

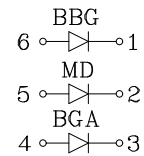
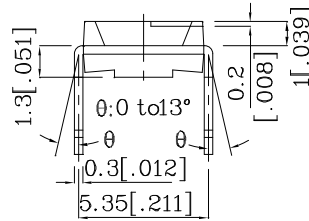
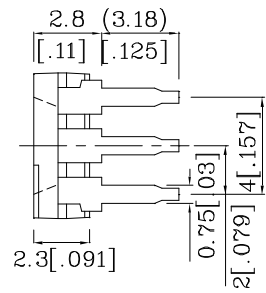
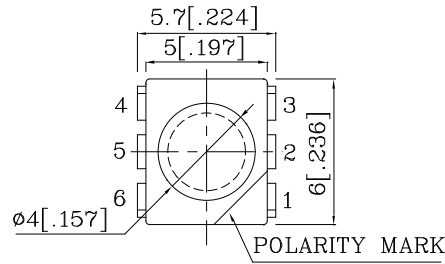
**PRELIMINARY SPEC**

**Features**

- OUTSTANDING MATERIAL EFFICIENCY.
- RELIABLE AND RUGGED.
- WATER CLEAR LENS.
- LOW POWER CONSUMPTION.
- ONE BLUE, ONE RED AND ONE GREEN CHIPS IN ONE PACKAGE.
- CAN PRODUCE ANY COLOR IN VISIBLE SPECTRUM, INCLUDING WHITE LIGHT.
- MOISTURE SENSITIVITY LEVEL : LEVEL 4
- RoHS COMPLIANT.



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE



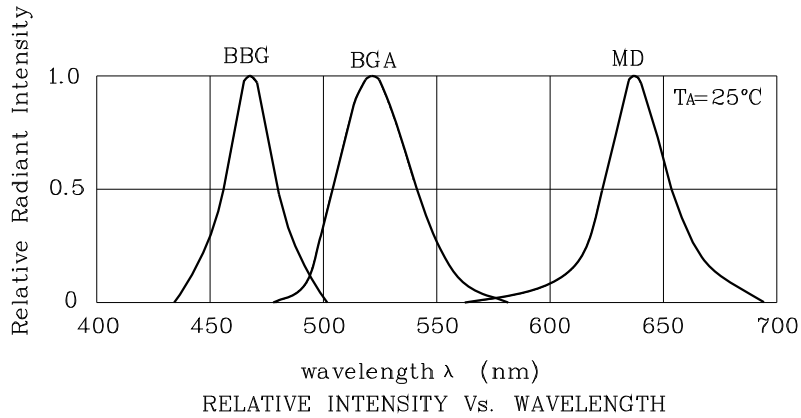
**Notes:**

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.

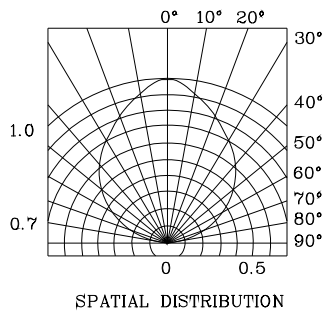
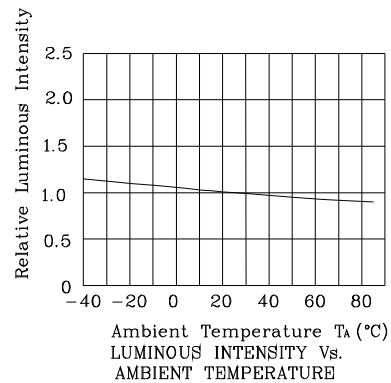
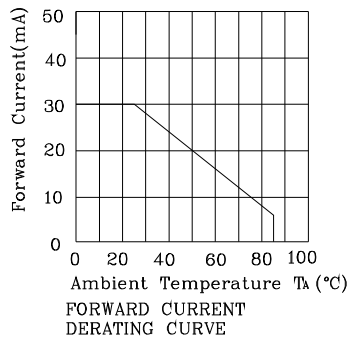
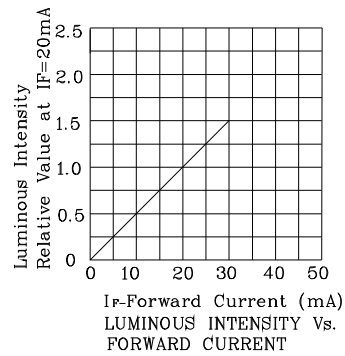
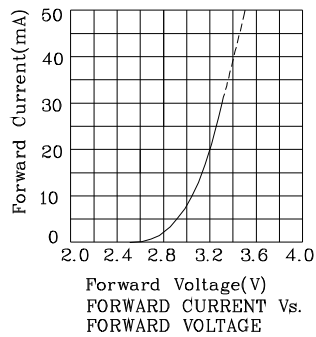
Absolute Maximum Ratings (TA=25°C)		BBG (InGaN)	MD (InGaAlP)	BGA (InGaN)	Unit
Reverse Voltage	VR	5	5	5	V
Forward Current	IF	30	50	30	mA
Forward Current (peak) 1/10 Duty Cycle 0.1ms Pulse Width	iFS	100	185	100	mA
Total Power Dissipation Within 350mW At All Chips Are Lightened	PT	350			mW
Electrostatic Discharge Threshold (HBM)		1000	-	1000	V
Operating Temperature	TA	-40 ~ +85			°C
Storage Temperature	Tstg	-40 ~ +85			
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 (TA=25°C)		BBG (InGaN)	MD (InGaAlP)	BGA (InGaN)	Unit
Forward Voltage (Typ.) (IF=20mA)	VF	3.2	1.9	3.2	V
Forward Voltage (Max.) (IF=20mA)	VF	4.0	2.5	4.0	V
Reverse Current (Max.) (VR=5V)	IR	10	10	10	uA
Wavelength of Peak Emission (Typ.) (IF=20mA)	$\lambda P$	468	640	520	nm
Wavelength of Dominant Emission (Typ.) (IF=20mA)	$\lambda D$	470	628	525	nm
Spectral Line Full Width At Half-Maximum (Typ.) (IF=20mA)	$\Delta\lambda$	21	27	35	nm
Capacitance (Typ.) (VF=0V, f=1MHz)	C	100	45	100	pF

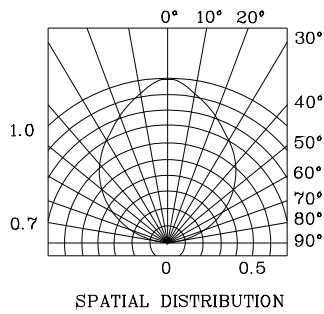
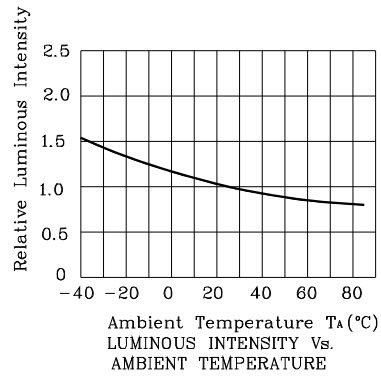
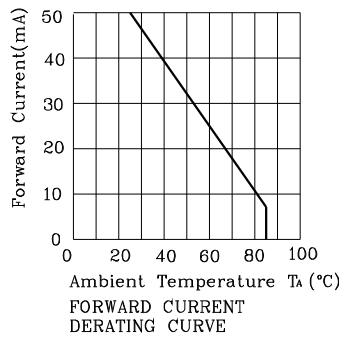
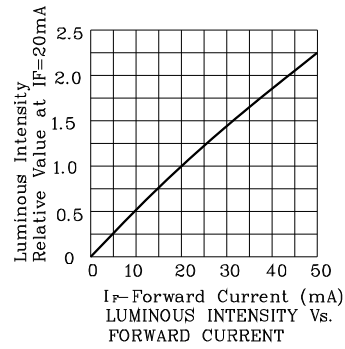
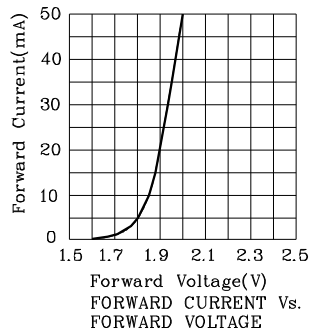
Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=30mA *50mA) mcd		Wavelength nm $\lambda P$	Viewing Angle 2 $\theta$ 1/2
				min.	typ.		
XSBBGMDBGA99W	Blue	InGaN	Water Clear	180	297	468	100°
	Red	InGaAlP		*380	*497	640	
	Green	InGaN		180	347	520	



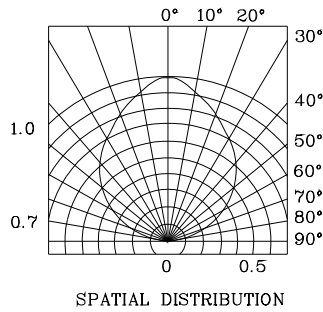
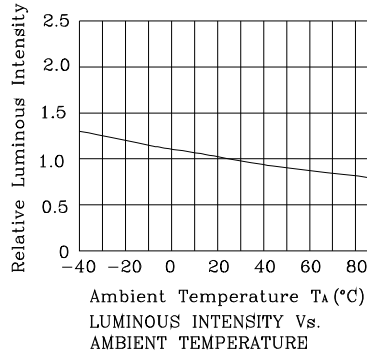
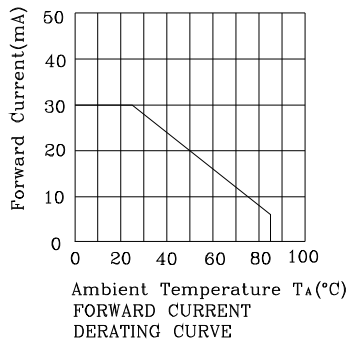
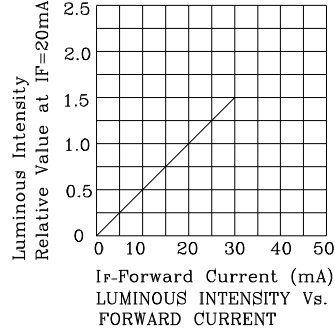
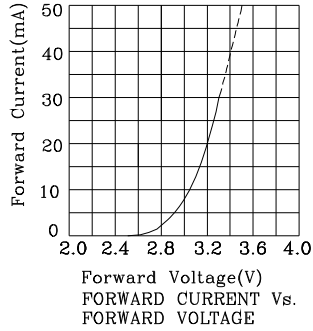
❖ **BBG**



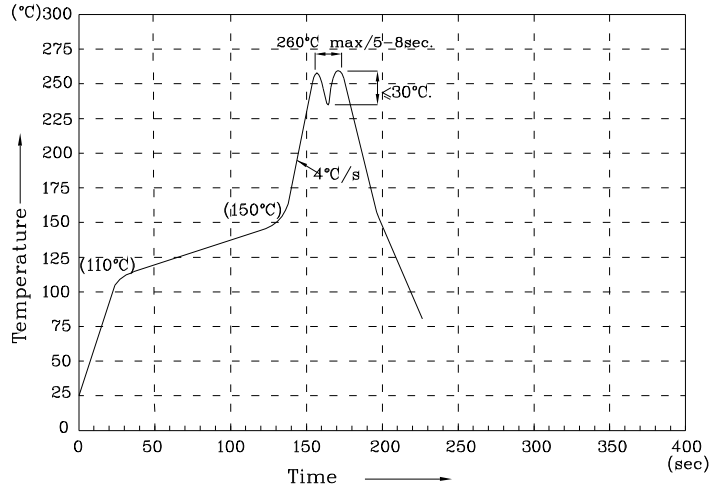
❖ MD



❖ BGA



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



NOTES:

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

Remarks:

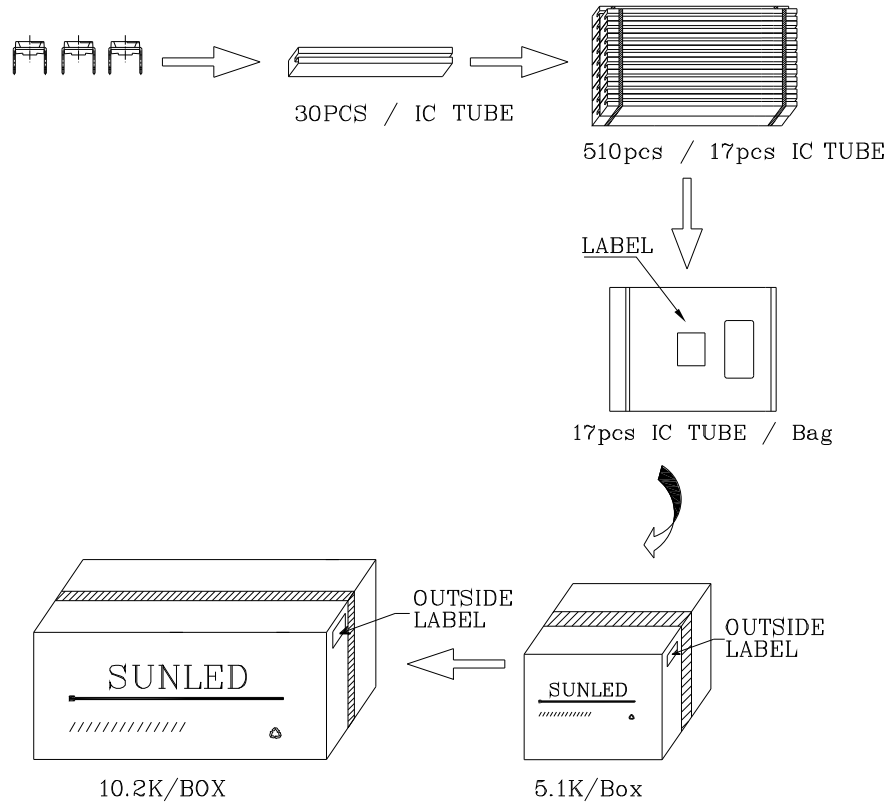

If special sorting is required (e.g. binning based on forward voltage, Luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

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**

**XSBBGMDBGA99W**

Q.C	
XX	XX XXX
PASSED	

P/NO : XSxxx99x	
QTY : 30 pcs	CODE: XXX
S/N : XX	
LOT NO:	
 xxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	