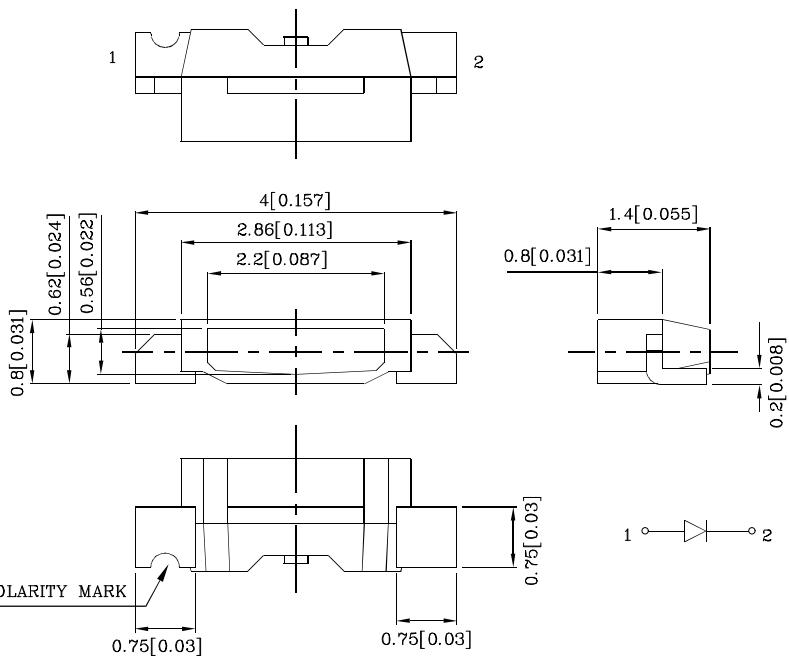


## Features

- Ideal for indication light on hand held products
- Long life and robust package
- Standard Package: 2,000pcs/ Reel
- MSL (Moisture Sensitivity Level): 3
- RoHS Compliant



## Package Schematics



### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.1$  (0.004") unless otherwise noted.
3. Specifications are subject to change without notice.

Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$ )		M2CRK (AlGaInP)	Unit
Reverse Voltage	$V_R$	5	V
Forward Current	$I_F$	30	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	$i_{FS}$	150	mA
Power Dissipation	$P_D$	84	mW
Operating Temperature	$T_A$	-40 ~ +85	°C
Storage Temperature	$T_{STG}$	-40 ~ +85	

Operating Characteristics ( $T_A=25^\circ\text{C}$ )		M2CRK (AlGaInP)	Unit
Forward Voltage (Typ.) ( $I_F=20\text{mA}$ )	$V_F$	2.2	V
Forward Voltage (Max.) ( $I_F=20\text{mA}$ )	$V_F$	2.8	V
Reverse Current (Max.) ( $V_R=5\text{V}$ )	$I_R$	10	uA
Wavelength of Peak Emission CIE127-2007*(Typ.) ( $I_F=20\text{mA}$ )	$\lambda_P$	640*	nm
Wavelength of Dominant Emission CIE127-2007*(Typ.) ( $I_F=20\text{mA}$ )	$\lambda_D$	625*	nm
Spectral Line Full Width At Half-Maximum (Typ.) ( $I_F=20\text{mA}$ )	$\Delta\lambda$	20	nm
Capacitance (Typ.) ( $V_F=0\text{V}$ , $f=1\text{MHz}$ )	C	27	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity CIE127-2007* ( $I_F=20\text{mA}$ ) mcd	Wavelength CIE127-2007* nm $\lambda_P$	Viewing Angle 20 1/2
XZM2CRK89S-1	Red	AlGaInP	Water Clear	1000 300*	1495 447*	640* 120°

\*Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

### **Handling Precautions**

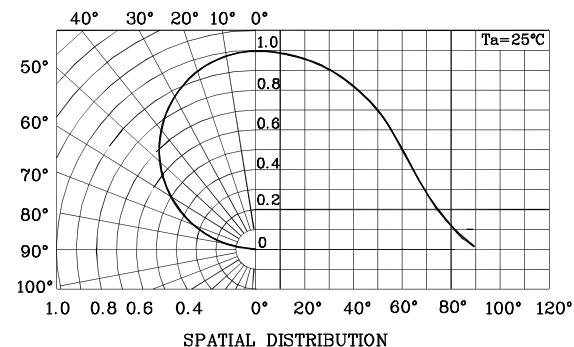
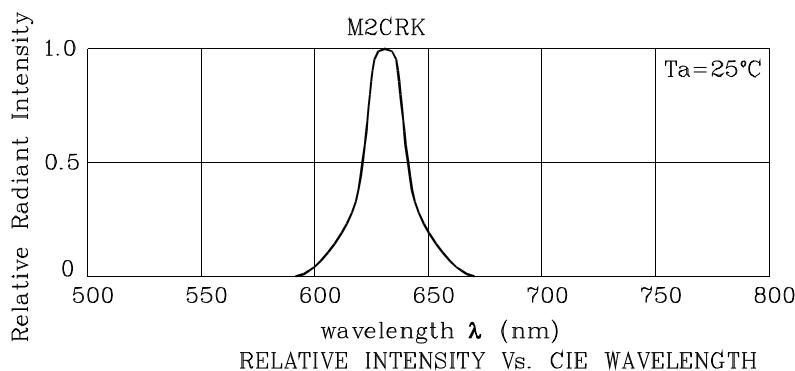
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.

As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might lead to damage and premature failure of the LED.

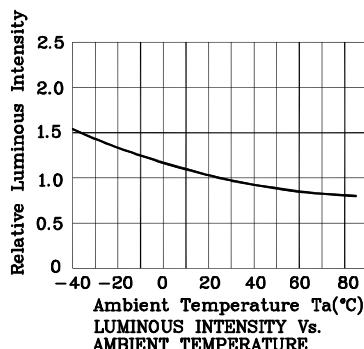
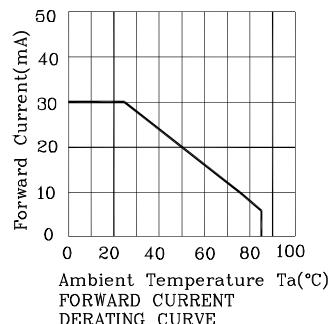
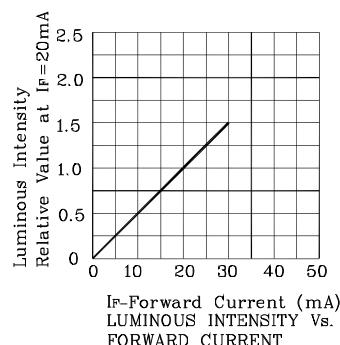
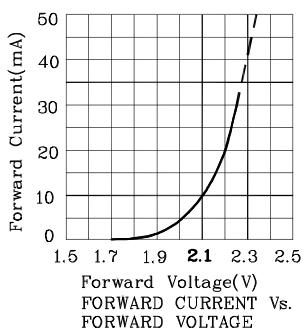
1. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.



2. As silicone encapsulation is permeable to gases, some corrosive substances such as H<sub>2</sub>S might corrode silver plating of leadframe. Special care should be taken if an LED with silicone encapsulation is to be used near such substances.

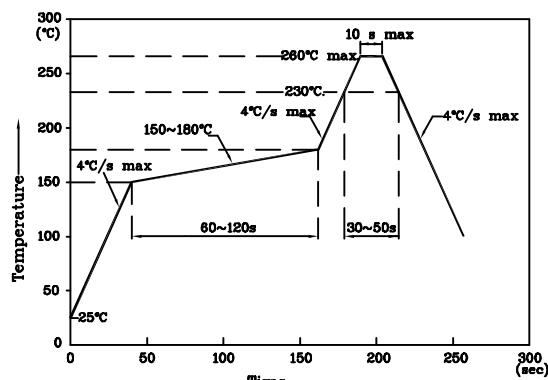


### ❖ M2CRK



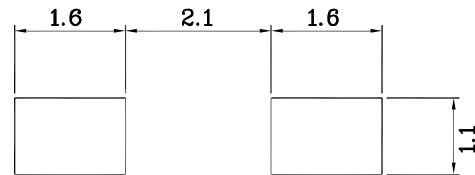
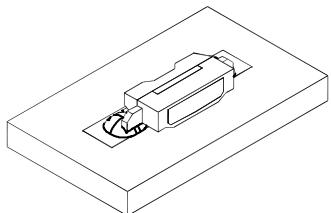
LED is recommended for reflow soldering and soldering profile is shown below.

#### Reflow Soldering Profile for SMD Products (Pb-Free Components)

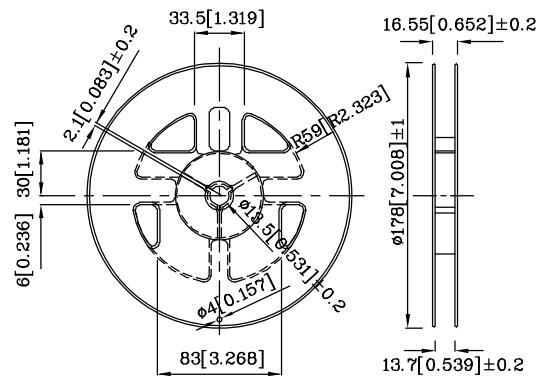


❖ The device has a single mounting surface.  
The device must be mounted according to  
the specifications.

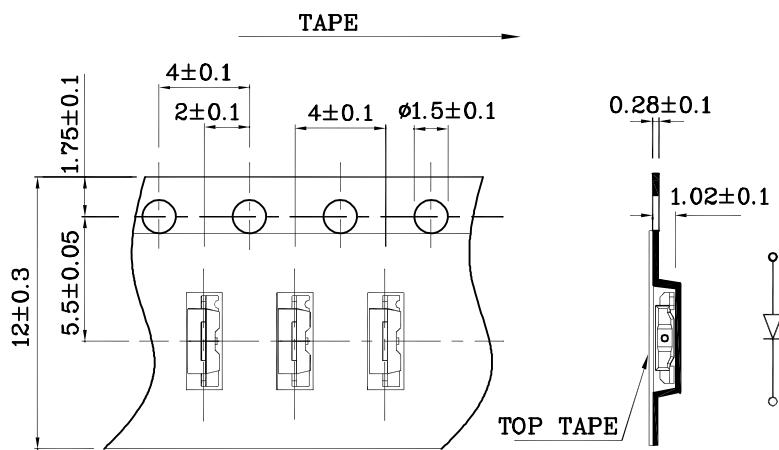
❖ Recommended Soldering Pattern  
(Units : mm; Tolerance:  $\pm 0.1$ )



❖ Reel Dimension



❖ Tape Specification (Units : mm)



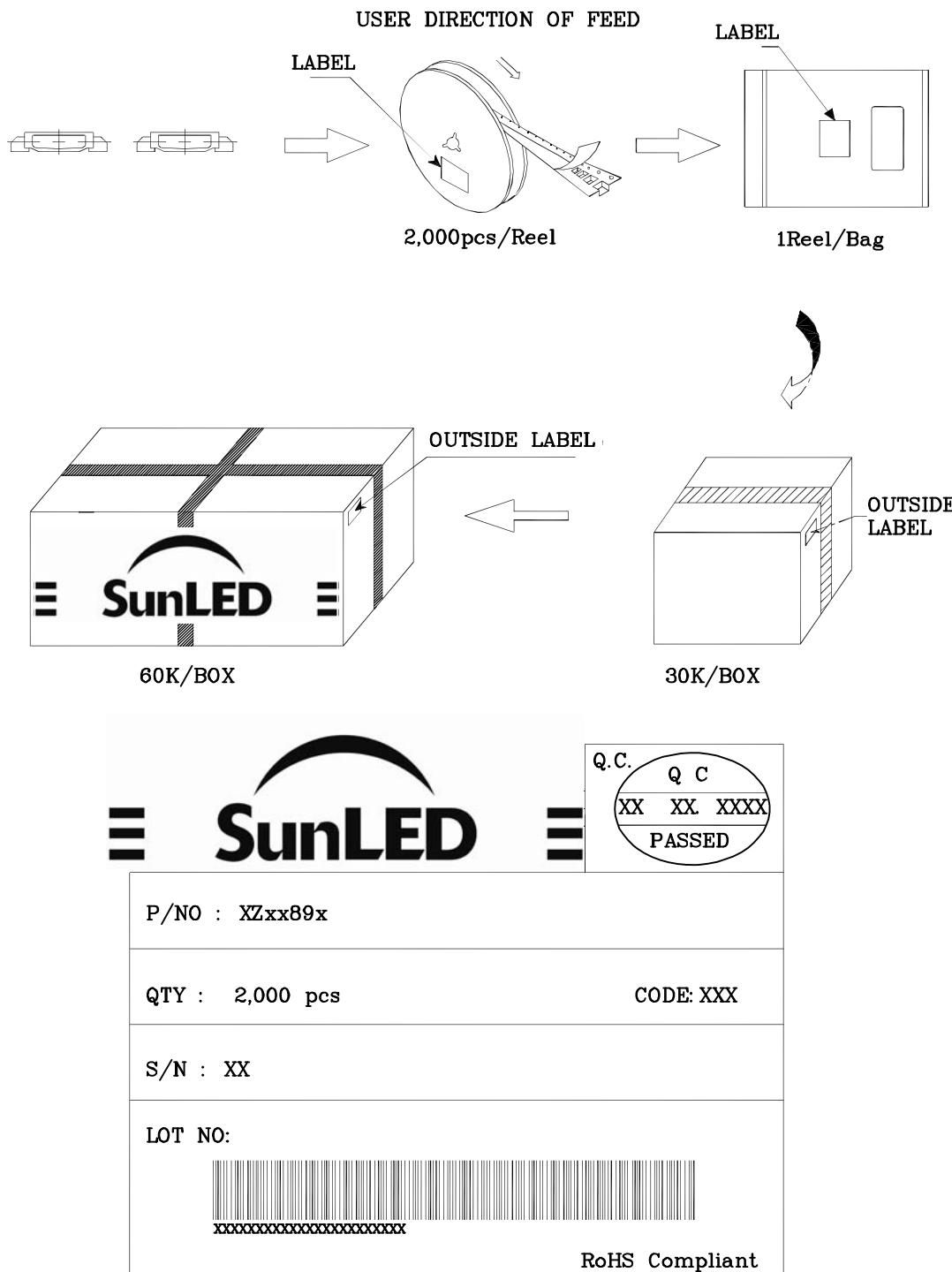
Remarks:

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:  $\pm 1\text{nm}$
2. Luminous intensity / luminous flux:  $\pm 15\%$
3. Forward Voltage:  $\pm 0.1\text{V}$

Note: Accuracy may depend on the sorting parameters.

## PACKING & LABEL SPECIFICATIONS



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