

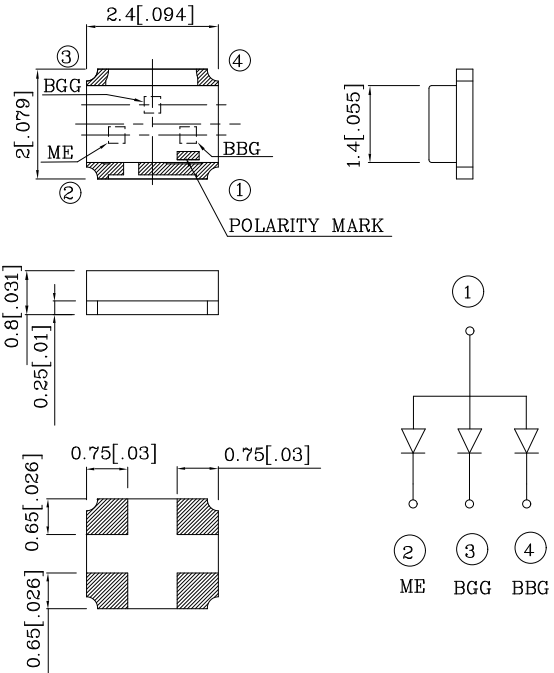
PRELIMINARY SPEC

Features

- LOW POWER CONSUMPTION.
- 2.4mmx2.0mm SMT LED, 0.8mm THICKNESS.
- CAN PRODUCE ANY COLOR IN VISIBLE SPECTRUM, INCLUDING WHITE LIGHT.
- PACKAGE : 2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES



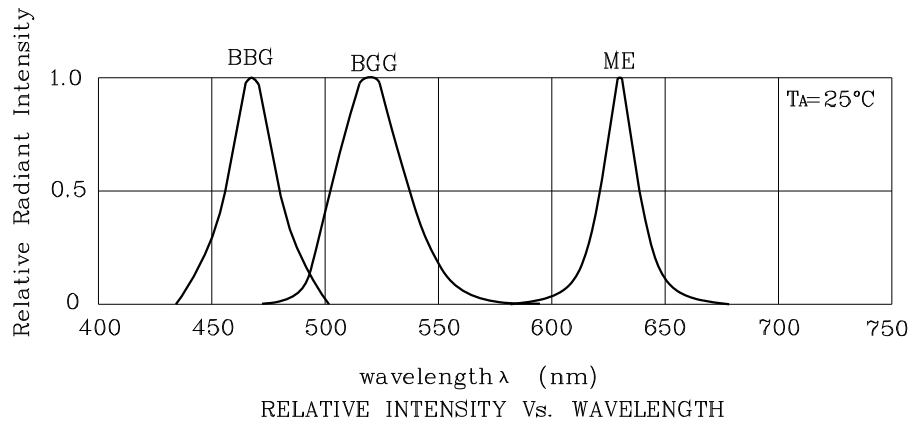
Notes:

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.

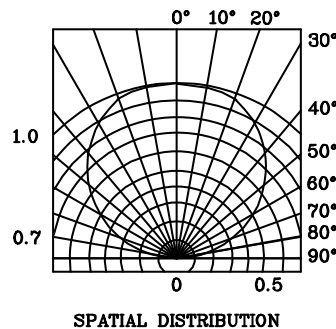
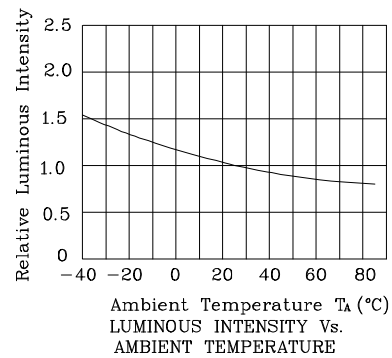
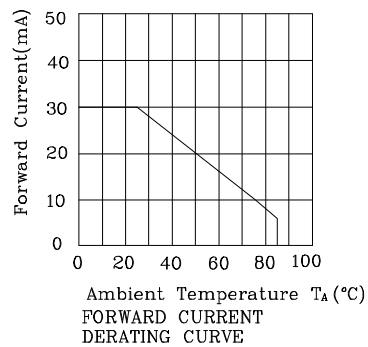
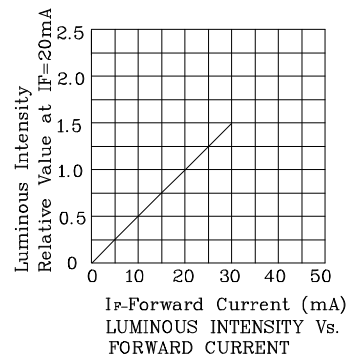
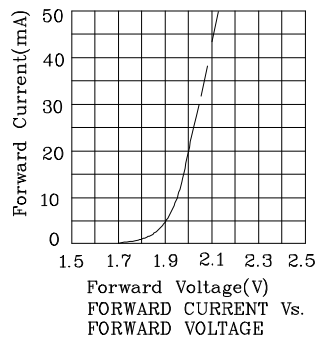
Absolute maximum ratings ($T_A=25^\circ\text{C}$)		ME (InGa AlP)	BGG (InGa N)	BBG (InG aN)	Unit
Reverse Voltage	V_R	5	5	5	V
Forward Current	I_F	30	30	30	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	i_{FS}	195	100	100	mA
Power Dissipation	P_T	75	120	120	mW
Electrostatic Discharge Threshold (HBM)	-	-	1000	1000	V
Operating Temperature	T_A	-40 ~ +85			°C
Storage Temperature	T_{stg}	-40 ~ +85			

Operating Characteristics ($T_A=25^\circ\text{C}$)		ME (InGaA IP)	BGG (InGa N)	BBG (InG aN)	Unit
Forward Voltage (Typ.) ($I_F=20\text{mA}$)	V_F	2.0	3.2	3.2	V
Forward Voltage (Max.) ($I_F=20\text{mA}$)	V_F	2.5	4.0	4.0	V
Reverse Current (Max.) ($V_R=5\text{V}$)	I_R	10	10	10	μA
Wavelength of Peak Emission (Typ.) ($I_F=20\text{mA}$)	λ_p	630	520	468	nm
Wavelength of Dominant Emission (Typ.) ($I_F=20\text{mA}$)	λ_D	621	525	470	nm
Spectral Line Full Width At Half-Maximum (Typ.) ($I_F=20\text{mA}$)	$\Delta\lambda$	20	35	21	nm
Capacitance (Typ.) ($V_F=0\text{V}$, $f=1\text{MHz}$)	C	25	100	100	pF

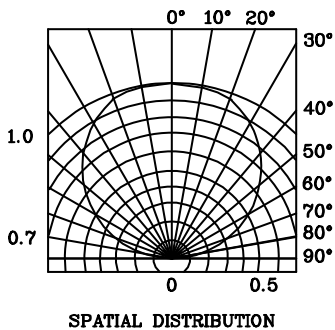
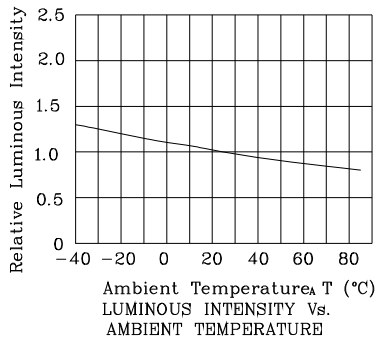
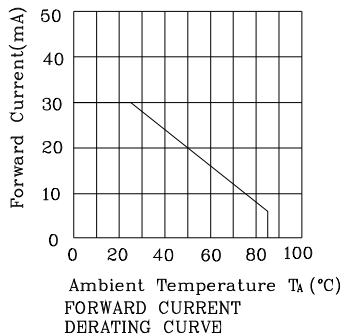
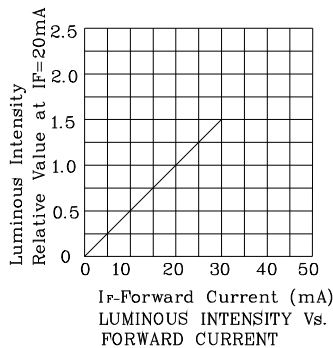
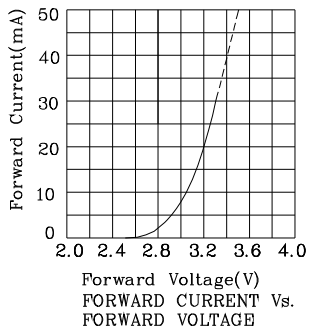
Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity ($I_F=20\text{mA}$) mcd		Wavelength nm λ_P	Viewing Angle 2θ 1/2
				min.	typ.		
ZMEBGGBBG93W	Red	InGaAlP	Water Clear	110	297	630	120°
	Green	InGaN		110	297	520	
	Blue	InGaN		50	118	468	



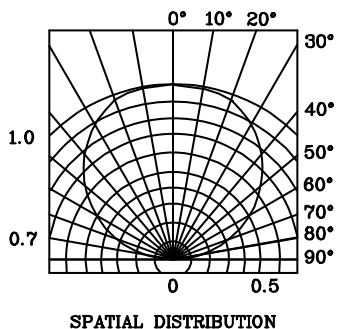
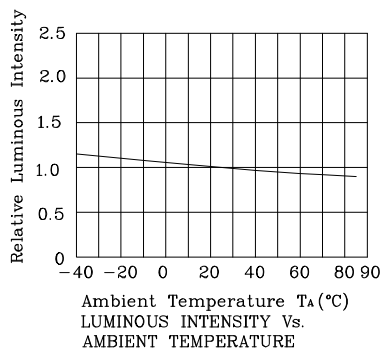
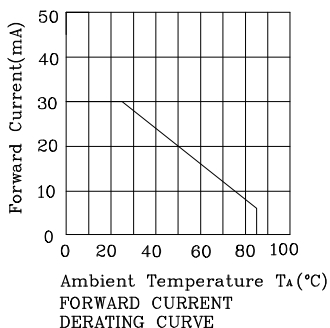
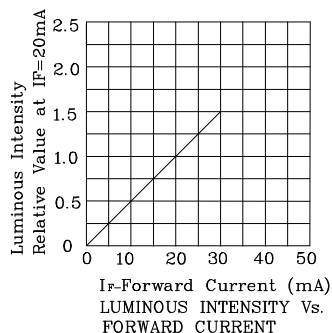
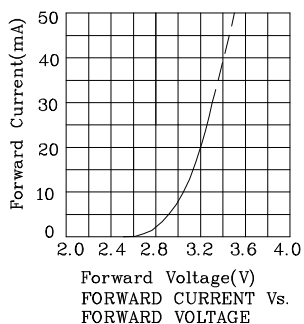
❖ ME



❖ **BGG**



❖ **BBG**



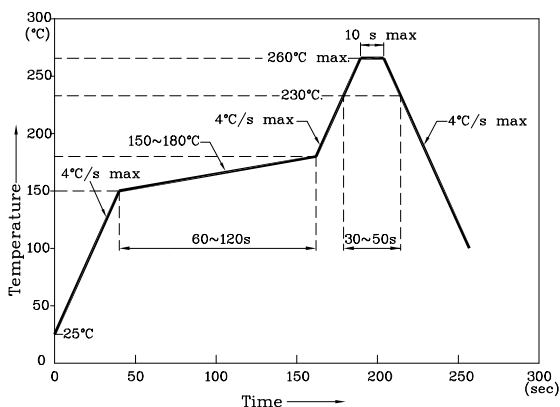
Remarks:

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.

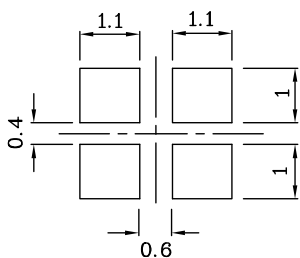
Reflow Soldering Profile For Lead-free SMT Process.



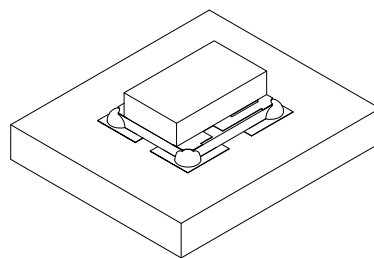
NOTES:

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.

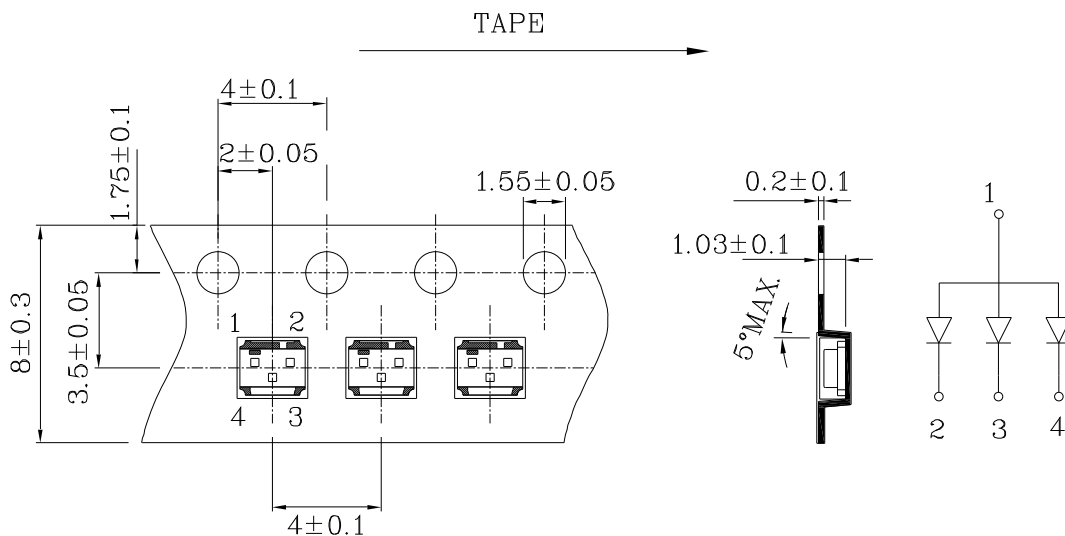
❖ Recommended Soldering Pattern (Units : mm; Tolerance: ±0.1)



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

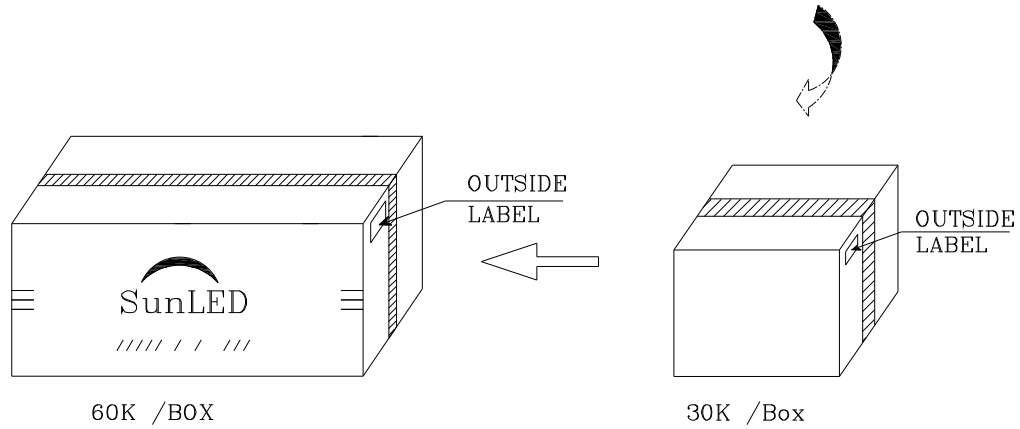
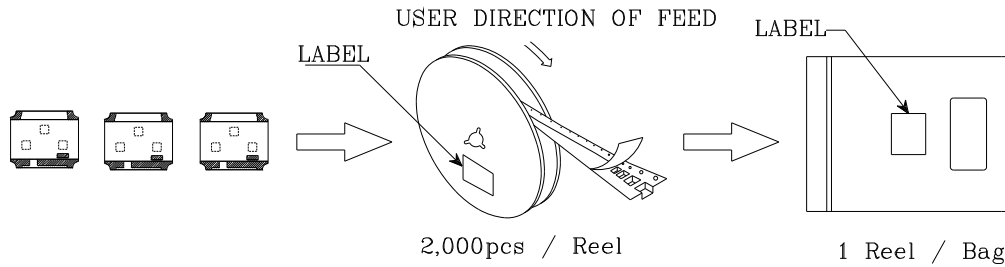



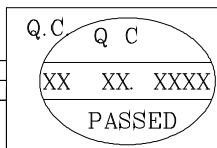

❖ Tape Specification (Units : mm)



PACKING & LABEL SPECIFICATIONS

ZMEBGGBBG93W

	
P/NO : Zxxx93x	
QTY : 2,000pcs	CODE: XXX
S/N : XX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	