



# Opto Plus LED Corp.

## OPL-3014LAT-30

3 mm Dia LED Lamp

### ● EDIT HISTORY

Version A : Feb. 17, 2021

Preliminary Spec.



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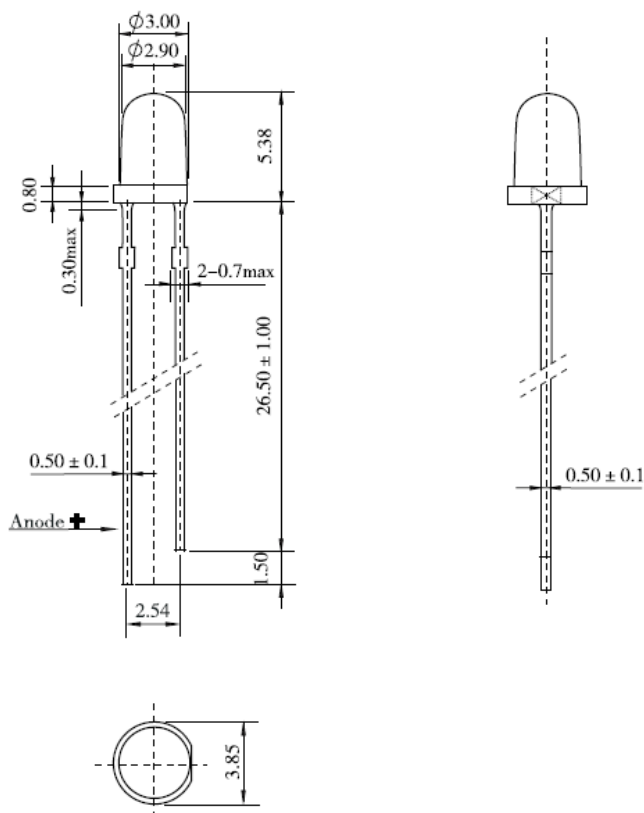
### ● FEATURES

- Low power consumption.
- High efficiency
- Round type
- With Flange
- Solder leads without stand-off
- Compliant with RoHs

### ● DESCRIPTION

- Chip Material : AlGaInP/GaAs
- Emitting Color : Ultra Amber
- Lens Color : Amber Transparent

### ● PACKAGE DIMENSIONS





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NOTES: All dimensions are in millimeters. Tolerances are  $\pm 0.25$  mm unless otherwise noted.

### ● LA: SUPER BRIGHT AMBER (AlGaInP/GaAs)

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

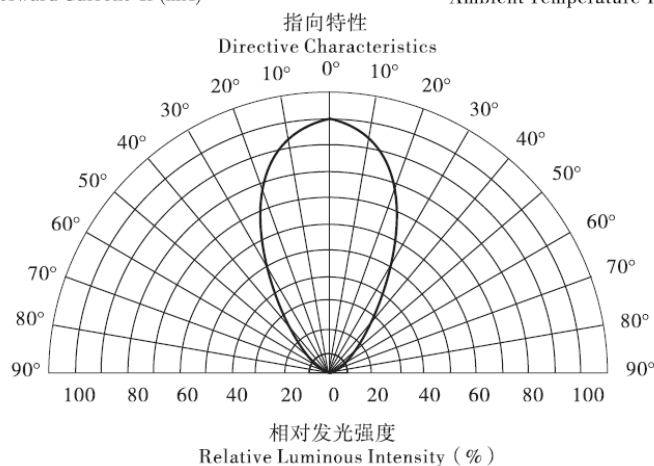
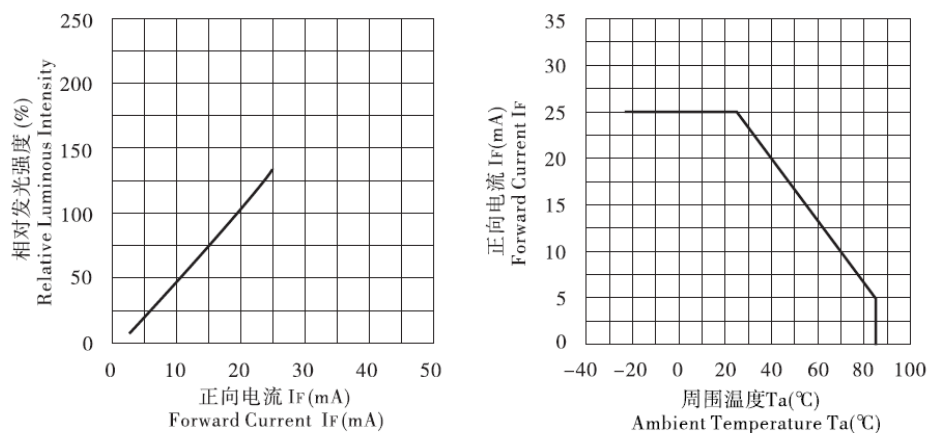
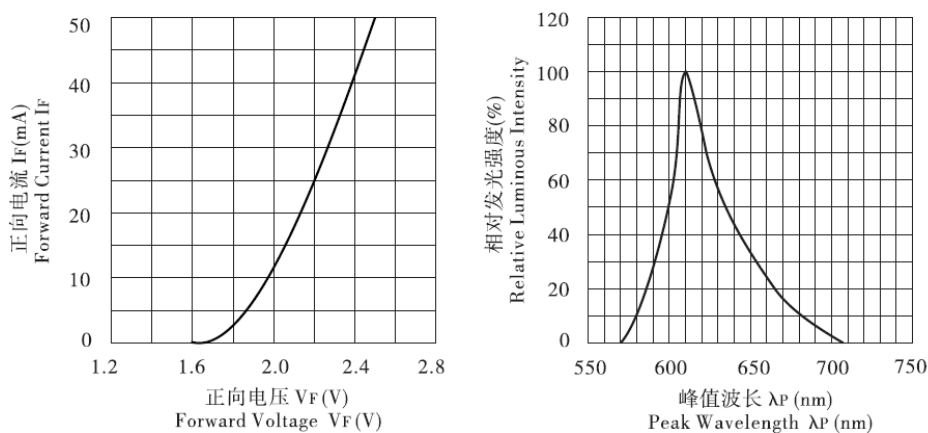
| Parameter                  | Symbol    | Maximum Rating             | Unit                 |
|----------------------------|-----------|----------------------------|----------------------|
| Power dissipation          | $P_{AD}$  | 80                         | mW                   |
| Reverse voltage            | $V_R$     | 5                          | V                    |
| Continuous forward current | $I_{AF}$  | 30                         | mA                   |
| Temperature coefficient    | $I/C$     | 0.4                        | mA/ $^\circ\text{C}$ |
| Pulse current              | $I_{PF}$  | 100                        | mA                   |
| Operating temperature      | $T_{OPR}$ | -25 to +85                 | $^\circ\text{C}$     |
| Storage temperature        | $T_{STG}$ | -40 to +100                | $^\circ\text{C}$     |
| Soldering Condition        | $T_{sd}$  | 260 $^\circ\text{C}$ /5set | $^\circ\text{C}$     |

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

| Characteristic               | Symbol          | Condition           | Min. | Typ. | Max. | Unit          |
|------------------------------|-----------------|---------------------|------|------|------|---------------|
| Forward voltage              | $V_F$           | $I_F = 20\text{mA}$ | -    | 2.0  | 2.4  | V             |
| Reverse current              | $I_R$           | $V_R = 5\text{V}$   | -    | -    | 50   | $\mu\text{A}$ |
| Peak wavelength              | $\lambda_P$     | $I_F = 20\text{mA}$ | -    | 610  | -    | nm            |
| Dominant wavelength          | $\lambda_D$     | $I_F = 20\text{mA}$ | -    | 608  | -    | nm            |
| Luminous intensity           | $I_V$           | $I_F = 20\text{mA}$ | -    | 1400 | -    | mcd           |
| Spectral radiation bandwidth | $\Delta\lambda$ | $I_F = 20\text{mA}$ | -    | 20   | -    | nm            |
| Viewing Angle                | $2\theta_{1/2}$ | $I_F = 20\text{mA}$ | -    | 30   | -    | deg           |

### ● LA: SUPER BRIGHT AMBER (AlGaInP/GaAs) CURVE

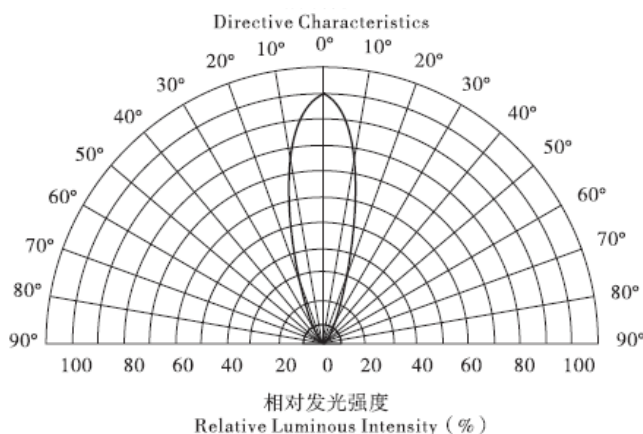
Typical Electro-optical Characteristic Curves  
(25 °C Free Air Temperature Unless Otherwise Specified)



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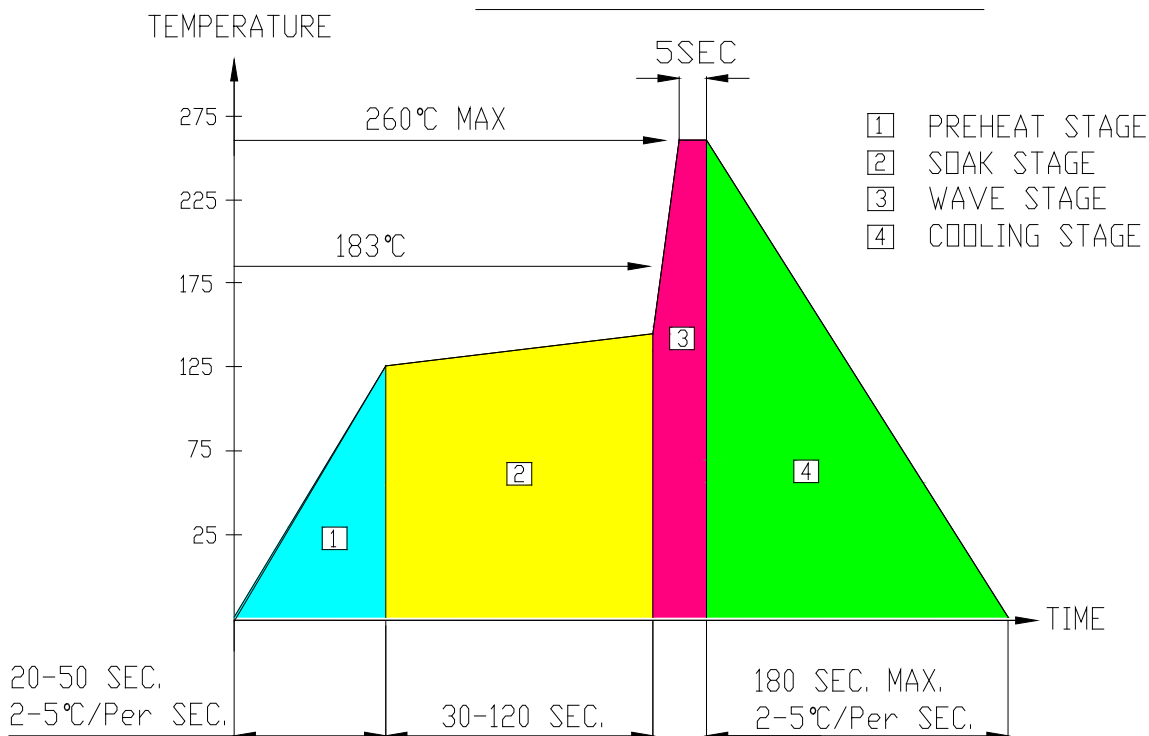
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## RECOMMEND SOLDERING PROFILE

### WAVE SOLDER PROFILE



## Note:

- Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
- Peak wave soldering temperature between 245°C ~ 225°C for 3 sec (5 sec max)
- No more than one wave soldering pass



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### ● SOLDERING IRON

Basic spec is  $\leq 4$  sec when  $260^{\circ}\text{C}$ . If temperature is higher, time should be shorter ( $+10^{\circ}\text{C} \rightarrow 1$  sec). Power dissipation of Iron should be smaller than 15W, and temperature should be controllable. Surface temperature of the device should be under  $230^{\circ}\text{C}$ .

### ● REWORK

Customer must finish rework within  $\leq 3$  sec under  $350^{\circ}\text{C}$ .  
The head of soldering iron cannot touch copper foil.