SunLED
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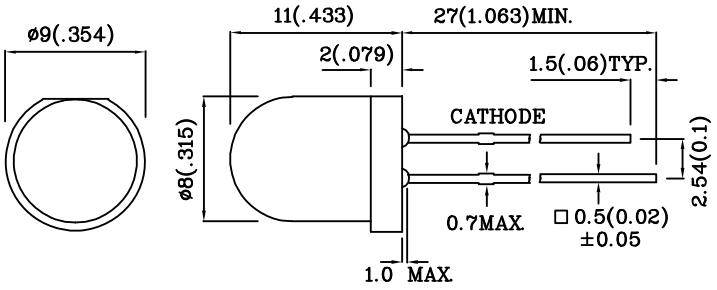
**Part Number:** **LM2BB81W**

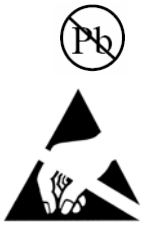
8mm ROUND LED LAMP

PRELIMINARY SPEC

## Features

- 8mm DIAMETER BIG LAMP.
- WIDE VIEWING ANGLE.
- I.C.COMPATIBLE.
- RELIABLE AND RUGGED.
- LONG LIFE-SOLID STATE RELIABILITY.
- RoHS COMPLIANT.



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

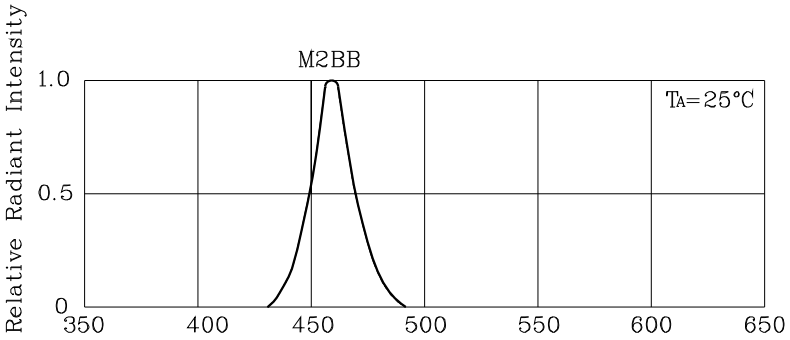
Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25(0.01") unless otherwise noted.
3.Specifications are subject to change without notice.

| **Absolute Maximum Ratings ($T_A$=25°C)** | | **M2BB (InGaN)** | **Unit** |
|---|---|---|---|
| Reverse Voltage | $V_R$ | 5 | V |
| Forward Current | $I_F$ | 30 | mA |
| Forward Current (peak) 1/10 Duty Cycle 0.1ms Pulse Width | iFS | 100 | mA |
| Power Dissipation | $P_T$ | 111 | mW |
| Operating Temperature | $T_A$ | -40 ~ +85 | °C |
| Storage Temperature | Tstg | -40 ~ +85 | |
| Electrostatic Discharge Threshold (HBM) | | 1000 | V |
| Lead Solder Temperature [2mm Below Package Base] | 260°C For 3 Seconds | | |
| Lead Solder Temperature [5mm Below Package Base] | 260°C For 5 Seconds | | |

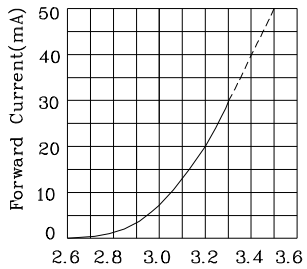
| **Operating Characteristics ($T_A$=25°C)** | | **M2BB (InGaN)** | **Unit** |
|---|---|---|---|
| Forward Voltage (Typ.) ($I_F$=20mA) | $V_F$ | 3.2 | V |
| Forward Voltage (Max.) ($I_F$=20mA) | $V_F$ | 3.7 | V |
| Reverse Current (Max.) ($V_R$=5V) | $I_R$ | 10 | uA |
| Wavelength Of Peak Emission (Typ.) ($I_F$=20mA) | λ P | 458 | nm |
| Wavelength Of Dominant Emission (Typ.) ($I_F$=20mA) | λ D | 465 | nm |
| Spectral Line Full Width At Half-Maximum (Typ.) ($I_F$=20mA) | Δλ | 22 | nm |
| Capacitance (Typ.) ($V_F$=0V, f=1MHz) | C | 110 | pF |

| Part Number | Emitting Color | Emitting Material | Lens-color | Luminous Intensity (IF=20mA) mcd | | Wavelength nm λ P | Viewing Angle 2 θ 1/2 |
|---|---|---|---|---|---|---|---|
| | | | | min. | typ. | | |
| LM2BB81W | Blue | InGaN | Water Clear | 3300 | 6490 | 458 | 12° |

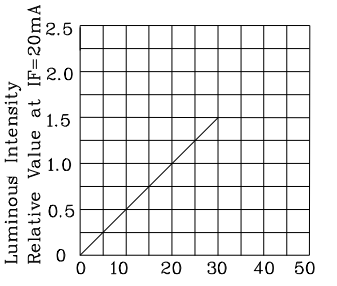



RELATIVE INTENSITY Vs. WAVELENGTH

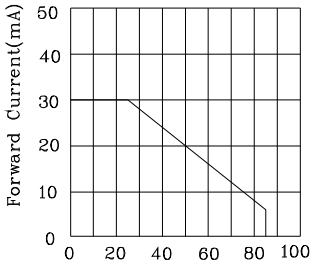
❖ **M2BB**



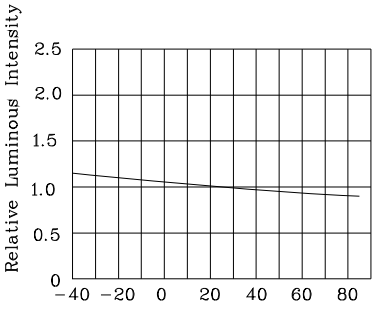

FORWARD CURRENT Vs.
FORWARD VOLTAGE



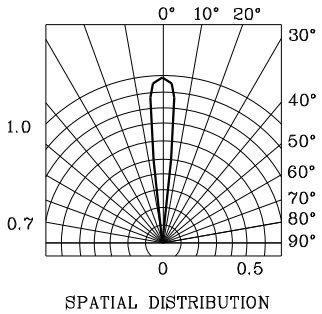

LUMINOUS INTENSITY Vs.
FORWARD CURRENT




FORWARD CURRENT
DERATING CURVE

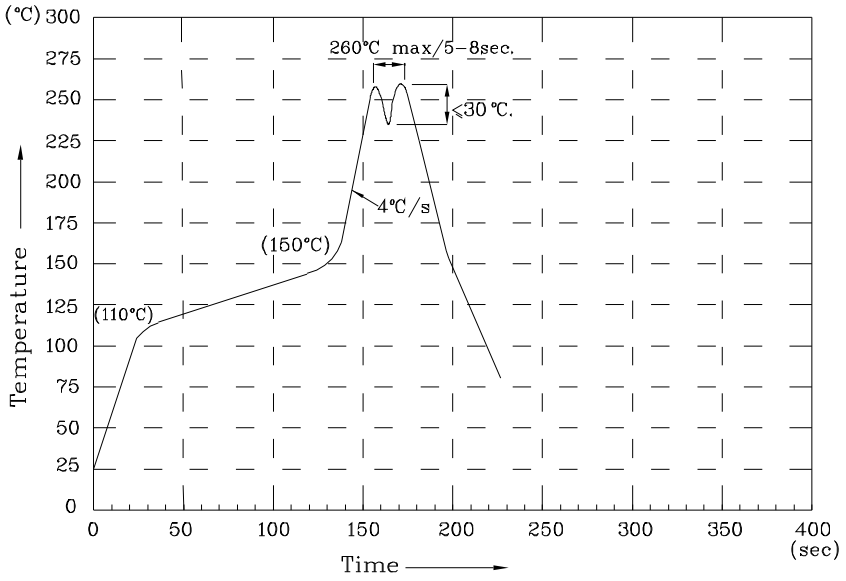



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE




SPATIAL DISTRIBUTION

Wave Soldering Profile For Lead-free Through-hole LED.




NOTES:

1. Recommend the wave temperature 245℃~260℃. The maximum soldering temperature should be less than 260℃.
2. Do not apply stress on epoxy resins when temperature is over 85 degree℃.
3. The soldering profile apply to the lead free soldering (Sn/Cu/Ag alloy).
4. No more than once.

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 LM2BB81W

