

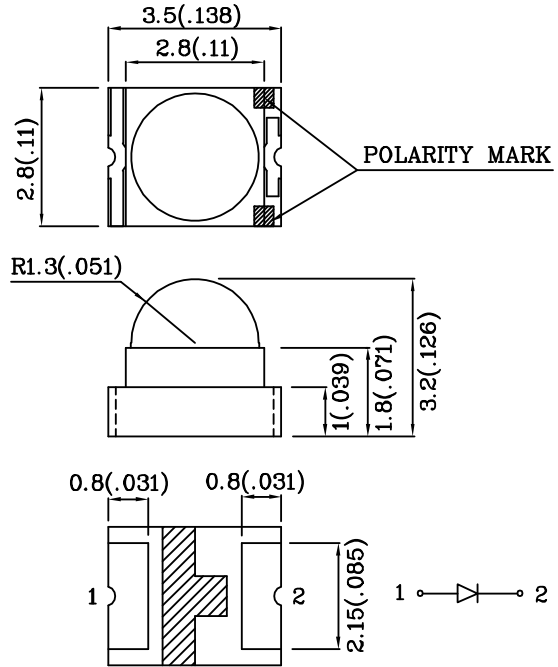
### Features

- SINGLE COLOR.
- SUITABLE FOR ALL SMT ASSEMBLY AND SOLDER PROCESS.
- IDEAL FOR BACKLIGHTING.
- AVAILABLE ON TAPE AND REEL.
- PACKAGE : 500PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.



#### Notes:

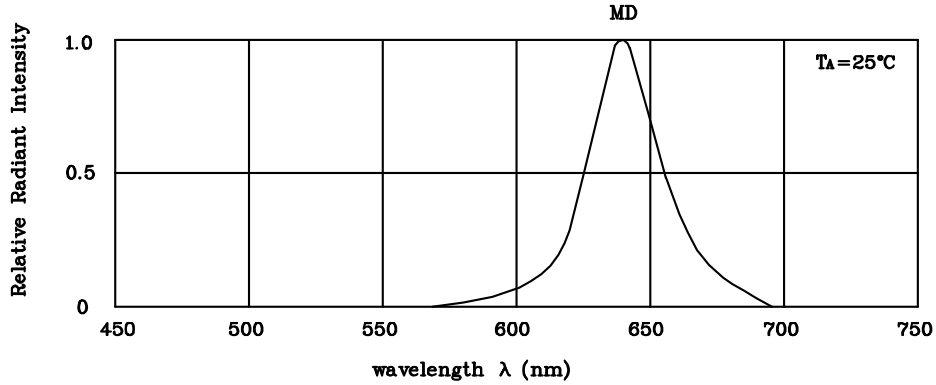
1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.2(0.008")$  unless otherwise noted.
3. Specifications are subject to change without notice.



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

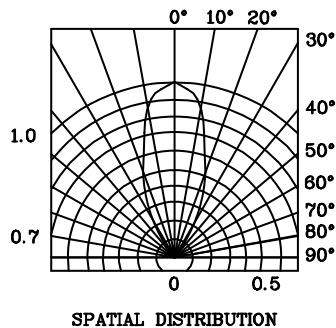
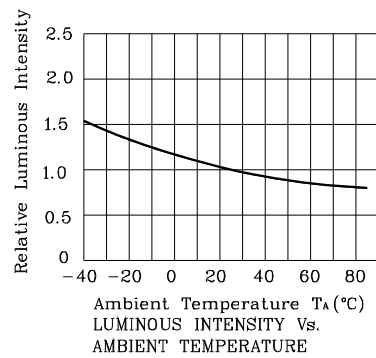
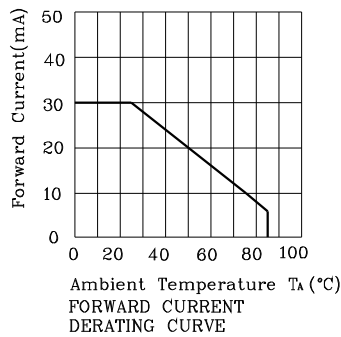
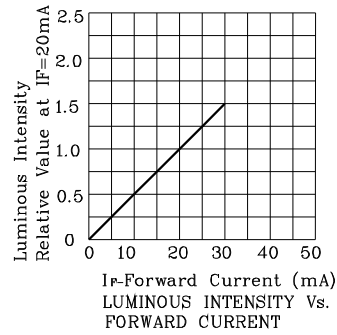
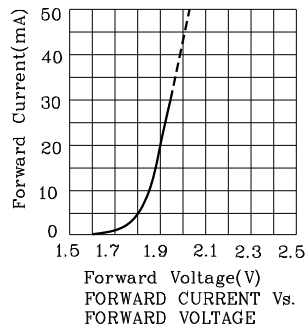
Operating Characteristics ( $T_A=25^\circ\text{C}$ )		MD (InGaAlP)	Unit
Forward Voltage (Typ.) ( $I_F=20\text{mA}$ )	$V_F$	1.9	V
Forward Voltage (Max.) ( $I_F=20\text{mA}$ )	$V_F$	2.5	V
Reverse Current (Max.) ( $V_R=5\text{V}$ )	$I_R$	10	$\mu\text{A}$
Wavelength of Peak Emission (Typ.) ( $I_F=20\text{mA}$ )	$\lambda_P$	640	nm
Wavelength of Dominant Emission (Typ.) ( $I_F=20\text{mA}$ )	$\lambda_D$	628	nm
Spectral Line Full Width At Half-Maximum (Typ.) ( $I_F=20\text{mA}$ )	$\Delta\lambda$	27	nm
Capacitance (Typ.) ( $V_F=0\text{V}$ , $f=1\text{MHz}$ )	$C$	45	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity ( $I_F=20\text{mA}$ ) med		Wavelength nm $\lambda_P$	Viewing Angle $2\theta$ 1/2
				min.	typ.		
ZMD45W-2	Red	InGaAlP	Water Clear	110	497	640	40°

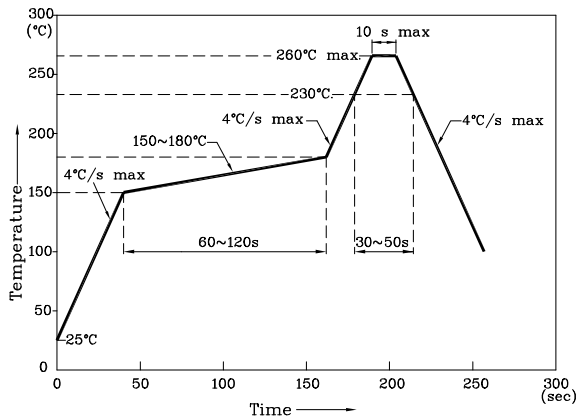


RELATIVE INTENSITY Vs. WAVELENGTH

❖ MD



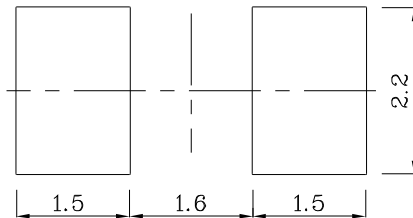
Reflow Soldering Profile For Lead-free SMT Process.



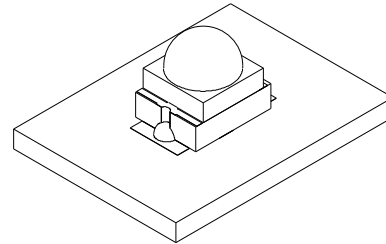
NOTES:

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.

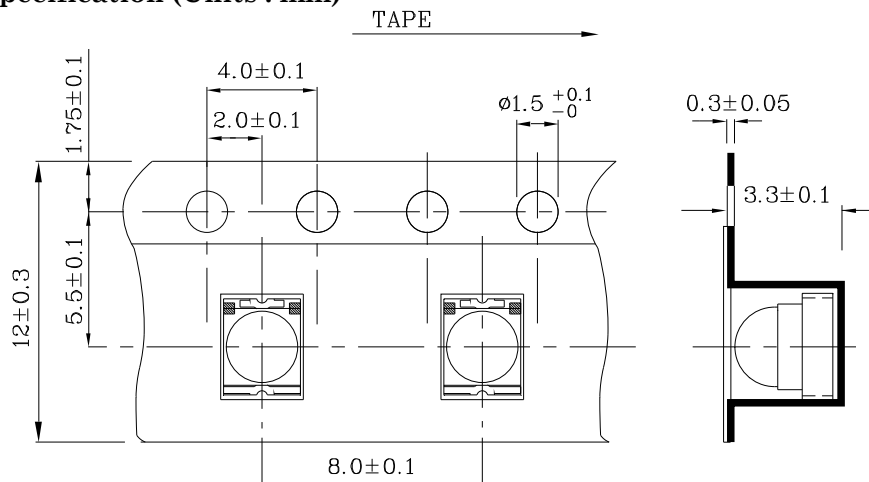
❖ Recommended Solering Pattern  
(Units : mm; Tolerance:± 0.1)



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



❖ Tape Specification (Units : mm)



Remarks:

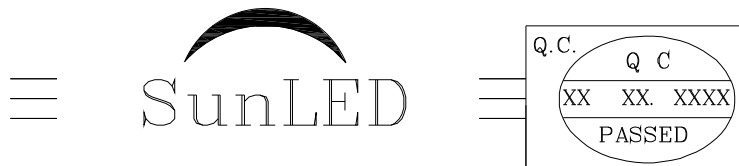
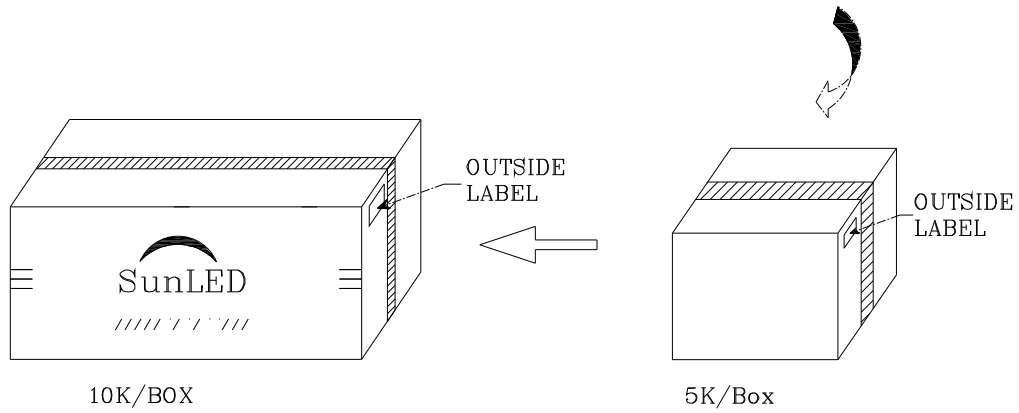
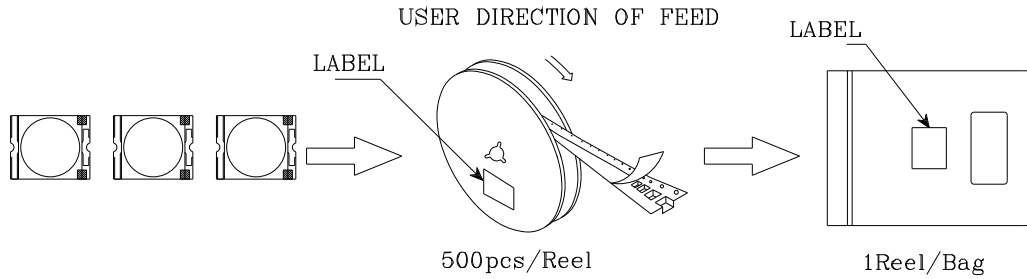
If special sorting is required (e.g. binning based on forward voltage, Luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:


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**

**ZMD45W-2**



P/N0 : Zxx45x-2	
QTY : 500 pcs	CODE: XXX
S/N : XX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	