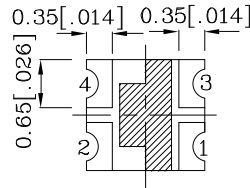
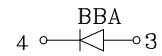
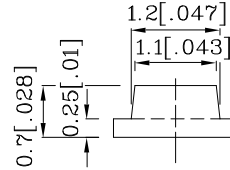
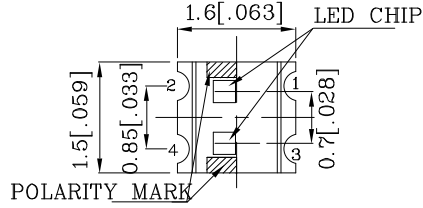


PRELIMINARY SPEC

**Features**

- 1.6mmx1.5mm SMT LED, 0.7mm THICKNESS.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.
- PACKAGE : 2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.



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

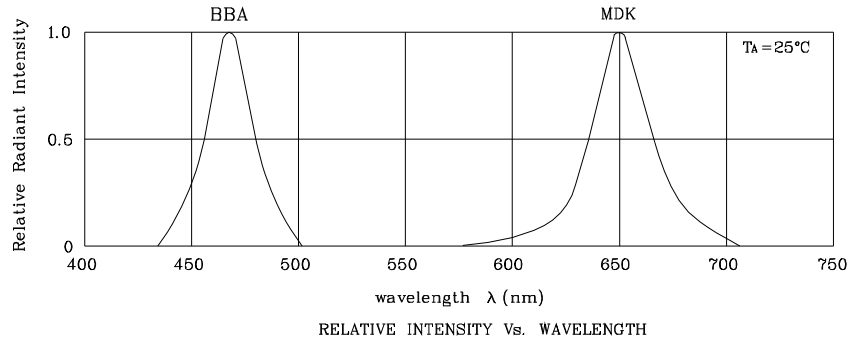
Notes:

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

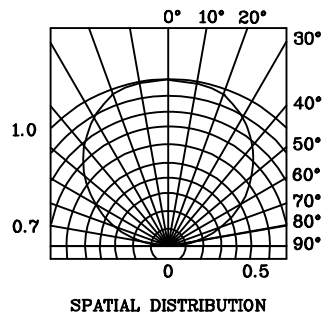
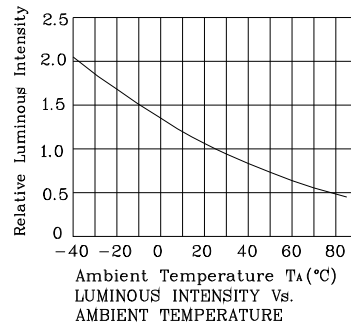
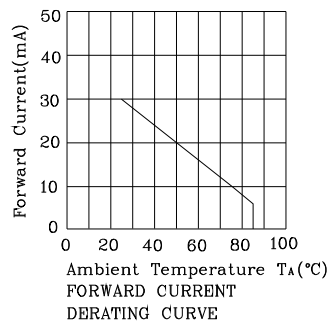
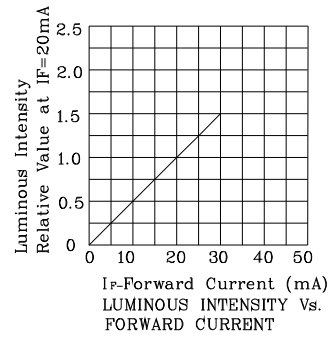
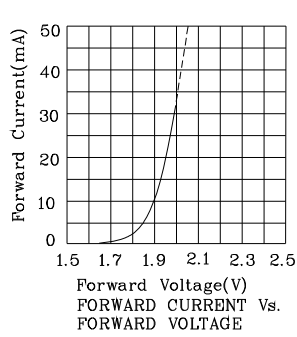
Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$ )		MDK (InGaAlP)	BBA (InGaN)	Unit
Reverse Voltage	$V_R$	5	5	V
Forward Current	$I_F$	30	30	mA
Forward Current (Peak) 1/10Duty Cycle 0.1ms Pulse Width	$i_{FS}$	185	100	mA
Power Dissipation	$P_T$	75	120	mW
Electrostatic Discharge Threshold (HBM)		-	1000	V
Operating Temperature	$T_A$	-40 ~ +85		°C
Storage Temperature	$T_{stg}$	-40 ~ +85		

Operating Characteristics ( $T_A=25^\circ\text{C}$ )		MDK (InGaAlP)	BBA (InGaN)	Unit
Forward Voltage (Typ.) ( $I_F=20\text{mA}$ )	$V_F$	1.95	3.2	V
Forward Voltage (Max.) ( $I_F=20\text{mA}$ )	$V_F$	2.5	4.0	V
Reverse Current (Max.) ( $V_R=5\text{V}$ )	$I_R$	10	10	$\mu\text{A}$
Wavelength Of Peak Emission (Typ.) ( $I_F=20\text{mA}$ )	$\lambda_P$	650	468	nm
Wavelength Of Dominant Emission (Typ.) ( $I_F=20\text{mA}$ )	$\lambda_D$	635	470	nm
Spectral Line Full Width At Half-Maximum (Typ.) ( $I_F=20\text{mA}$ )	$\Delta\lambda$	28	21	nm
Capacitance (Typ.) ( $V_F=0\text{V}$ , $f=1\text{MHz}$ )	$C$	35	100	pF

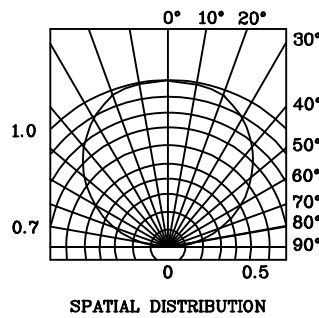
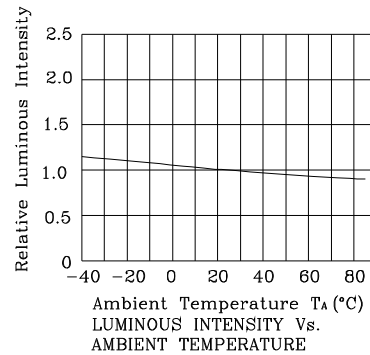
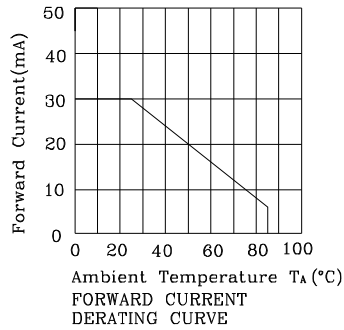
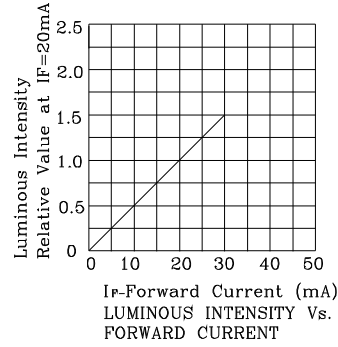
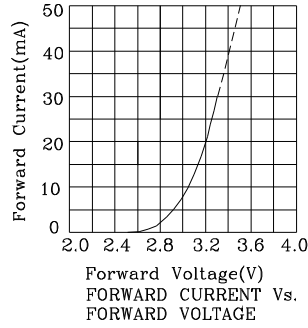
Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity ( $I_F=20\text{mA}$ ) mcd		Wavelength nm $\lambda_P$	Viewing Angle $2\theta$ 1/2
				min.	typ.		
ZMDKBBA59W-1	Red	InGaAlP	Water Clear	70	148	650	120°
	Blue	InGaN		18	59	468	



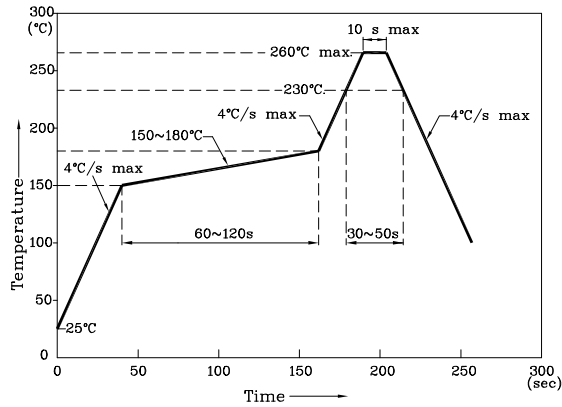
❖ MDK



❖ **BBA**



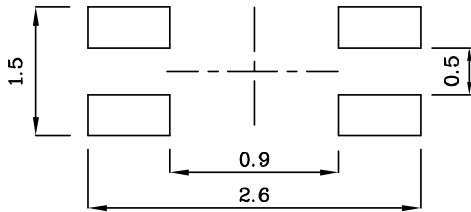
Reflow Soldering Profile For Lead-free SMT Process.



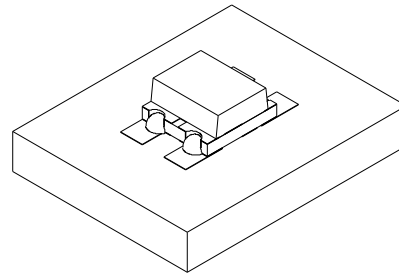
NOTES:

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.

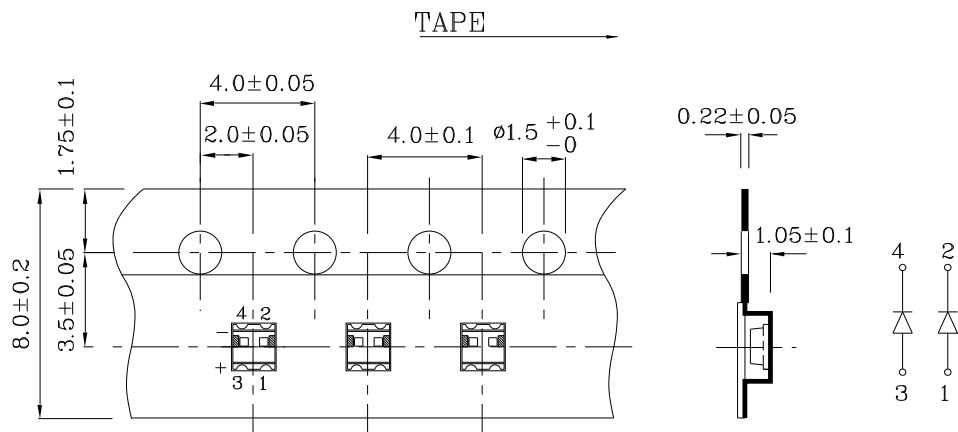
❖ Recommended Soldering Pattern (Units : mm; Tolerance: ±0.1)



❖ 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:

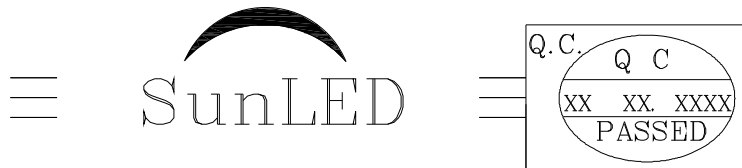
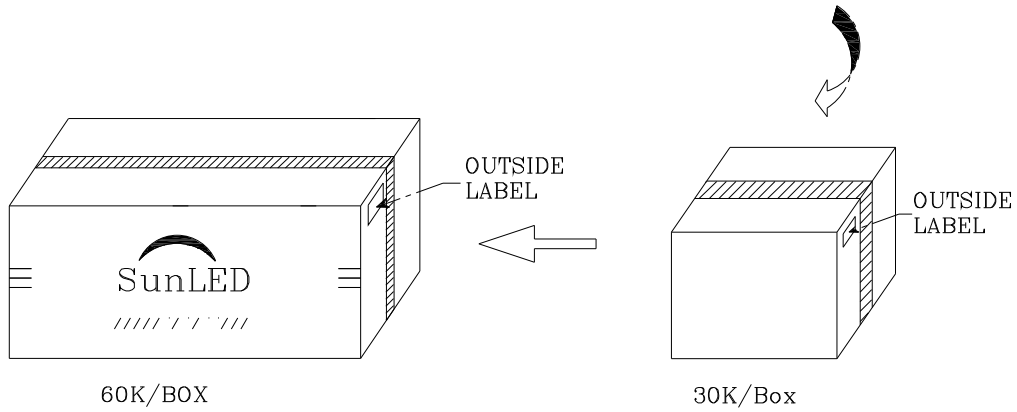
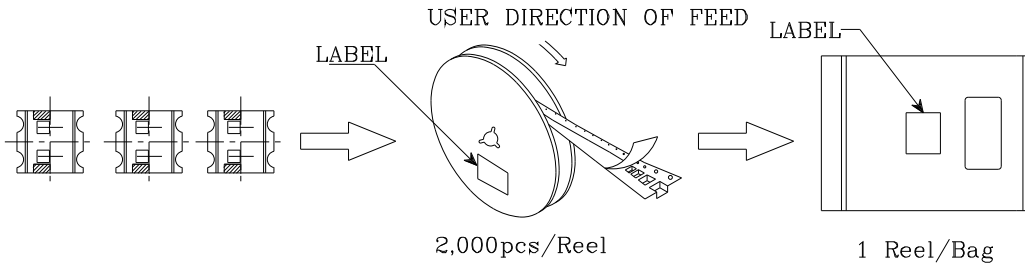
1. Wavelength: +/-1nm
2. Luminous Intensity / Luminous Flux: +/-15%
3. Forward Voltage: +/-0.1V


Note: Accuracy may depend on the sorting parameters.



**PACKING & LABEL SPECIFICATIONS**

**ZMDKBBA59W-1**



P/NO : Zxxx59x-1	
QTY : 2,000 pcs	CODE: XXX
S/N : XX	
LOT NO :	
 XXXXXXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	