



SUBMINIATURE SOLID STATE LAMP

PRELIMINARY SPEC

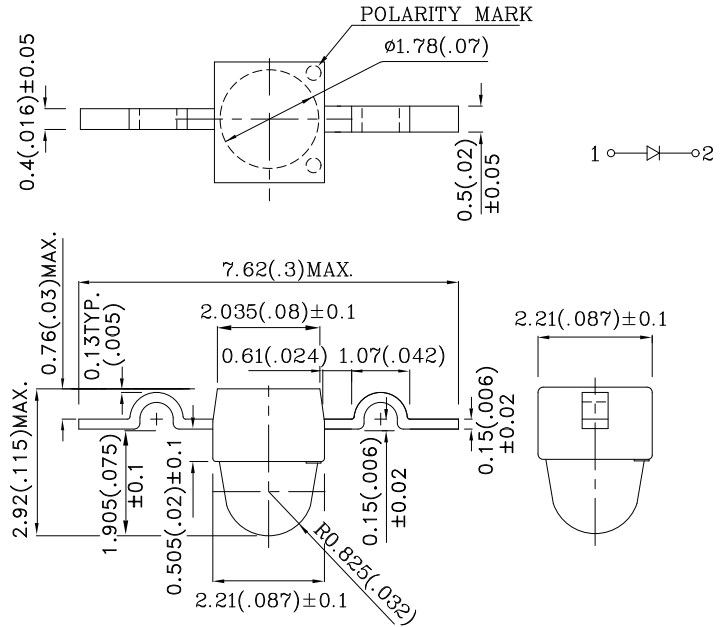
**Features**

- SUBMINIATURE PACKAGE.
- WIDE VIEWING ANGLE.
- YOKE LEAD.
- LONG LIFE-SOLID STATE RELIABILITY.
- LOW PACKAGE PROFILE.
- PACKAGE : 1000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.



Notes:

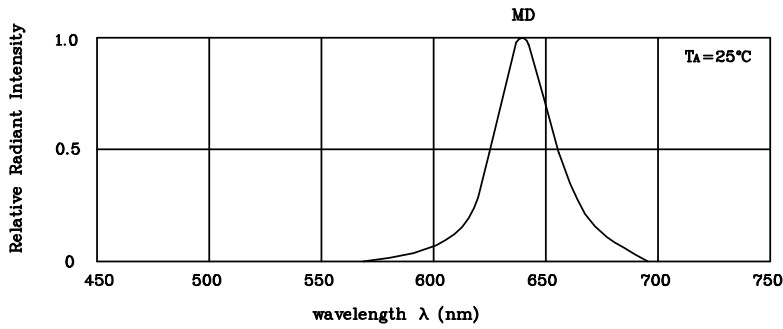
1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(0.01)$ " unless otherwise noted.
- 3.Specifications are subject to change without notice.



Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$ )		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	

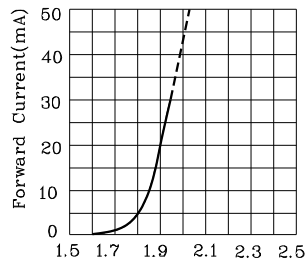
Operating Characteristics ( $T_A=25^\circ\text{C}$ )		MD (InGaAlP)	Unit
Forward Voltage (Typ.) ( $I_F=20\text{mA}$ )	$V_F$	1.9	V
Forward Voltage (Max.) ( $I_F=20\text{mA}$ )	$V_F$	2.5	V
Reverse Current (Max.) ( $V_R=5\text{V}$ )	$I_R$	10	$\mu\text{A}$
Wavelength of Peak Emission (Typ.) ( $I_F=20\text{mA}$ )	$\lambda_P$	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 ( $I_F=20\text{mA}$ ) mcd		Wavelength nm $\lambda_P$	Viewing Angle $2\theta_{1/2}$
				min.	typ.		
ZMD64W-8	Red	InGaAlP	Water Clear	650	1590	640	20°

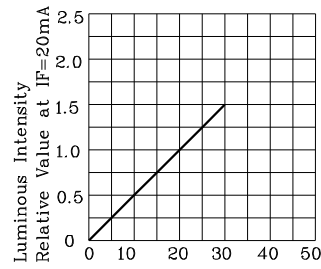


RELATIVE INTENSITY Vs. WAVELENGTH

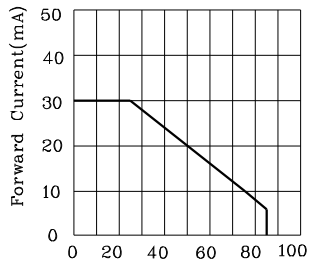
❖ MD



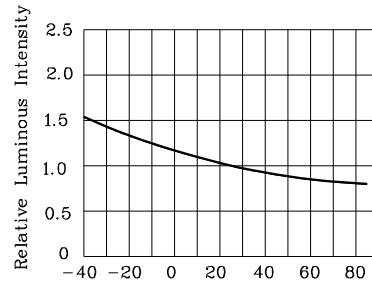
FORWARD CURRENT Vs. FORWARD VOLTAGE



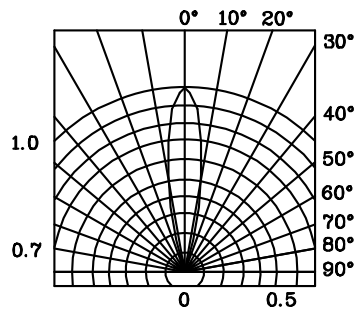
LUMINOUS INTENSITY Vs. FORWARD CURRENT



FORWARD CURRENT DERATING CURVE

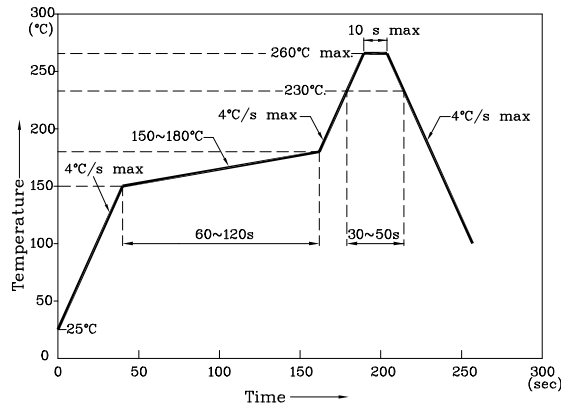


LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

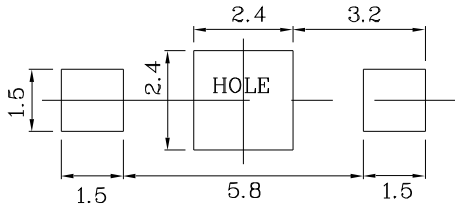
Reflow Soldering Profile For Lead-free SMT Process.



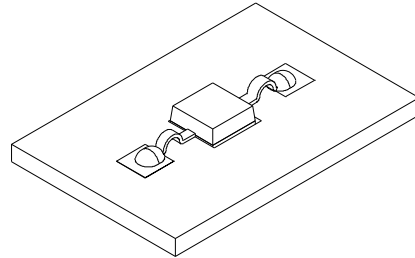
NOTES:

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.

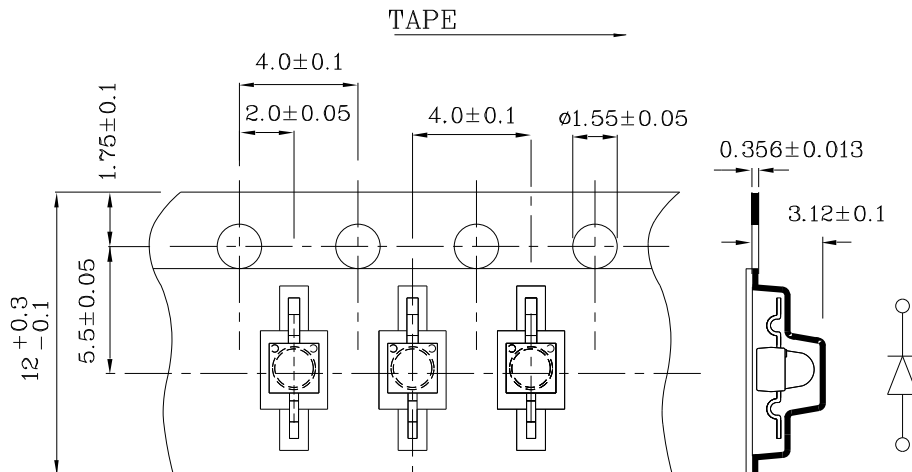
❖ Recommended Soldering Pattern (Units : mm; Tolerance:± 0.1)



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



❖ Tape Specification (Units : mm)



Remarks:

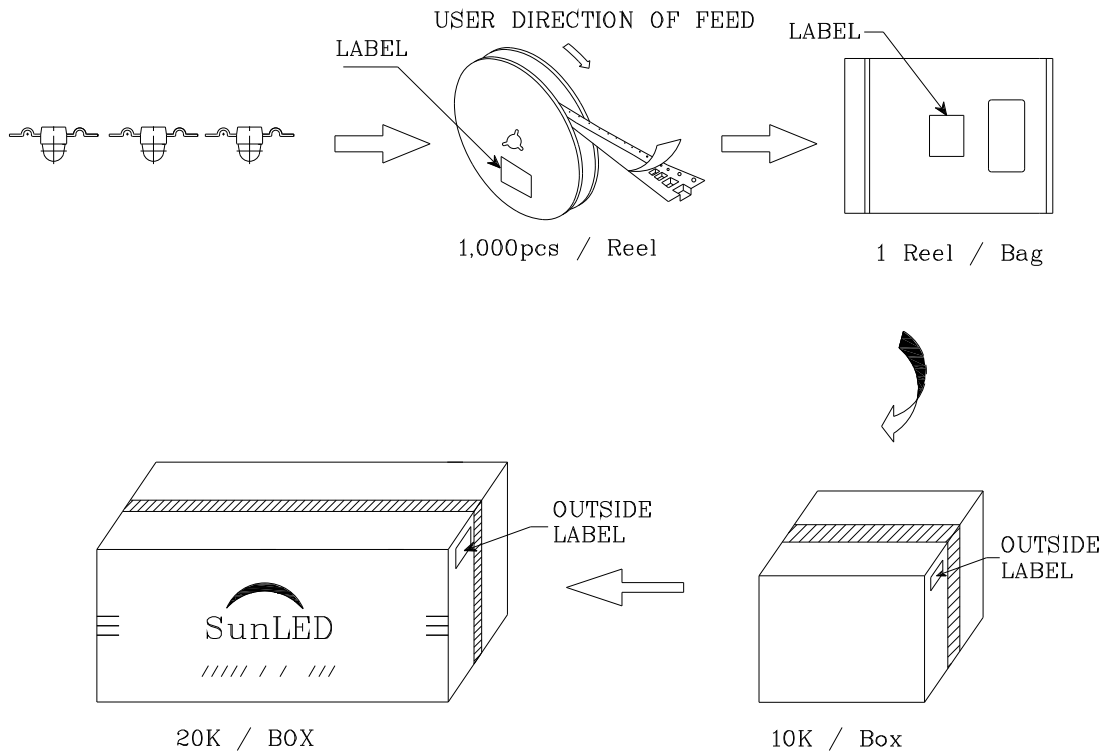

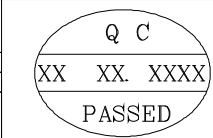
If special sorting is required (e.g. binning based on forward voltage, Luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:


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**

**ZMD64W-8**

P/NO : Zxx64x-8	
QTY : 1,000 pcs	CODE: XXX
S/N : XX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	