



CHINA INTERNATIONAL CO.
SHENZHEN FURUIER PHOTOELECTRIC CO., LTD.

SPECIFICATION FOR APPROVAL

CUSTOMER :

ARTICLE : 10mm Round white diffused Amber LED

PART NO : FLR-100W03-SA7

DATE : 2013-03-21

CUSTOMER MODEL:

RoHS PRODUCT

Authorized Signature



ATTENTION
OBSERVE PRECAUTIONS
ELECTROSTATIC
SENSITIVE DEVICES

**ØAbsolute Maximum Rating**

| Item | Symbol | Absolute Maximum Rating | Unit |
|----------------------------|--------|-------------------------|------|
| Forward Current | IF | 20 | mA |
| Peak Forward Current | IFP | 80 | mA |
| Reverse Voltage | VR | 5 | V |
| Power Dissipation | PD | 60 | mW |
| Operation Temperature | Topr | -35~+80 | ℃ |
| Storage Temperature | Tstg | -40~+80 | ℃ |
| Lead Soldering Temperature | Tsol | Max. 260° for 3sec Max. | |

*IFP Conditions:Pulse Width≤10msec duty≤1/10

*Tsol Conditions:4mm from the base of the epoxy bulb

ØTypicalOptical/ElectricalCharacteristics

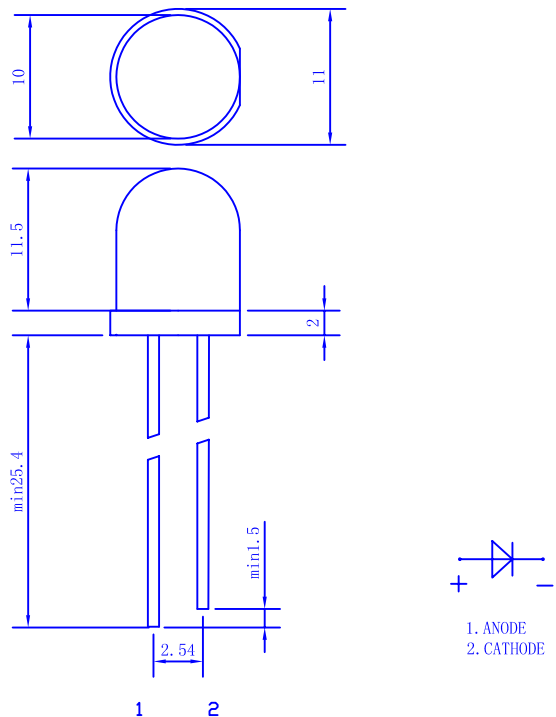
| Item | Symbol | Condition | Min. | Typ. | Max. | Unit |
|---------------------------|---------|-----------|------|-------|------|------|
| Forward Voltage | VF | IF=20mA | -- | 2.0 | 2.4 | V |
| Reverse Current | IF | VR=5V | -- | -- | 10 | uA |
| 50% Power Angle | 2 θ 1/2 | IF=20mA | -- | 50 | -- | deg |
| Luminous Intensity | IV | IF=20mA | 800 | 1000 | -- | mcd |
| Peak Wavelength | λ p | IF=20mA | 602 | 604 | 606 | nm |
| Recommend Forward Current | IF(rec) | -- | -- | 10~20 | -- | mA |

Notes:

- 1.Absolute maximum ratings Ta=25° C .
- 2.Tolerance of measurement of forward voltage±0.1V.
- 3.Tolerance of measurement of peak Wavelength±2.0nm.
- 4.Tolerance of measurement of luminous intensity±15%.



ØPackage Dimensions And Materials



□ 0.5 SQUARE*2

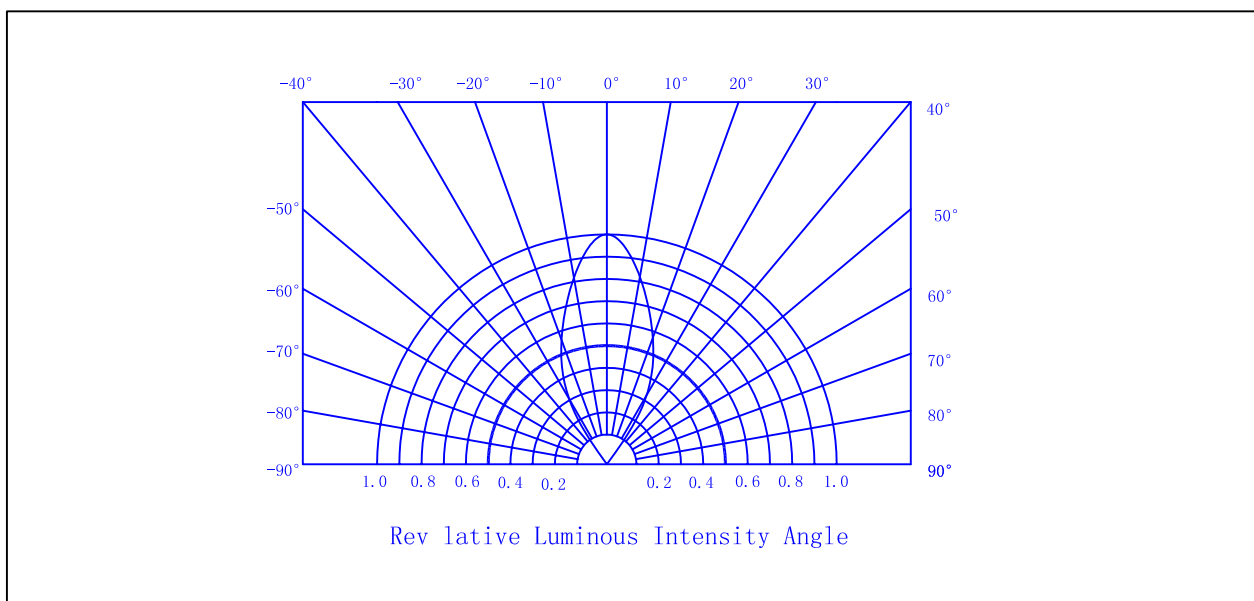
| Chip | | Lens Color |
|---------------|----------------|----------------|
| Dice Material | Emitting Color | |
| AlGaInP | Amber | white diffused |
| | | |

Notes:

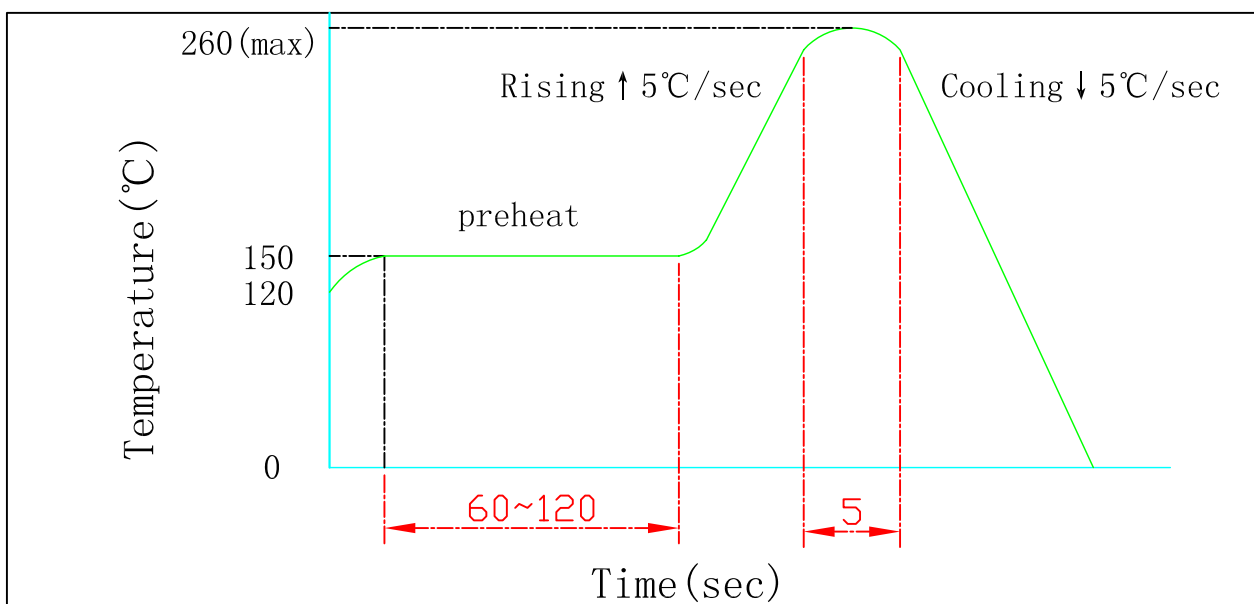
- 1.All dimension units are millimeters
- 2.All dimension tolerance is $\pm 0.2\text{mm}$ unless otherwise noted
- 3.An epoxy meniscus may extend about 1.5mm down the leads
- 4.Burr around bottom of epoxy may be 0.5mm max



Ø Spatial Distribution



Ø Reflow Temp/Time



Ø Soldering iron

Basic spec is ≤ 5 sec when 260°C. If temperature is higher, time should be shorter (+10°C-1sec) Power dissipation of iron should be smaller than 15W, and temperatures should be controllable. surface temperature of the device should be under 230°C

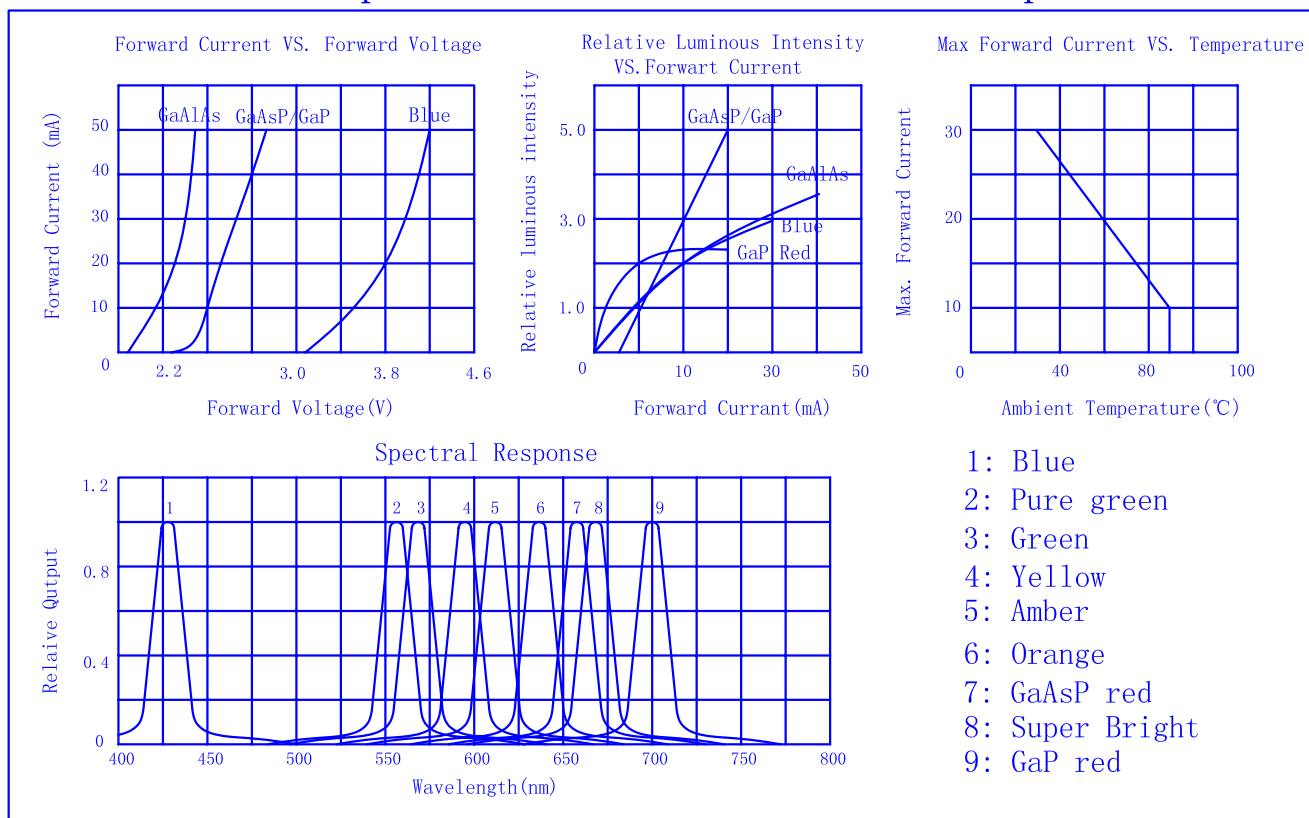


Electro-Optical Characteristic(Ta=25°C)

| PARAMETER | SYMBOL | TEST CONDITIONS | Green | | Orange | | GaP Red | | HI-EFF | | Yellow | | GaAlAs | | Blue | | UNIT |
|-------------------------|------------------|-----------------|-------|------|--------|------|---------|------|--------|------|--------|------|--------|------|------|------|------|
| | | | TYP. | MAX. | TYP. | MAX. | TYP. | MAX. | TYP. | MAX. | TYP. | MAX. | TYP. | MAX. | TYP. | MAX. | |
| Forward Voltage | VF | IF=20mA | 2.3 | 2.8 | 2.2 | 2.8 | 2.3 | 2.8 | 2.2 | 2.8 | 2.2 | 2.8 | 1.8 | 2.5 | 3.5 | 4.5 | V |
| Reverse Current | IR | VR=5V | | 100 | | 100 | | 100 | | 100 | | 100 | | 100 | | 100 | uA |
| Wavelength | λ P | IF=20mA | 570 | | 635 | | 700 | | 625 | | 590 | | 660 | | 430 | | nm |
| Spectral Line Halfwidth | $\Delta \lambda$ | IF=20mA | 30 | | 35 | | 100 | | 35 | | 35 | | 20 | | 30 | | nm |

Absolute Maximum Ratings(Ta=±25°C)

| PARAMETER | Green | Orange | Gap Red | HI-EFF | Yellow | GaAlAs | Blue | UNIT |
|--|-----------|--------|---------|--------|--------|--------|------|------|
| Reverse Voltage Per Segment or D.P. | 5 | 5 | 5 | 5 | 5 | 5 | 5 | V |
| Average Forward Current (IF) | 25 | 25 | 25 | 25 | 25 | 30 | 50 | mA |
| Peak Forward Current Per Segment Or Dp | 200 | 200 | 200 | 200 | 200 | 200 | 200 | mA |
| Power Dissipation | 85 | 85 | 85 | 85 | 85 | 100 | 120 | mW |
| Operating Temperature Range | -35℃～+80℃ | | | | | | | |
| Recommend Storage Temperature Range | -35℃～+80℃ | | | | | | | |
| Lead Solder Temperature(4mm From Body) 260℃for3sec | | | | | | | | |
| Life:100000H | | | | | | | | |

Typical Electron-Optical Characteristic Curves25°C
Free Air Temperature Unless Otherwise Specified

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