

Features

- 3.0mmx2.5mm SMT LED, 1.1mm thickness.
- Bi-color, Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

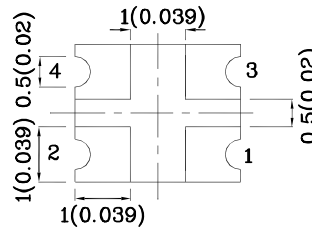
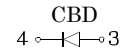
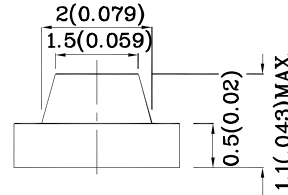
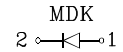
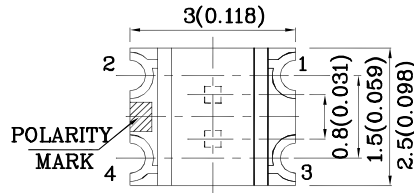


ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Notes:

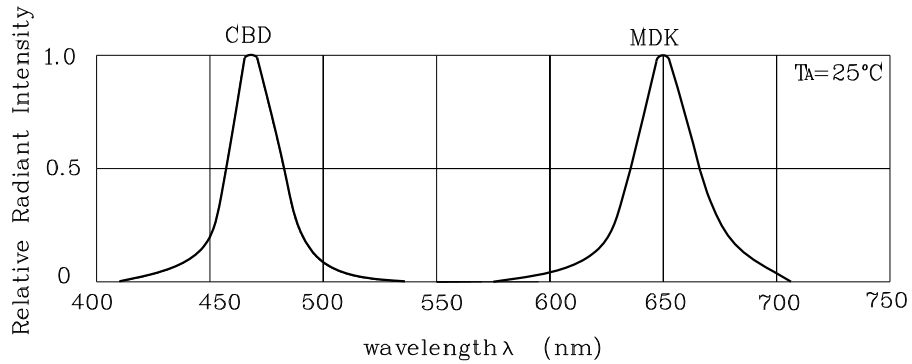
1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.2(0.008)$ " unless otherwise noted.
3. Specifications are subject to change without notice.

| Absolute Maximum Ratings (TA=25°C) | | MDK (AlGaInP) | CBD (InGaN) | Unit |
|---|------|------------------|----------------|------|
| Reverse Voltage | VR | 5 | 5 | V |
| Forward Current | IF | 30 | 30 | mA |
| Forward Current (Peak) 1/10Duty Cycle 0.1ms Pulse Width | iFS | 185 | 150 | mA |
| Power Dissipation | PD | 75 | 120 | mW |
| Operating Temperature | TA | -40 ~ +85 | | °C |
| Storage Temperature | Tstg | -40 ~ +85 | | |



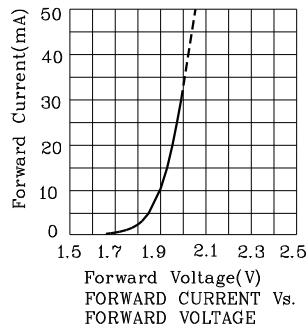
| Operating Characteristics (TA=25°C) | | MDK (AlGaInP) | CBD (InGaN) | Unit |
|---|-----------------|------------------|----------------|------|
| Forward Voltage (Typ.) (IF=20mA) | VF | 1.95 | 3.3 | V |
| Forward Voltage (Max.) (IF=20mA) | VF | 2.5 | 4.0 | V |
| Reverse Current (Max.) (VR=5V) | IR | 10 | 50 | uA |
| Wavelength of Peak Emission (Typ.) (IF=20mA) | λP | 650 | 468 | nm |
| Wavelength of Dominant Emission (Typ.) (IF=20mA) | λD | 630 | 470 | nm |
| Spectral Line Full Width At Half-Maximum (Typ.) (IF=20mA) | $\Delta\lambda$ | 28 | 25 | nm |
| Capacitance (Typ.) (VF=0V, f=1MHz) | C | 35 | 100 | pF |

| Part Number | Emitting Color | Emitting Material | Lens-color | Luminous Intensity (IF=20mA) mcd | | Wavelength nm λP | Viewing Angle 2 θ 1/2 |
|--------------|----------------|-------------------|-------------|--|------|---------------------------------|---------------------------------|
| | | | | min. | typ. | | |
| XZMDK CBD57W | Red | AlGaInP | Water Clear | 100 | 198 | 650 | 120° |
| | Blue | InGaN | | 40 | 79 | 468 | |

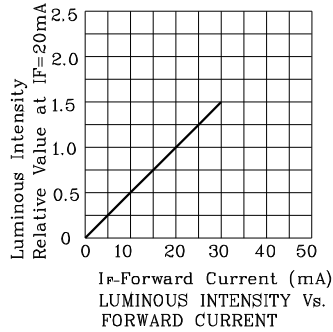


RELATIVE INTENSITY Vs. WAVELENGTH

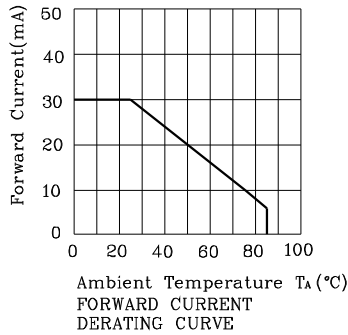
❖ MDK



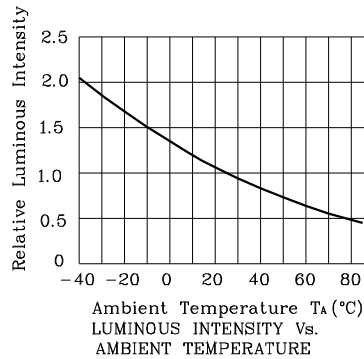
FORWARD CURRENT Vs. FORWARD VOLTAGE



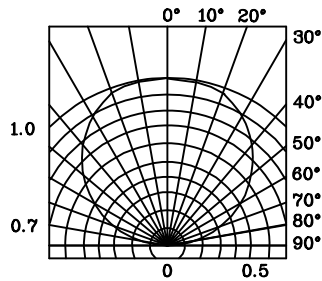
LUMINOUS INTENSITY Vs. FORWARD CURRENT



FORWARD CURRENT DERATING CURVE

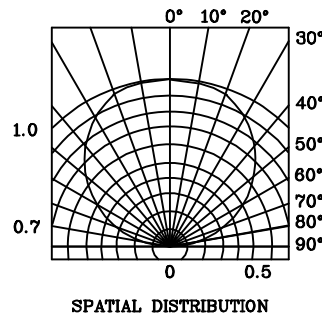
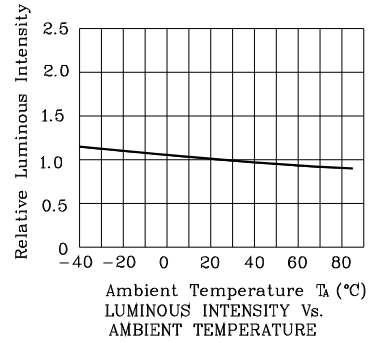
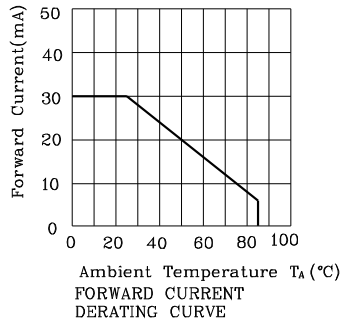
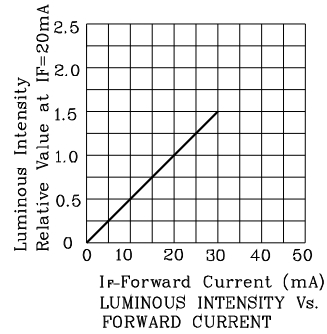
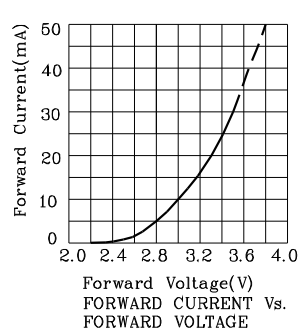


LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

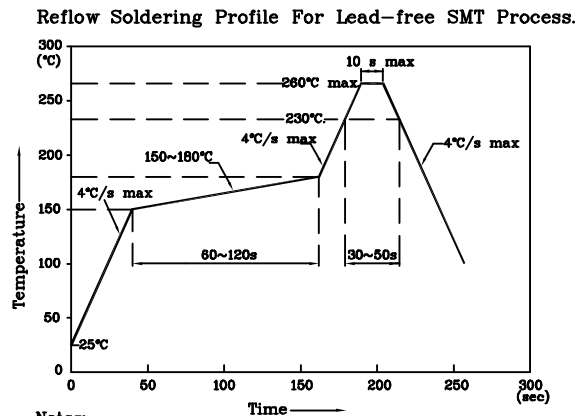


SPATIAL DISTRIBUTION

❖ CBD



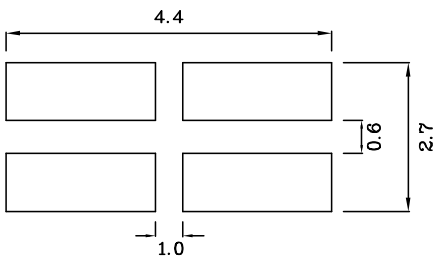
Reflow soldering is recommended and the soldering profile is shown below.
Other soldering methods are not recommended as they might cause damage to the product.



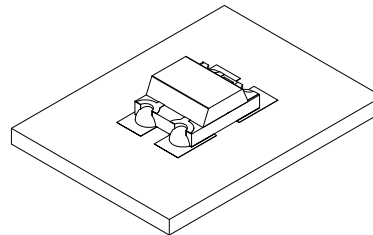
Notes:

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

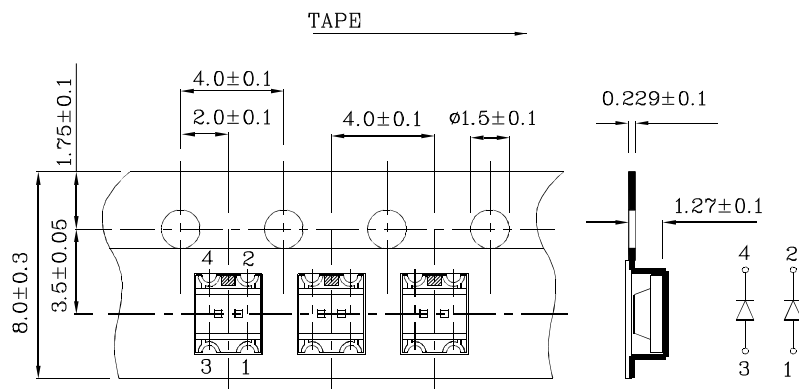
❖ Recommended Soldering Pattern
(Units : mm; Tolerance: ± 0.1)



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



❖ Tape Specification (Units : mm)



Remarks:

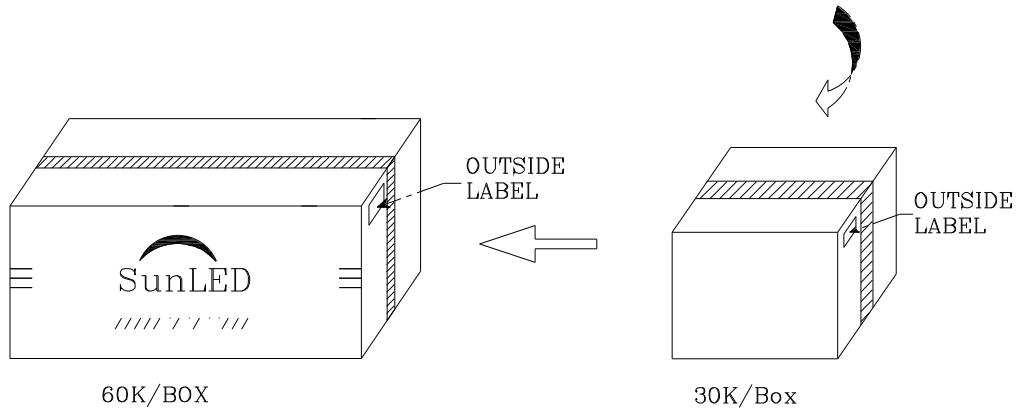
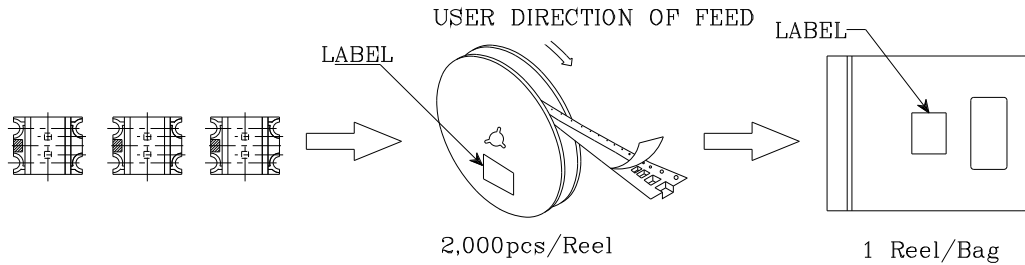
If special sorting is required (e.g. binning based on forward voltage, Luminous intensity/ luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:


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

XZMDKCBD57W





Q.C.
 Q C
 XX XX XXXX
 PASSED

| | |
|--|-----------|
| P/NO : XZxxx57x | |
| QTY : 2,000 pcs | CODE: XXX |
| S/N : XX | |
| LOT NO : | |
|  XXXXXXXXXXXXXXXXXXXXXXXX | |
| RoHS Compliant | |