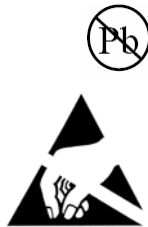
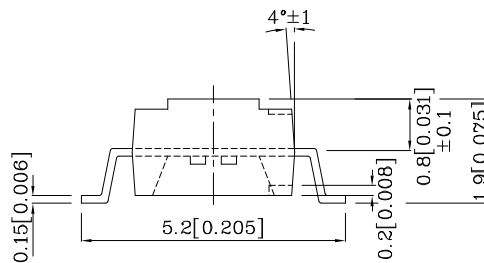
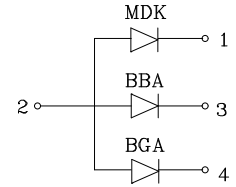
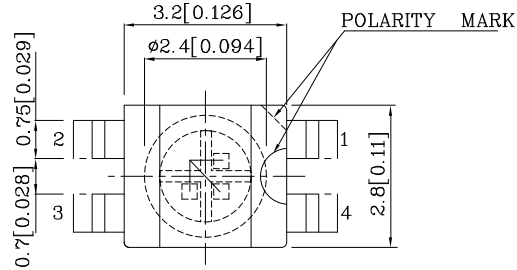


PRELIMINARY SPEC

Features

- SUITABLE FOR ALL SMT ASSEMBLY AND SOLDER PROCESS.
- AVAILABLE ON TAPE AND REEL.
- PACKAGE: 1500PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 4.
- RoHS COMPLIANT.



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

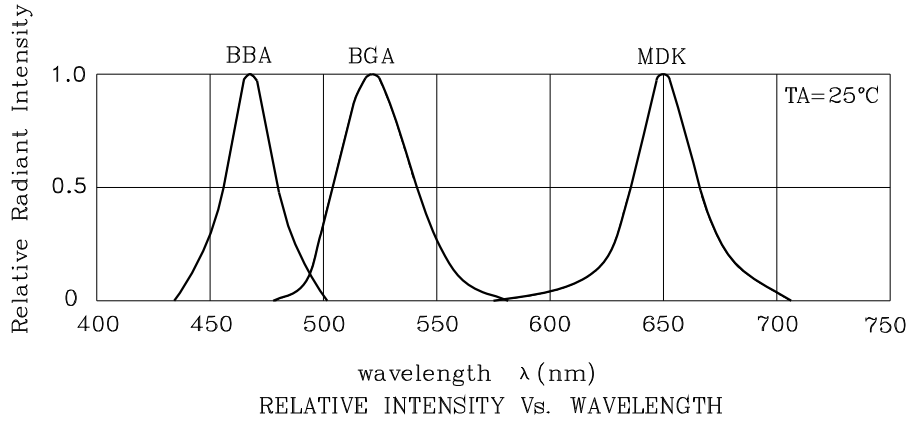
Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.2(0.008") unless otherwise noted.
3. Specifications are subject to change without notice.

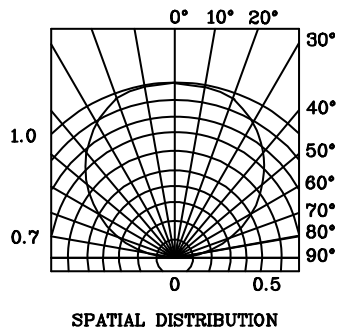
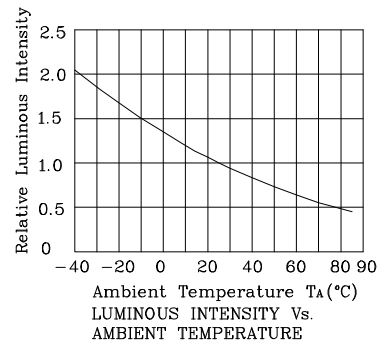
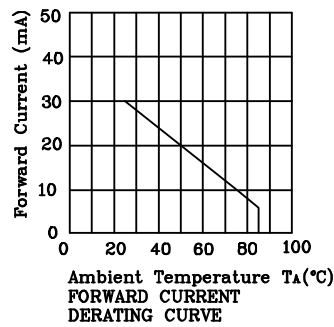
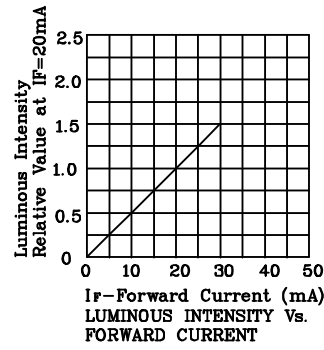
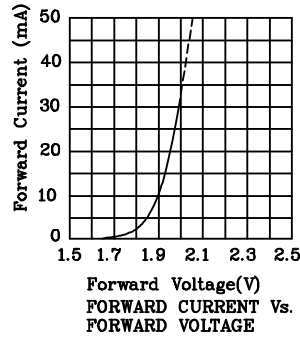
Absolute maximum ratings (TA=25°C)		MDK (InGa AlP)	BBA (InGa N)	BGA (InGa N)	Unit
Reverse Voltage	V _R	5	5	5	V
Forward Current	I _F	30	30	30	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	i _{FS}	185	100	100	mA
Power Dissipation	P _T	75	120	120	mW
Electrostatic Discharge Threshold (HBM)		-	1000	1000	V
Operating Temperature	T _A	-40 ~ +85			°C
Storage Temperature	T _{stg}	-40 ~ +85			

Operating Characteristics (TA=25°C)		MDK (InGaA IP)	BBA (InGa N)	BGA (InGa N)	Unit
Forward Voltage (Typ.) (I _F =20mA)	V _F	1.95	3.2	3.2	V
Forward Voltage (Max.) (I _F =20mA)	V _F	2.5	4.0	4.0	V
Reverse Current (Max.) (V _R =5V)	I _R	10	10	10	uA
Wavelength of Peak Emission (Typ.) (I _F =20mA)	λ _p	650	468	520	nm
Wavelength of Dominant Emission (Typ.) (I _F =20mA)	λ _D	635	470	525	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I _F =20mA)	Δλ	28	21	35	nm
Capacitance (Typ.) (V _F =0V, f=1MHz)	C	35	100	100	pF

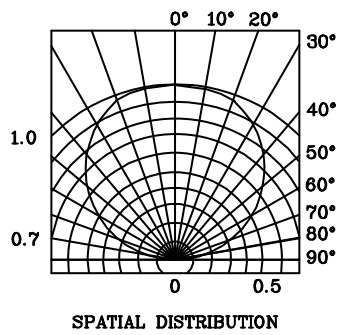
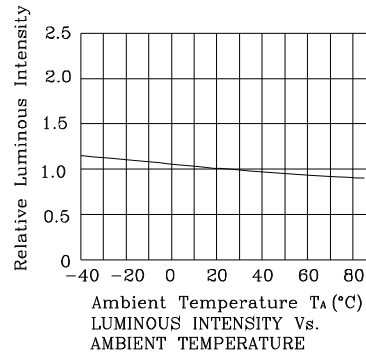
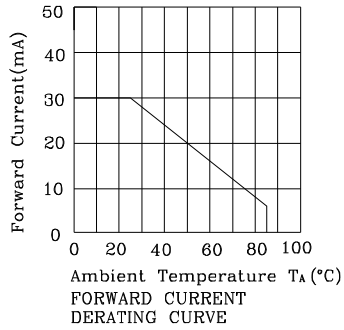
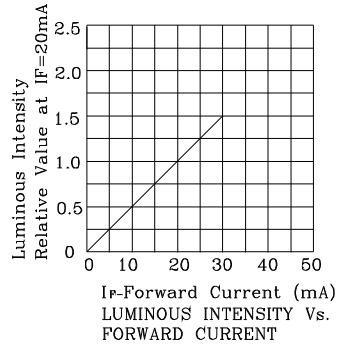
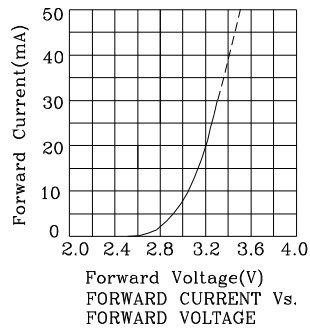
Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (I _F =20mA) mcd		Wavelength nm λ P	Viewing Angle 2 θ 1/2
				min.	typ.		
ZMDKBBABGA45W-9	Red	InGaAlP	Water Clear	70	198	650	120°
	Blue	InGaN		36	69	468	
	Green	InGaN		70	198	520	



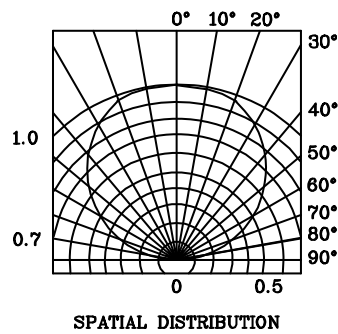
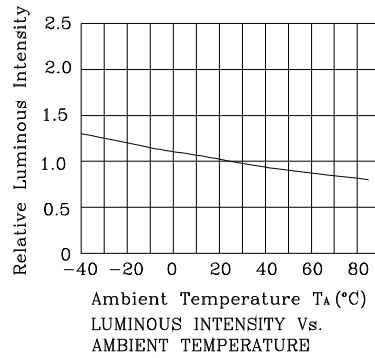
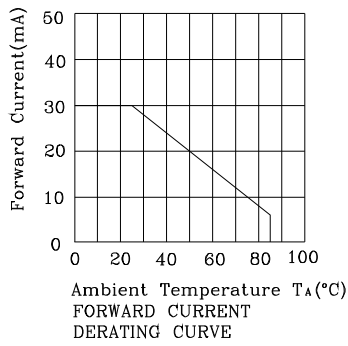
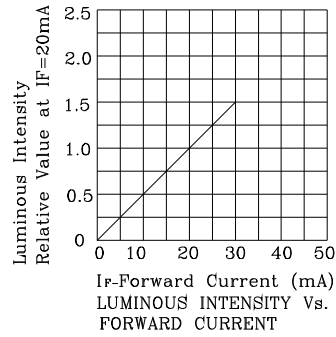
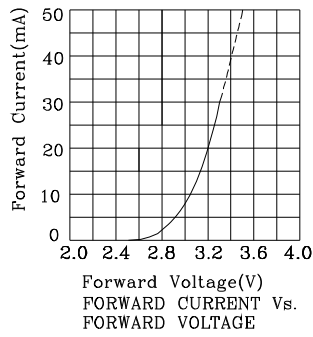
❖ MDK



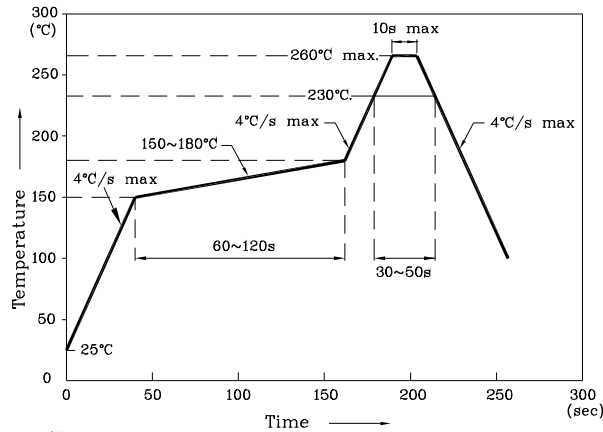
❖ BBA



❖ BGA



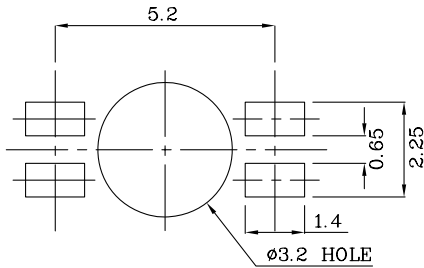
Reflow Soldering Profile For Lead-free SMT Process.



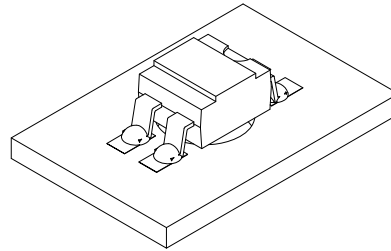
Notes:

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.

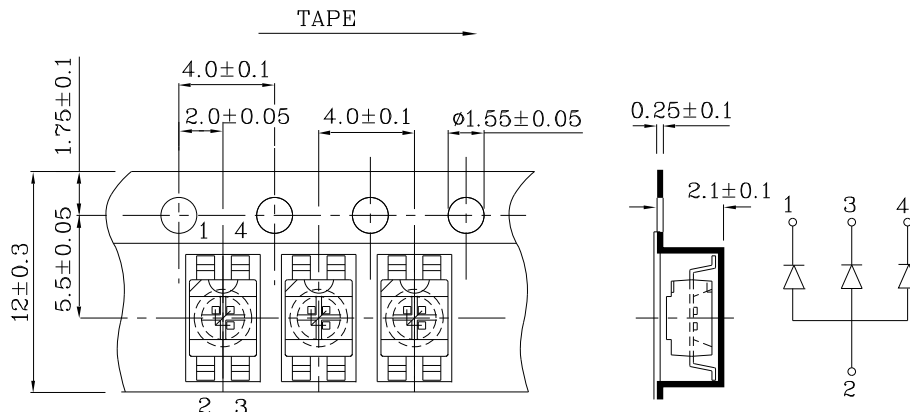
❖ Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



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



❖ Tape Specification (Units : mm)



Remarks:

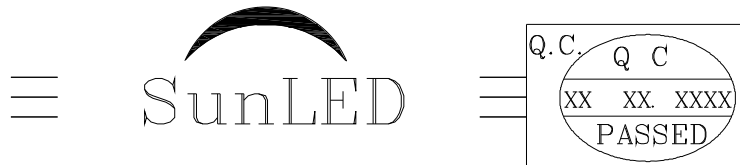
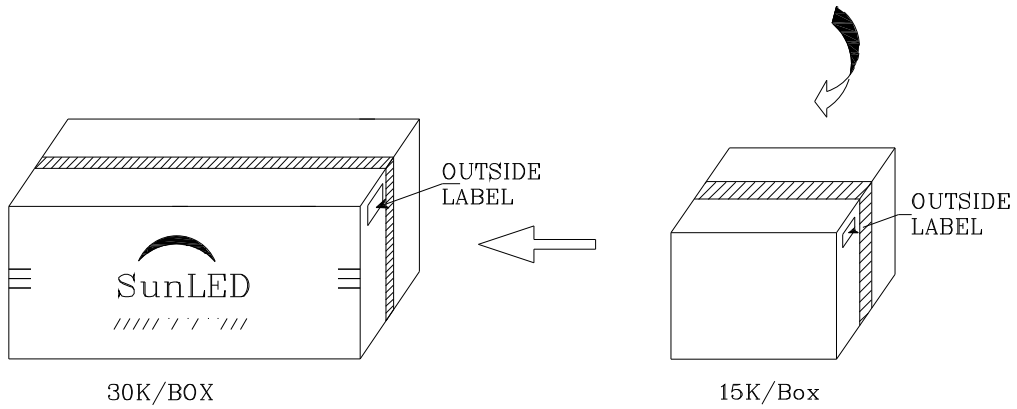
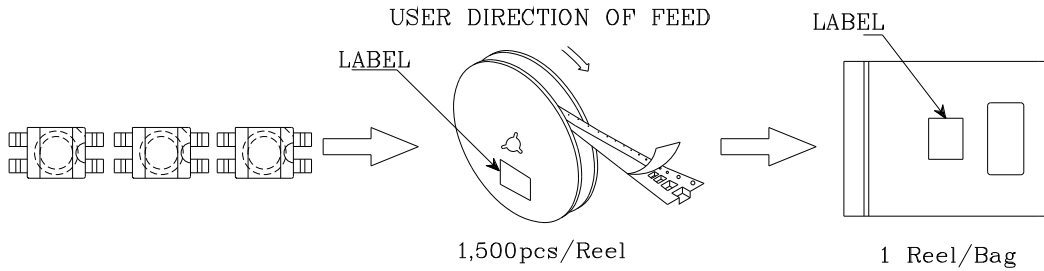
If special sorting is required (e.g. binning based on forward voltage, Luminous intensity/ luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:


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

ZMDKBBABGA45W-9



P/NO : Zxxx45x-9	
QTY : 1,500 pcs	CODE: XXX
S/N : XX	
LOT NO :	
 XXXXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	