



# Opto Plus LED Corp.

## OPL-3014LYD-60

3 mm Dia LED Lamp

### ● EDIT HISTORY

Version A : Feb. 17, 2021

Preliminary Spec.



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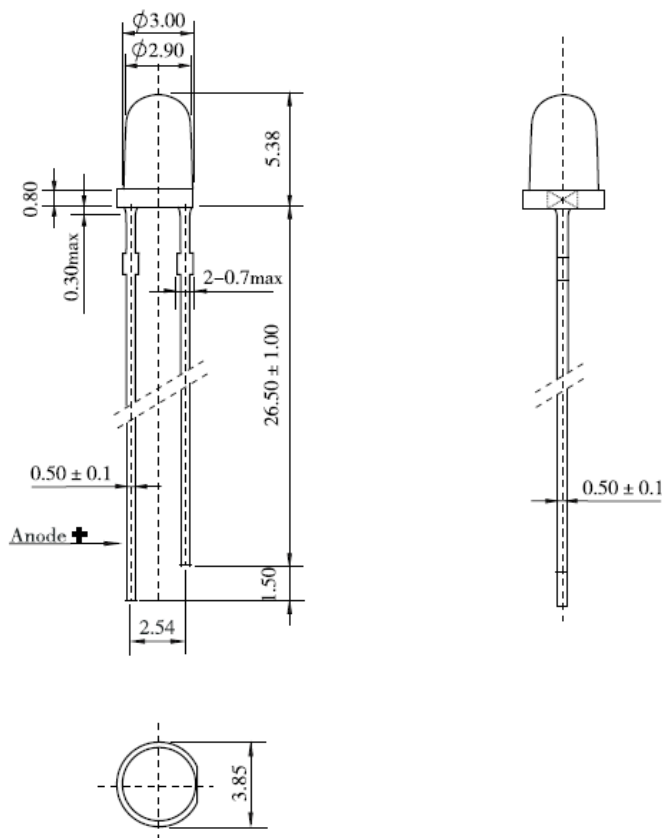
### ● FEATURES

- 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 Yellow
- Lens Color : Yellow Diffused

### ● PACKAGE DIMENSIONS





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

### ● LY: SUPER BRIGHT YELLOW (AlGaInP/GaAs)

ABSOLUTE MAXIMUM RATING AT Ta=25°C

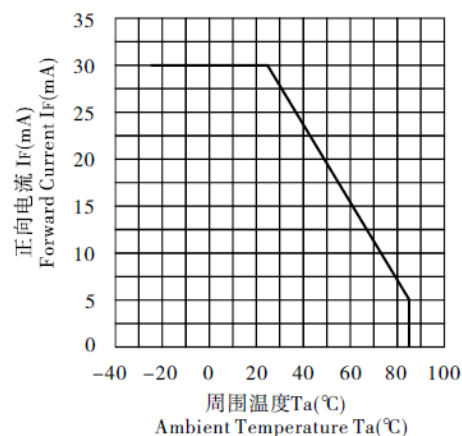
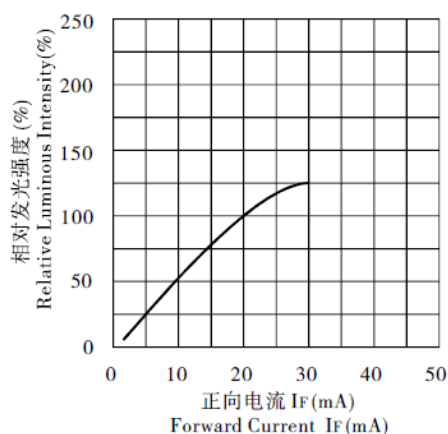
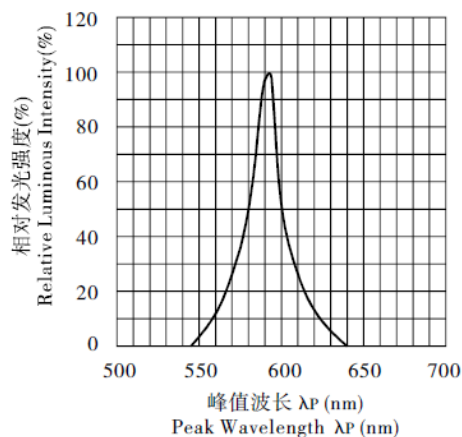
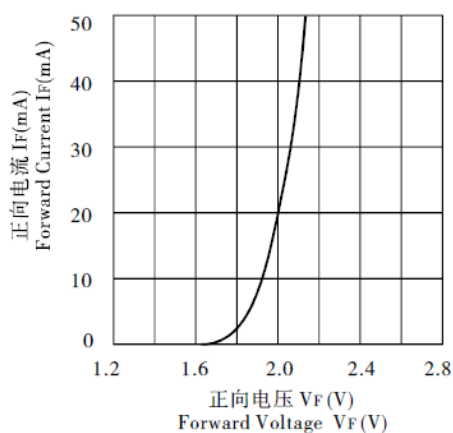
| Parameter                  | Symbol           | Maximum Rating | Unit  |
|----------------------------|------------------|----------------|-------|
| Power dissipation          | P <sub>AD</sub>  | 80             | mW    |
| Reverse voltage            | V <sub>R</sub>   | 5              | V     |
| Continuous forward current | I <sub>AF</sub>  | 30             | mA    |
| Temperature coefficient    | I/C              | 0.33           | mA/°C |
| Pulse current              | I <sub>PF</sub>  | 100            | mA    |
| Operating temperature      | T <sub>OPR</sub> | -25 to +85     | °C    |
| Storage temperature        | T <sub>STG</sub> | -40 to +100    | °C    |
| Soldering Condition        | T <sub>sd</sub>  | 260°C/5set     | °C    |

ELECTRICAL - OPTICAL CHARACTERISTICS AT Ta=25°C

| Characteristic               | Symbol            | Condition             | Min. | Typ. | Max. | Unit |
|------------------------------|-------------------|-----------------------|------|------|------|------|
| Forward voltage              | V <sub>F</sub>    | I <sub>F</sub> = 20mA | -    | 2.0  | 2.4  | V    |
| Reverse current              | I <sub>R</sub>    | V <sub>R</sub> = 5V   | -    | -    | 50   | μA   |
| Peak wavelength              | λ <sub>P</sub>    | I <sub>F</sub> = 20mA | -    | 593  | -    | nm   |
| Dominant wavelength          | λ <sub>D</sub>    | I <sub>F</sub> = 20mA | -    | 590  | -    | nm   |
| Luminous intensity           | I <sub>v</sub>    | I <sub>F</sub> = 20mA | -    | 1000 | -    | mcd  |
| Spectral radiation bandwidth | Δλ                | I <sub>F</sub> = 20mA | -    | 20   | -    | nm   |
| Viewing Angle                | 2θ <sub>1/2</sub> | I <sub>F</sub> = 20mA | -    | 60   | -    | deg  |

### ● LY: SUPER BRIGHT YELLOW (AlGaInP/GaAs) CURVE

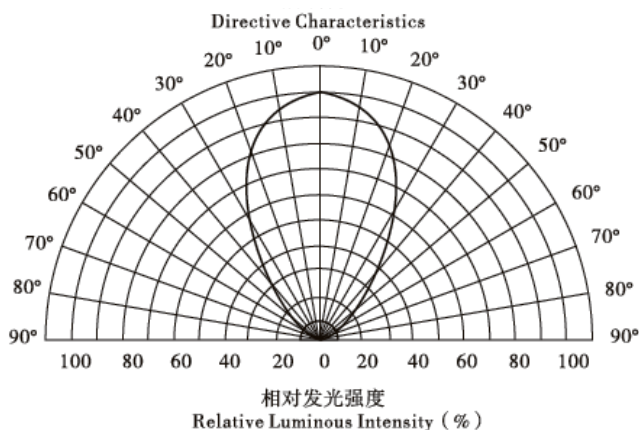
Typical Electro-optical Characteristic Curves  
(25 °C Free Air Temperature Unless Otherwise Specified)



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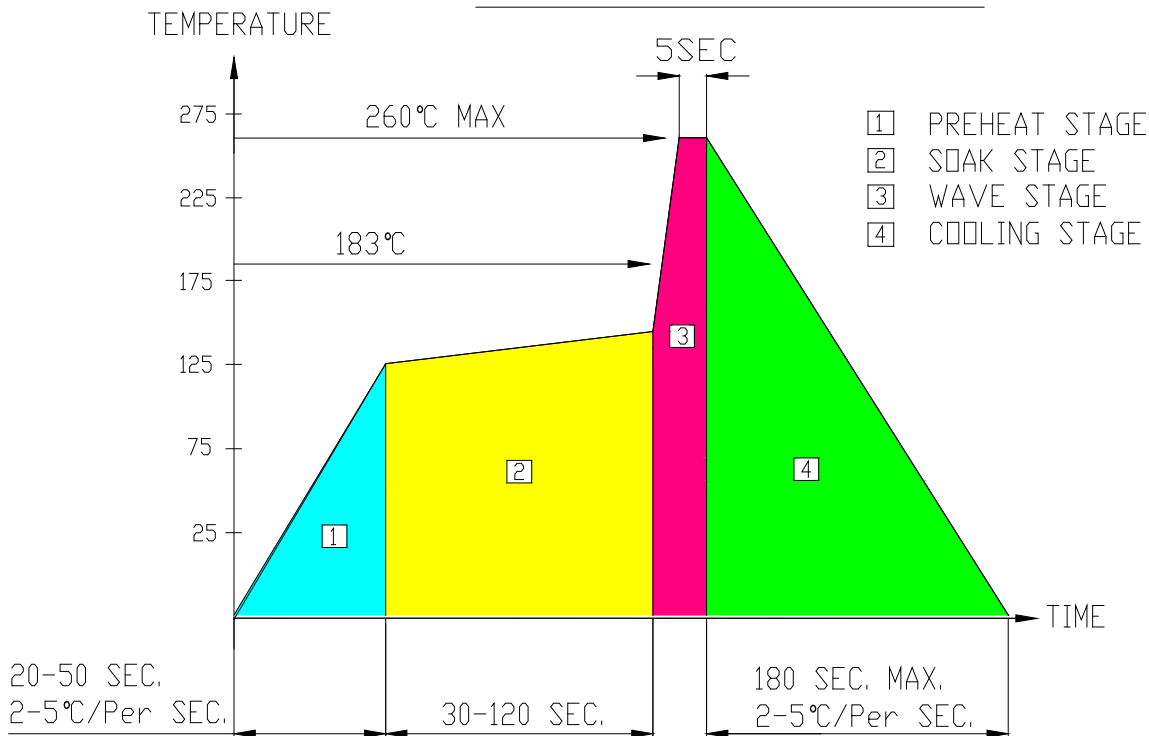
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### ● RECOMMEND SOLDERING PROFILE

#### 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.