

## PRELIMINARY SPEC

## Features

- 2.0mmx1.25mm SMT LED,0.75mm 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.

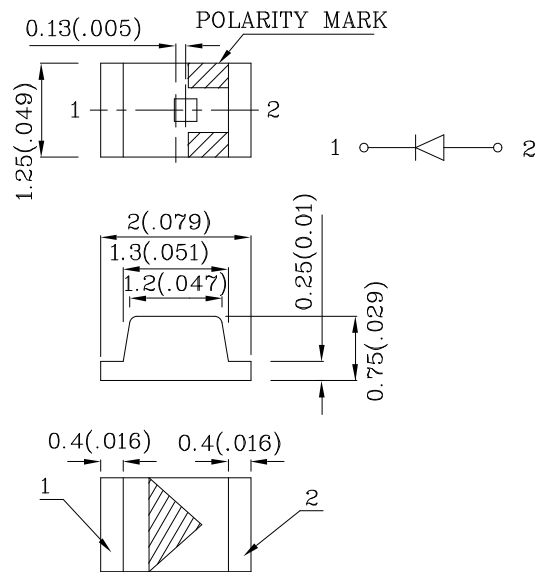


**ATTENTION**  
**OBSERVE PRECAUTIONS**  
**FOR HANDLING**  
**ELECTROSTATIC**  
**DISCHARGE**  
**SENSITIVE**  
**DEVICES**

Notes:

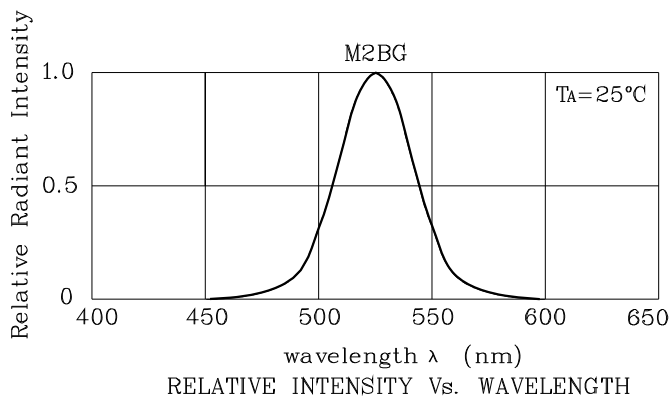
1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.1(0.004")$  unless otherwise noted.
3. Specifications are subject to change without notice.

| Absolute Maximum Ratings<br>(TA=25°C)                          |      | M2BG<br>(InGaN) | Unit |
|----------------------------------------------------------------|------|-----------------|------|
| Reverse Voltage                                                | VR   | 5               | V    |
| Forward Current                                                | IF   | 30              | mA   |
| Forward Current (peak)<br>1/10 Duty Cycle<br>0.1ms Pulse Width | iFS  | 100             | mA   |
| Power Dissipation                                              | PT   | 111             | mW   |
| Operating Temperature                                          | TA   | -40 ~ +85       | °C   |
| Storage Temperature                                            | Tstg | -40 ~ +85       |      |
| Electrostatic Discharge Threshold<br>(HBM)                     |      | 1000            | V    |

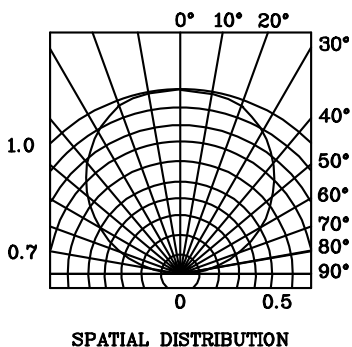
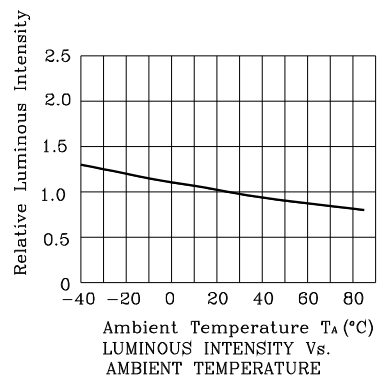
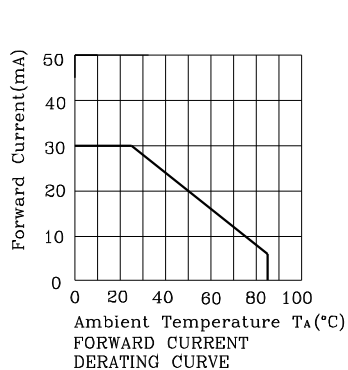
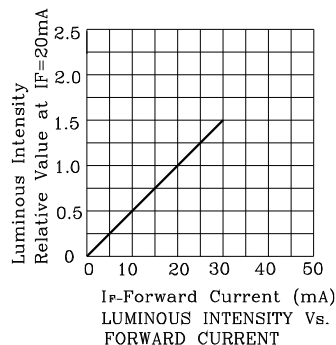
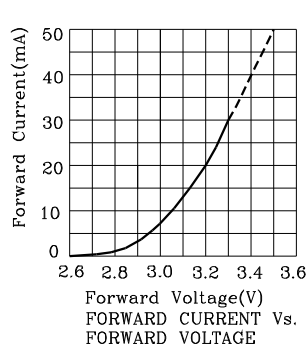


| Operating Characteristics<br>(TA=25°C)                          |                 | M2BG<br>(InGaN) | Unit |
|-----------------------------------------------------------------|-----------------|-----------------|------|
| Forward Voltage (Typ.)<br>(IF=20mA)                             | VF              | 3.2             | V    |
| Forward Voltage (Max.)<br>(IF=20mA)                             | VF              | 3.7             | V    |
| Reverse Current (Max.)<br>(VR=5V)                               | IR              | 10              | uA   |
| Wavelength Of Peak<br>Emission (Typ.)<br>(IF=20mA)              | $\lambda$ P     | 525             | nm   |
| Wavelength Of Dominant<br>Emission (Typ.)<br>(IF=20mA)          | $\lambda$ D     | 535             | nm   |
| Spectral Line Full Width<br>At Half-Maximum (Typ.)<br>(IF=20mA) | $\Delta\lambda$ | 39              | nm   |
| Capacitance (Typ.)<br>(VF=0V, f=1MHz)                           | C               | 65              | pF   |

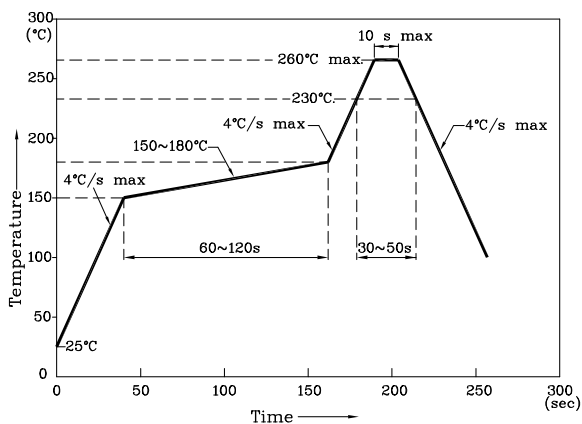
| Part Number                  | Emitting Color | Emitting Material     | Lens-color  | Luminous Intensity (IF=20mA)<br>mcd | Wavelength<br>nm<br>λ P | Viewing Angle<br>2 θ 1/2 |
|------------------------------|----------------|-----------------------|-------------|-------------------------------------|-------------------------|--------------------------|
|                              |                |                       |             | min.                                | typ.                    |                          |
| ZM2BG54W-1                   | Green          | InGaN                 | Water Clear | 380                                 | 795                     | 525                      |
|                              |                |                       |             |                                     |                         |                          |
|                              |                |                       |             |                                     |                         |                          |
| Published Date : FEB 26,2008 |                | Drawing No : SDSA6203 |             | V1                                  | Checked : B.L.LIU       | P.1/4                    |



❖ **M2BG**



Reflow Soldering Profile For Lead-free SMT Process.



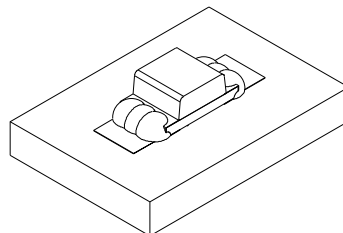
NOTES:

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.

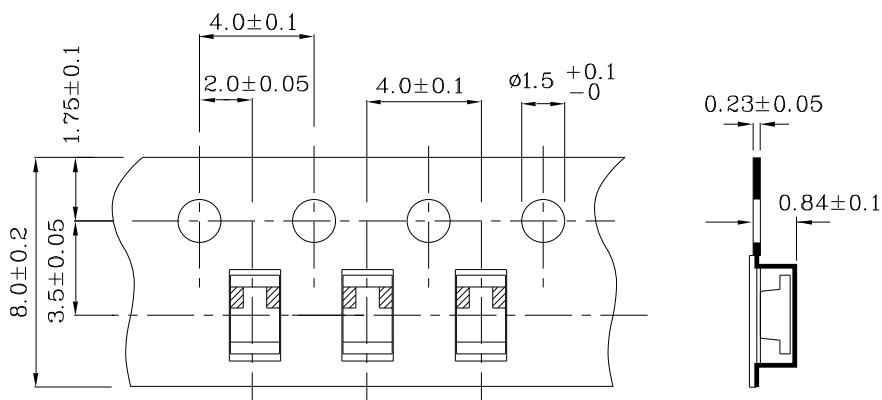
❖ Recommended Soldering Pattern  
(Units : mm; Tolerance:  $\pm 0.1$ )



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



❖ Tape Specification (Units : mm)



Remarks:

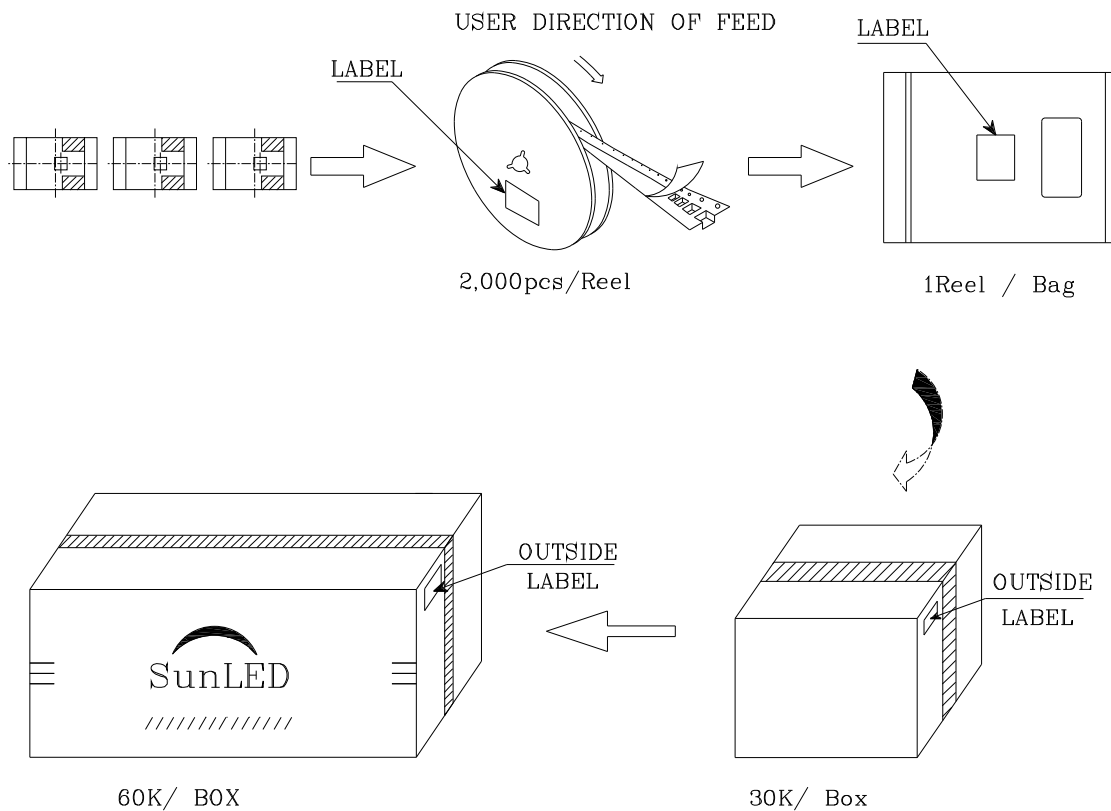
If special sorting is required (e.g. binning based on forward voltage, Luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength:  $\pm 1\text{nm}$
2. Luminous Intensity / Luminous Flux:  $\pm 15\%$
3. Forward Voltage:  $\pm 0.1\text{V}$

Note: Accuracy may depend on the sorting parameters.

**PACKING & LABEL SPECIFICATIONS**

**ZM2BG54W-1**



|                  |           |  |
|------------------|-----------|--|
|                  |           |  |
| P/NO : Zxxx54x-1 |           |  |
| QTY : 2,000 pcs  | CODE: XXX |  |
| S/N : XX         |           |  |
| LOT NO:          |           |  |
|                  |           |  |
| RoHS Compliant   |           |  |