

PRELIMINARY SPEC

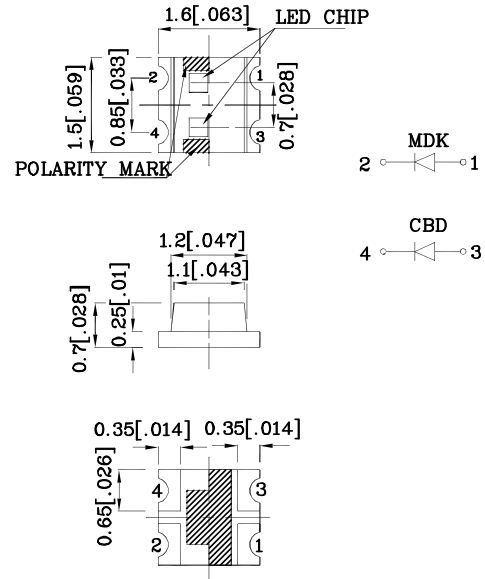
Features

- 1.6mmx1.5mm SMT LED, 0.7mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Various colors and lens types available.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.2(0.008)$ " unless otherwise noted.
3. Specifications are subject to change without notice.

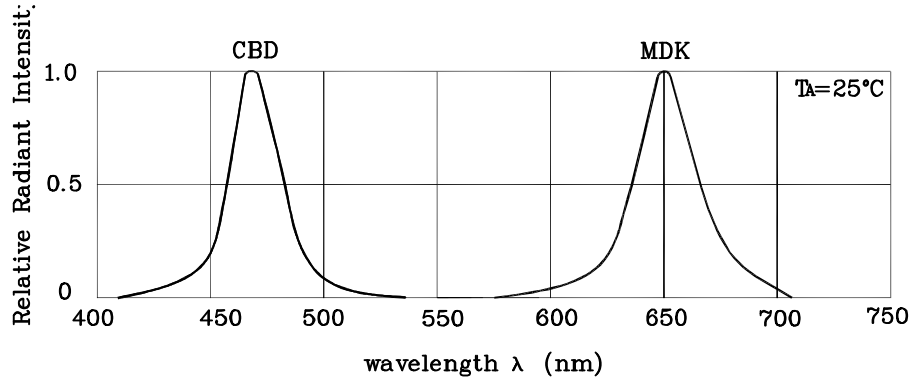


ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

| Absolute maximum ratings (TA=25°C) | | MDK (AlGaInP) | CBD (InGaN) | Unit |
|--|------------------|------------------|----------------|------|
| Reverse Voltage | V _R | 5 | 5 | V |
| Forward Current | I _F | 30 | 30 | mA |
| Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width | i _{FS} | 185 | 150 | mA |
| Power Dissipation | P _D | 75 | 120 | mW |
| Operating Temperature | T _A | -40 ~ +85 | | °C |
| Storage Temperature | T _{stg} | -40 ~ +85 | | |

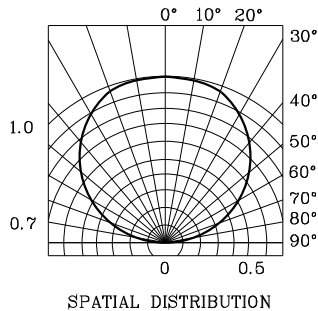
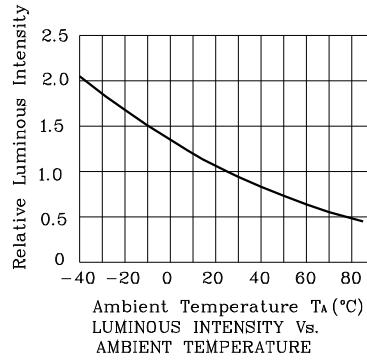
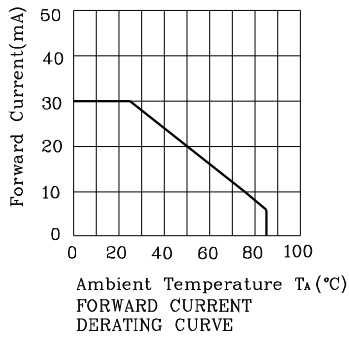
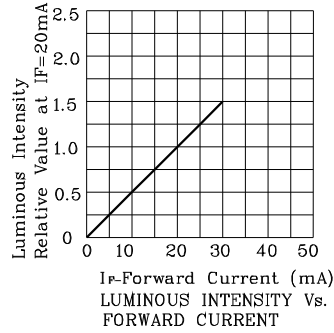
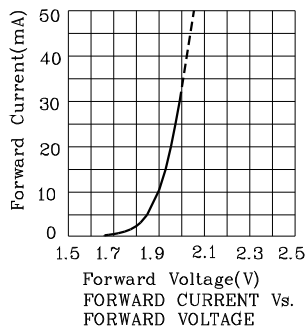
| Operating Characteristics (TA=25°C) | | MDK (AlGaInP) | CBD (InGaN) | Unit |
|--|----------------|------------------|----------------|------|
| Forward Voltage (Typ.) (I _F =20mA) | V _F | 1.95 | 3.3 | V |
| Forward Voltage (Max.) (I _F =20mA) | V _F | 2.5 | 4.0 | V |
| Reverse Current (Max.) (V _R =5V) | I _R | 10 | 10 | uA |
| Wavelength of Peak Emission (Typ.) (I _F =20mA) | λ _P | 650 | 468 | nm |
| Wavelength of Dominant Emission (Typ.) (I _F =20mA) | λ _D | 630 | 470 | nm |
| Spectral Line Full Width At Half-Maximum (Typ.) (I _F =20mA) | Δλ | 28 | 25 | nm |
| Capacitance (Typ.) (V _F =0V, f=1MHz) | C | 35 | 100 | pF |

| Part Number | Emitting Color | Emitting Material | Lens-color | Luminous Intensity (I _F =20mA) mcd | | Wavelength nm λ _P | Viewing Angle 2 θ 1/2 |
|--------------|----------------|-------------------|-------------|---|------|------------------------------------|--------------------------|
| | | | | min. | typ. | | |
| XZMDKCB59W-1 | Red | AlGaInP | Water Clear | 70 | 218 | 650 | 120° |
| | Blue | InGaN | | 50 | 89 | 468 | |

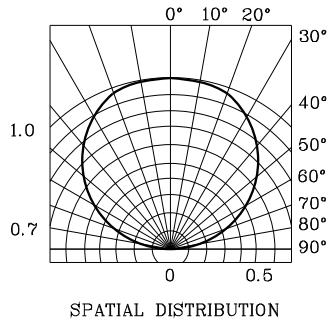
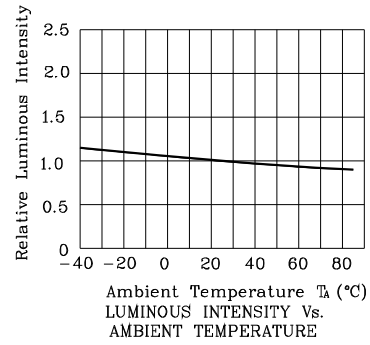
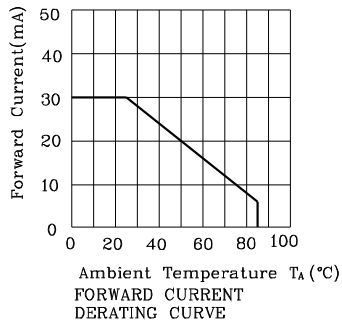
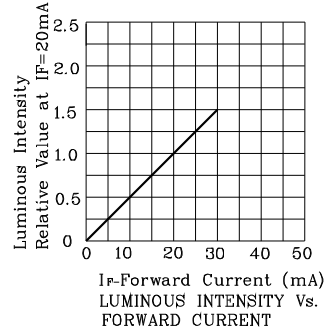
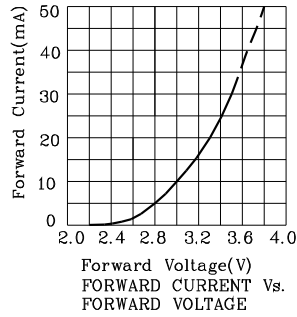


RELATIVE INTENSITY Vs. WAVELENGTH

❖ MDK



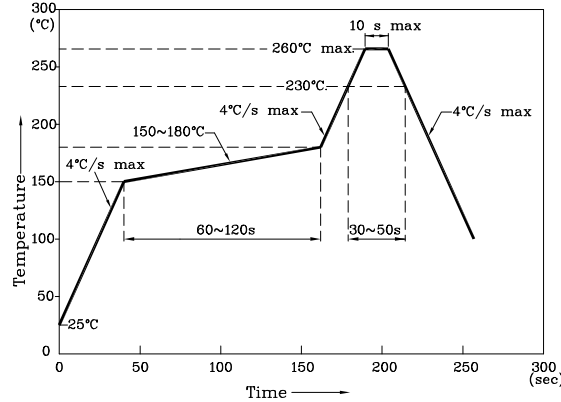
❖ CBD





Reflow soldering is recommended and the soldering profile is shown below.
Other soldering methods are not recommended as they might cause damage to the product.

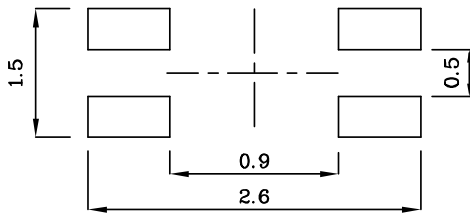
Reflow Soldering Profile For Lead-free SMT Process.



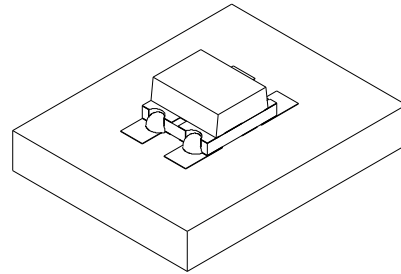
NOTES:

1. Maximum soldering temperature should not exceed 260°C.
2. Recommended reflow temperature: 145°C–260°C.
3. Do not put stress to the epoxy resin during high temperatures conditions.

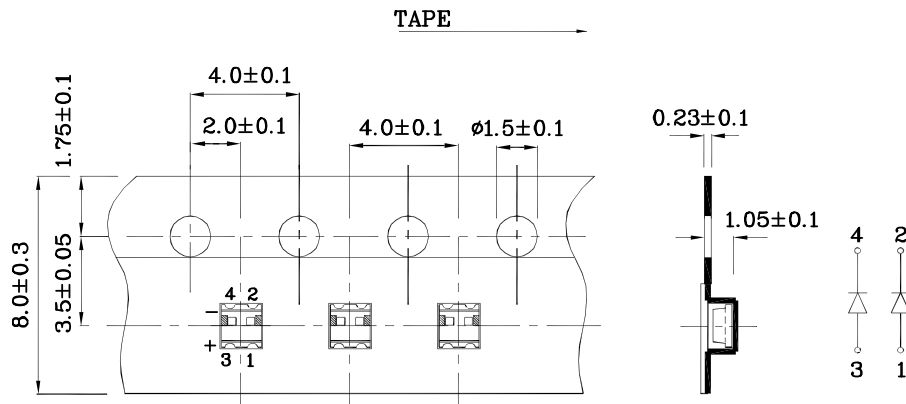
❖ **Recommended Soldering Pattern**
(Units : mm; Tolerance: ±0.1)



❖ **The device has a single mounting surface. The device must be mounted according to the specifications.**



❖ **Tape Specification (Units : mm)**



Remarks:

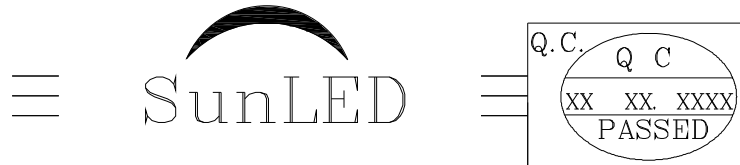
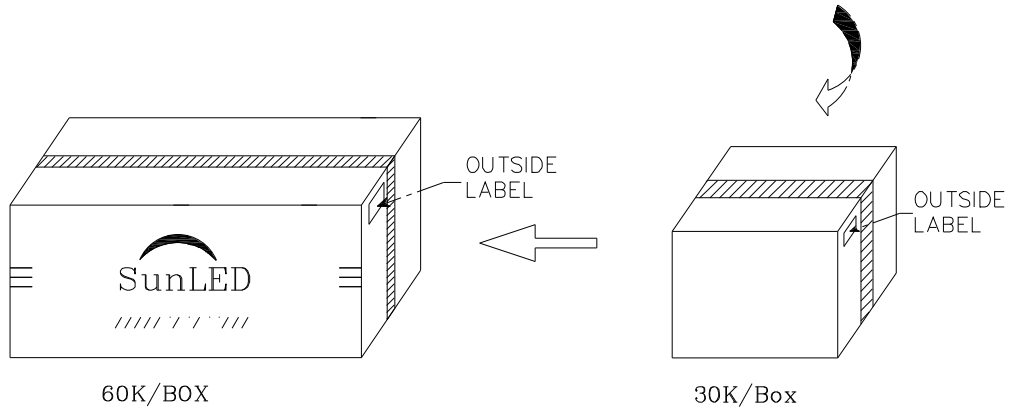
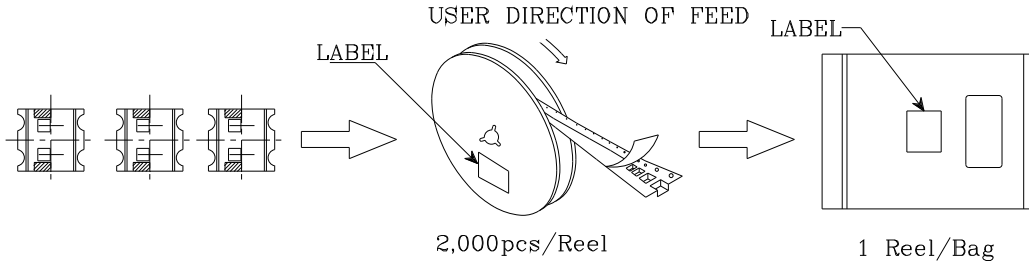
If special sorting is required (e.g. binning based on forward voltage, Luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:


1. Wavelength: +/-1nm
2. Luminous Intensity / Luminous Flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.

PACKING & LABEL SPECIFICATIONS

XZMDKCB59W-1



| | |
|--|-----------|
| P/NO : XZxxx59x-1 | |
| QTY : 2,000 pcs | CODE: XXX |
| S/N : XX | |
| LOT NO : | |
|  XXXXXXXXXXXXXXXXXXXXXXXXXXXX | |
| RoHS Compliant | |