

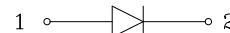
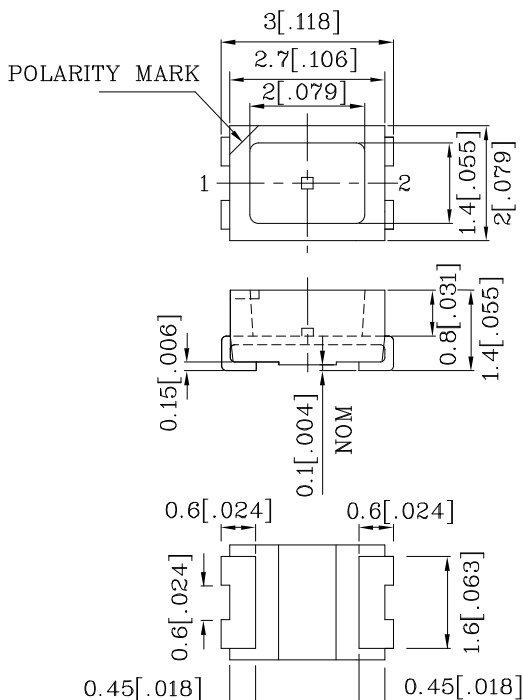
PRELIMINARY SPEC

Features

- 3.0MM X 2.0MM, 1.4MM HIGH, ONLY MINIMUM SPACE REQUIRED.
- SUITABLE FOR COMPACT OPTOELECTRONIC APPLICATIONS.
- LOW POWER CONSUMPTION.
- PACKAGE : 2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 4.
- RoHS COMPLIANT.



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES



Notes:

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

Absolute Maximum Ratings (TA=25°C)		M2BB (InGaN)	Unit
Reverse Voltage	VR	5	V
Forward Current	IF	30	mA
Forward Current (peak) 1/10 Duty Cycle 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 (HBM)		1000	V

Operating Characteristics (TA=25°C)		M2BB (InGaN)	Unit
Forward Voltage (Typ.) (IF=20mA)	VF	3.2	V
Forward Voltage (Max.) (IF=20mA)	VF	3.7	V
Reverse Current (Max.) (VR=5V)	IR	10	uA
Wavelength of Peak Emission (Typ.) (IF=20mA)	λP	458	nm
Wavelength of Dominant Emission (Typ.) (IF=20mA)	λD	465	nm
Spectral Line Full Width At Half-Maximum (Typ.) (IF=20mA)	$\Delta\lambda$	22	nm
Capacitance (Typ.) (VF=0V, f=1MHz)	C	110	pF

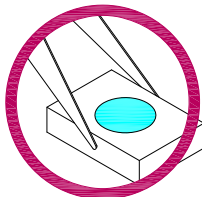
Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=20mA) mcd		Wavelength nm λP	Viewing Angle 2 θ 1/2
				min.	typ.		
ZM2BB50FS	Blue	InGaN	Water Clear	110	278	458	120°
Published Date : FEB 26, 2008							
Drawing No : SDSA6352				V1		Checked : B.L.LIU	
						P.1/5	

Handling Precautions

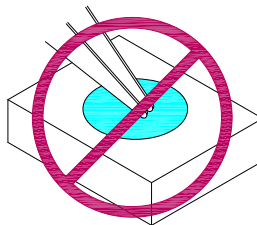
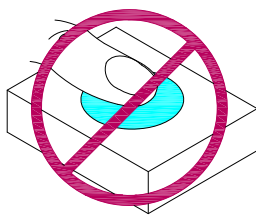
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.

As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might leads to damage and premature failure of the LED.

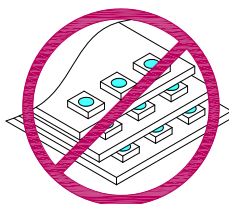
1. Handle the component along the side surfaces by using forceps or appropriate tools.



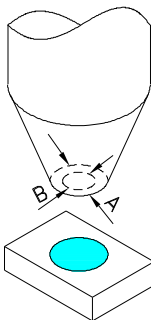
2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.

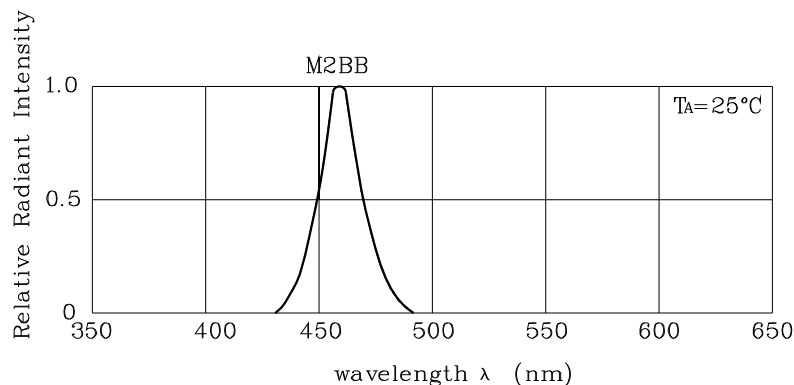


3. Do not stack together assembled PCBs containing exposed LEDs. Outside impact may scratch the silicone lens or damage the internal circuitry.



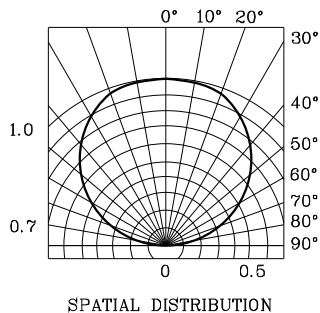
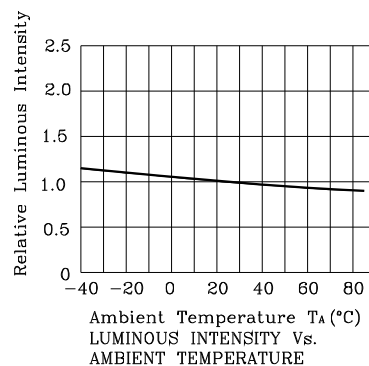
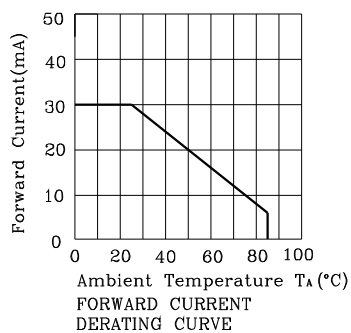
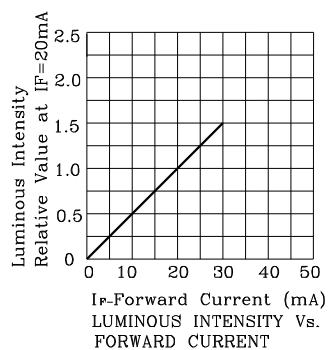
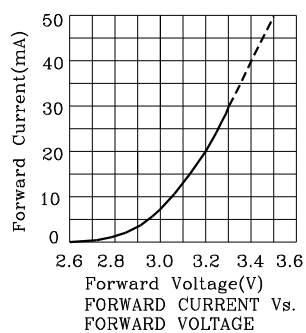
4. The outer diameter of the SMD pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible.
5. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.
6. The dimensions of the component must be accurately programmed in the pick-and-place machine to insure precise pickup and avoid damage during production.



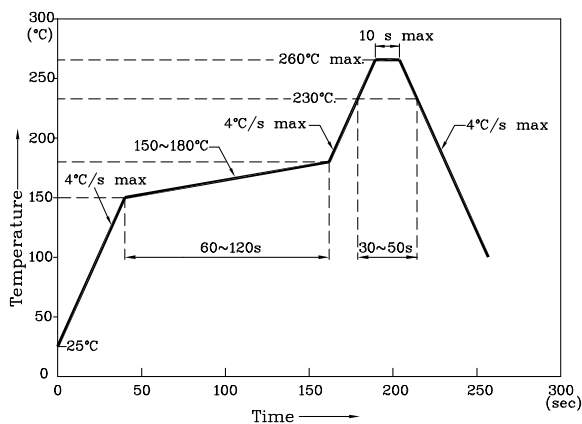


RELATIVE INTENSITY Vs. WAVELENGTH

❖ **M2BB**



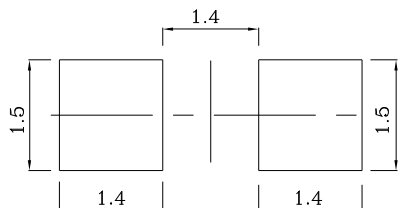
Reflow Soldering Profile For Lead-free SMT Process.



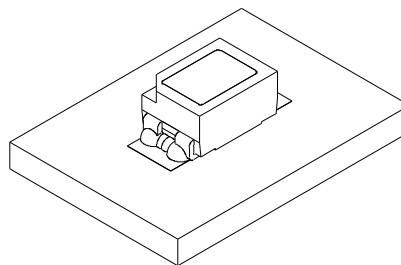
NOTES:

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.

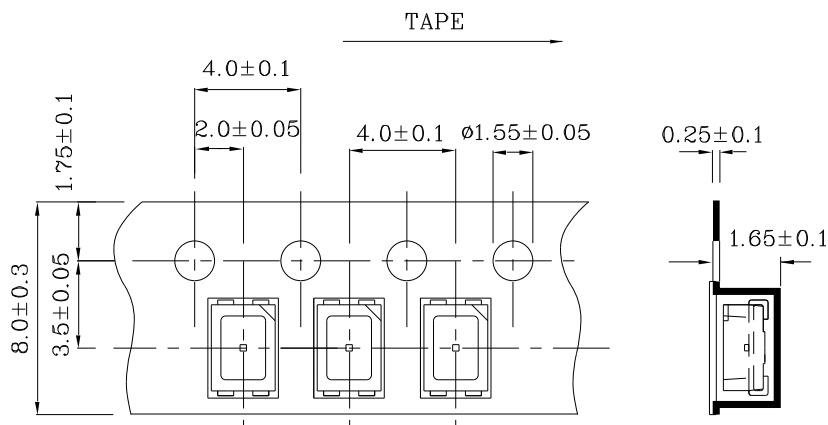
❖ Recommended Soldering Pattern
(Units : mm; Tolerance:± 0.1)



❖ 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:

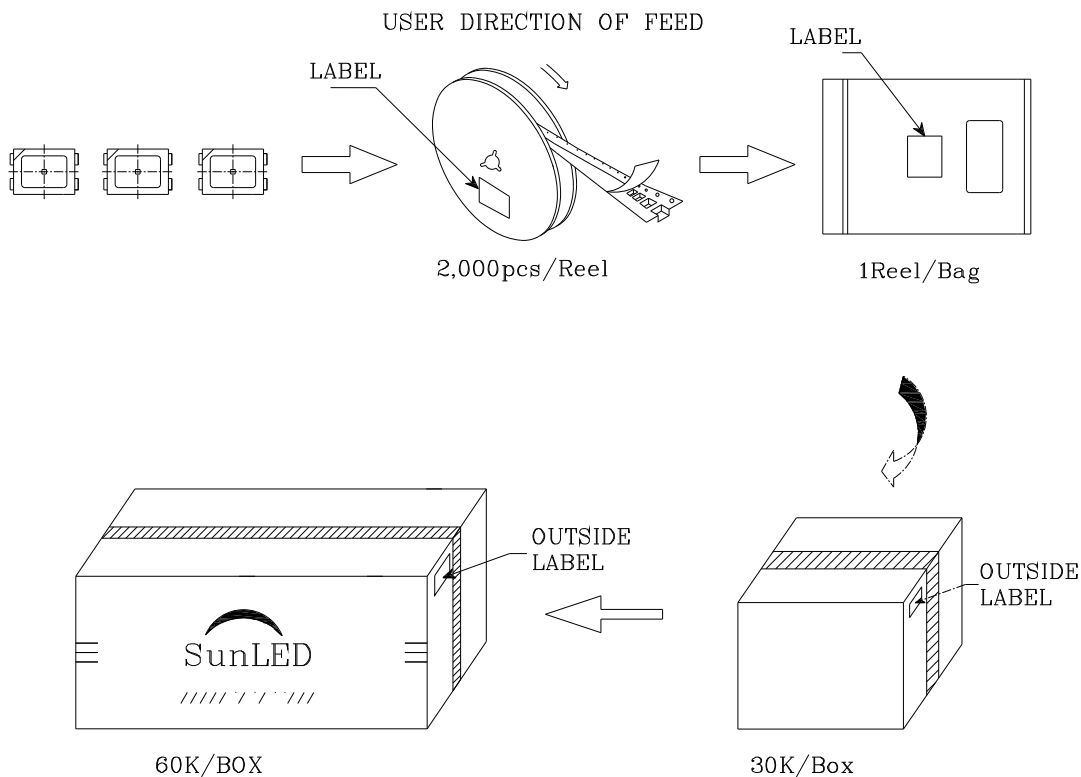
1. Wavelength: +/-1nm
2. Luminous Intensity / Luminous Flux: +/-15%
3. Forward Voltage: +/-0.1V


Note: Accuracy may depend on the sorting parameters.



PACKING & LABEL SPECIFICATIONS

ZM2BB50FS






Q.C. Q C

XX XX XXXX

PASSED

P/NO : Zxx50Fx	
QTY : 2,000 pcs	CODE: XXX
S/N : XX	
LOT NO:  xxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	