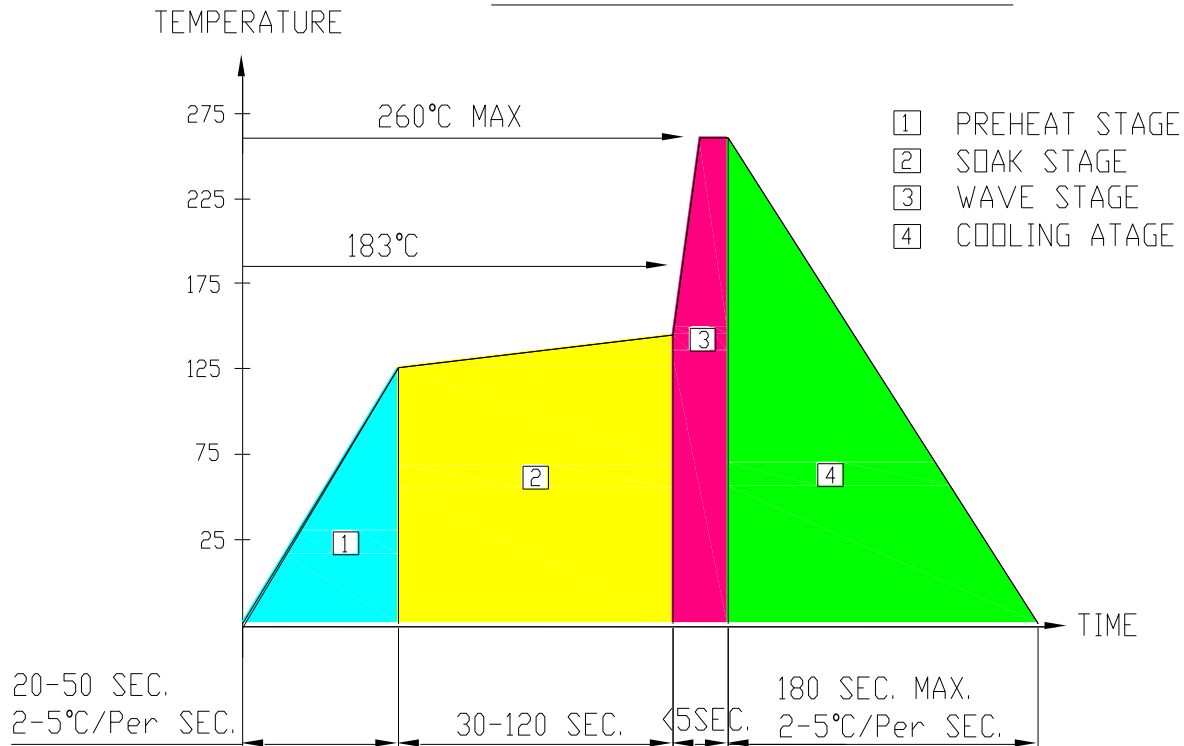
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● RECOMMEND SOLDERING PROFILE

WAVE SOLDER PROFILE



● SOLDERING IRON

Basic spec is ≤ 4 sec when 260°C. If temperature is higher, time should be shorter (+10°C → 1 sec). Power dissipation of Iron should be smaller than 15W, and temperature should be controllable. Surface temperature of the device should be under 230°C.

● REWORK

Customer must finish rework within ≤ 4 sec under 245°C.