



Opto Plus LED Corp.
0.50" Case Mold Type LED Display
OPD-AS5010LR-GW
OPD-AS5011LR-GW

● **EDIT HISTORY**

Version A : Mar. 20, 2015

Preliminary Spec.

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



Opto Plus LED Corp.
0.50" Case Mold Type LED Display
OPD-AS5010LR-GW
OPD-AS5011LR-GW

● **FEATURES**

- 0.50 inch (12.70 mm) Digit Height.
- Low current operation..
- Case mold type.
- Gray face, White segment.
- RoHS compliant, Pb Free.

● **DESCRIPTION**

The OPD-AS5010LR-GW & OPD-AS5011LR-GW is a 0.50 inch (12.70 mm) height alphanumeric display.

This device utilizes Super Red LED chip which are made AlGaInP on a transparent GaAs, substrate. The display has Gray face, White segment.

● **DEVICE**

| PART NO Super Red | DESCRIPTION |
|-----------------------------|--------------------|
| OPD-AS5010LR-GW | Common Anode |
| OPD-AS5011LR-GW | Common Cathode |

RoHS Compliance



Pb free.





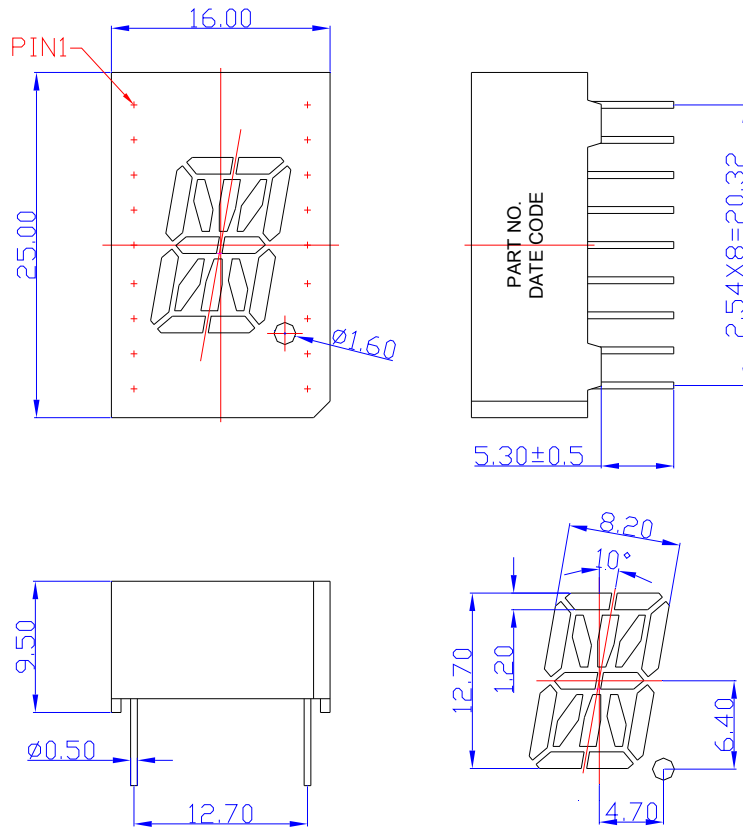
Opto Plus LED Corp.

0.50" Case Mold Type LED Display

OPD-AS5010LR-GW

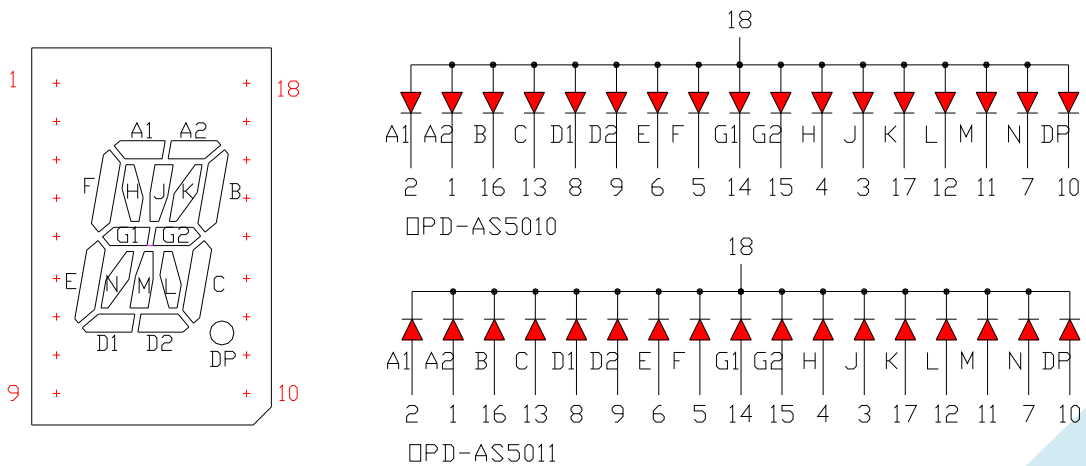
OPD-AS5011LR-GW

● MECHANICAL DIMENSIONS



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

● TYPICAL INTERNAL EQUIVALENT CIRCUIT





Opto Plus LED Corp.
0.50" Case Mold Type LED Display
OPD-AS5010LR-GW
OPD-AS5011LR-GW

● **LR: SUPER RED (AlGaInP/GaAs)**

ABSOLUTE MAXIMUM RATING AT Ta=25°C

| Parameter | Symbol | Super Red | Unit |
|---|------------------|------------|---------|
| Power dissipation per dice | P _{AD} | 70 | mW |
| Derating liner from 25°C per dice | - | 0.33 | mA / °C |
| Continuous forward current per dice | I _{AF} | 25 | mA |
| Peak current per dice (duty cycle 1/10, 1kHz) | I _{PF} | 90 | 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 Ta=25°C

| Characteristic | Symbol | Condition | Min. | Typ. | Max. | Unit |
|------------------------------|----------------|----------------------|------|------|------|------|
| Forward voltage | V _F | I _F =20mA | - | 2.0 | 2.6 | V |
| Reverse current | I _R | V _R =5V | - | - | 10 | μA |
| Peak wavelength | λ _P | I _F =20mA | - | 650 | - | nm |
| Dominant wavelength | λ _D | I _F =20mA | - | 639 | - | nm |
| Luminous intensity | I _v | I _F =20mA | - | 20 | - | mcd |
| Spectral radiation bandwidth | Δλ | I _F =20mA | - | 20 | - | nm |



Opto Plus LED Corp.

0.50" Case Mold Type LED Display

OPD-AS5010LR-GW

OPD-AS5011LR-GW

● LR: SUPER RED (AlGaInP/GaAs)

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

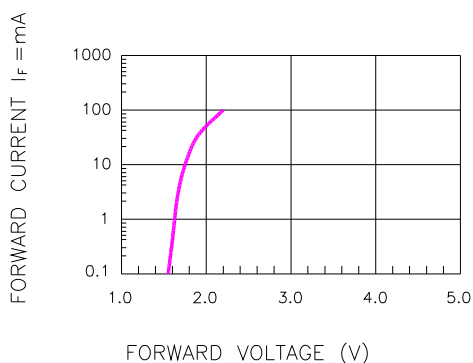


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

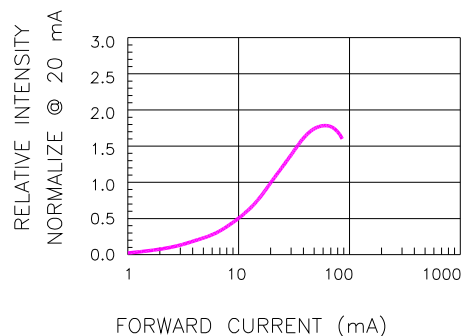


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

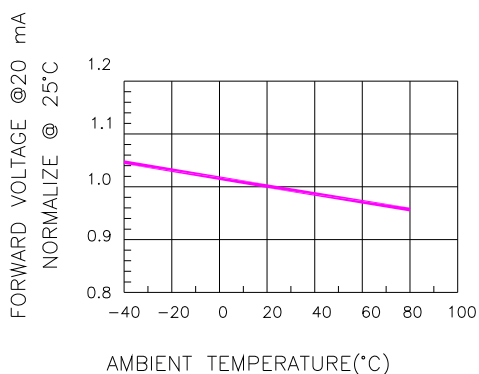


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

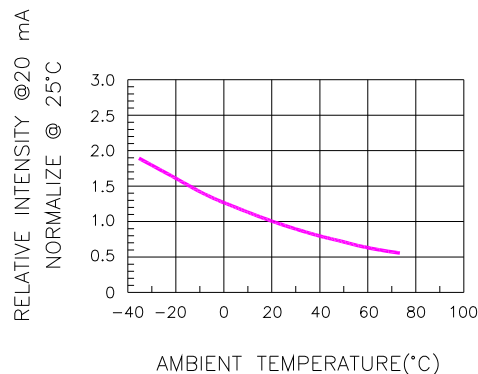


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

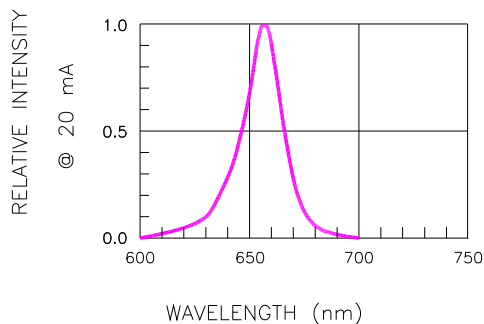


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

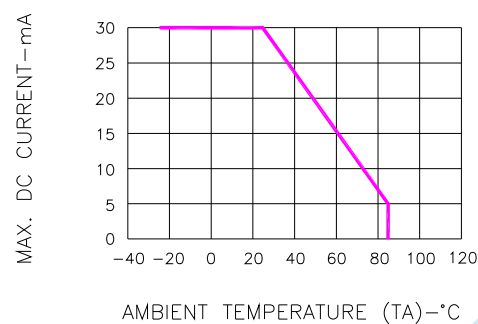
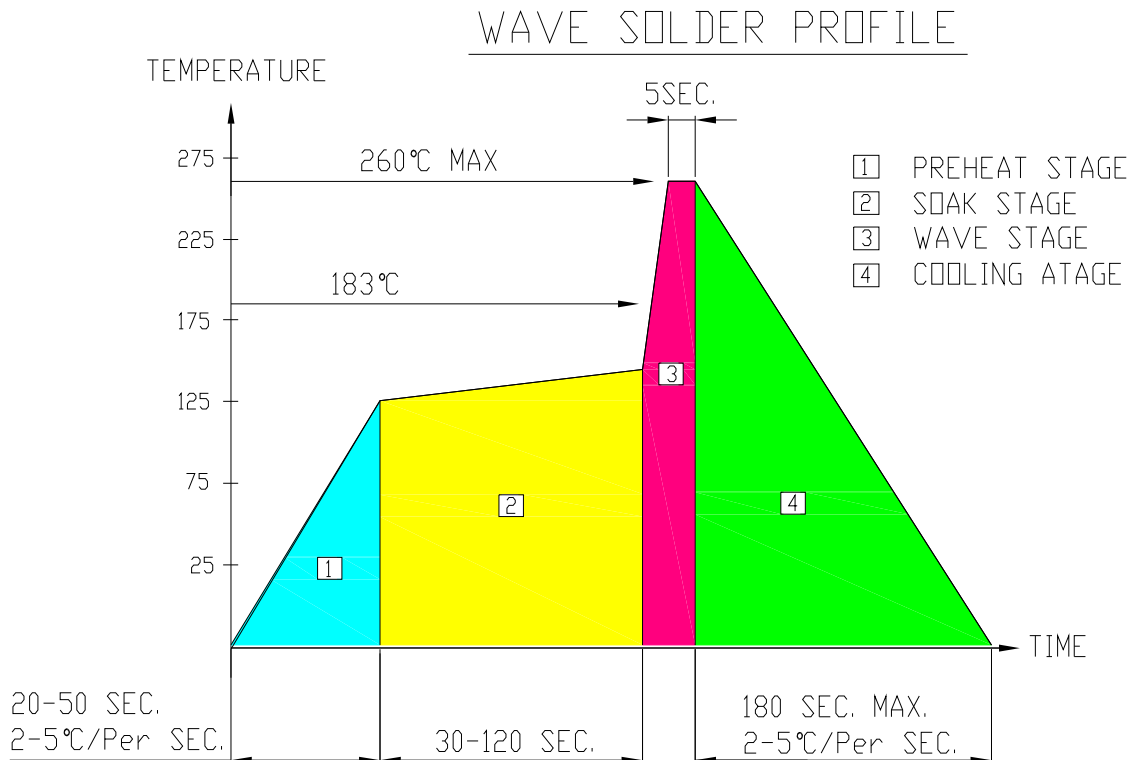


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



Opto Plus LED Corp.
0.50" Case Mold Type LED Display
OPD-AS5010LR-GW
OPD-AS5011LR-GW

● **RECOMMEND SOLDERING 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**

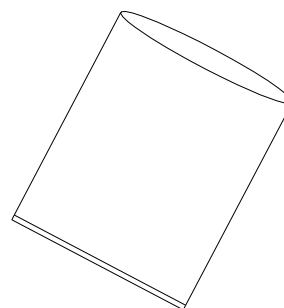
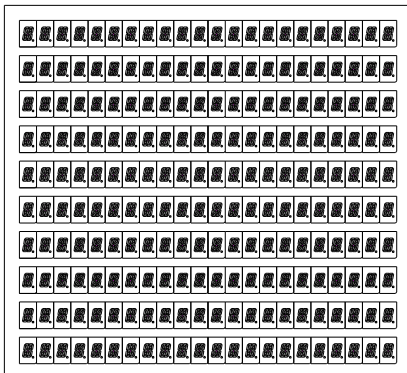
Customer must finish rework within ≤ 4 sec under 245°C.



Opto Plus LED Corp.
0.50'' Case Mold Type LED Display
OPD-AS5010LR-GW
OPD-AS5011LR-GW

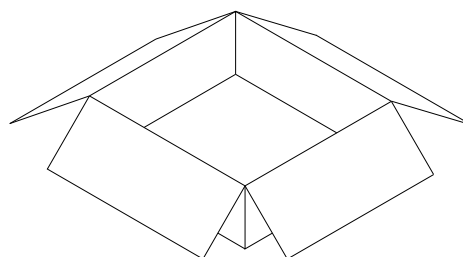
● **PACKAGE DIMENSIONS**

220 PCS (22 x 10 PCS) / 1 White Polyform



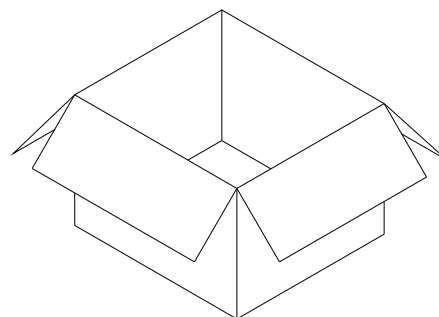
BAG SIZE :450X410X560

5 White Polyform / 1 BAG
1100 PCS /1Inner Carton



INNER BOX SIZE : 394 x 370 x 138 mm

2200 PCS / 2 Inner Carton / 1 Outer Carton



OUTER BOX SIZE : 430 x 390 x 300 mm