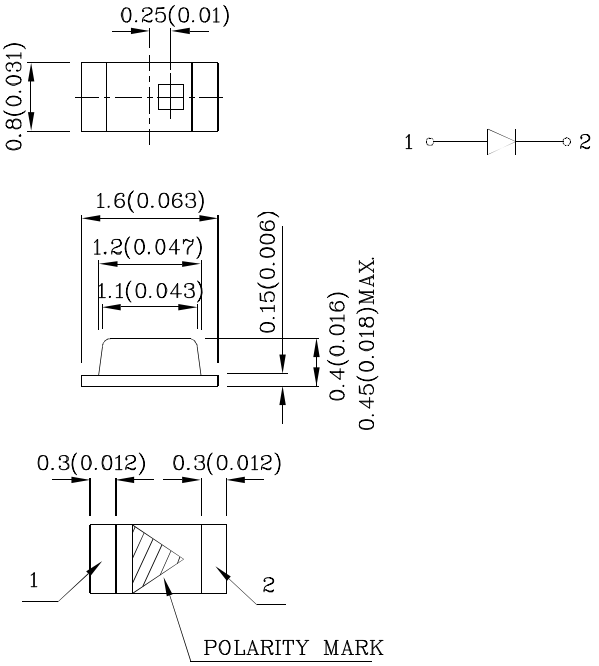
Part Number: XZMDK53W-3

1.6x0.8mm SMD CHIP LED LAMP

Features

- Ideal for indication light on hand held products
- Long life and robust package
- Variety of lens types and color choices available
- Standard Package: 2,000pcs/ Reel
- MSL (Moisture Sensitivity Level): 3
- RoHS compliant

Package Schematics



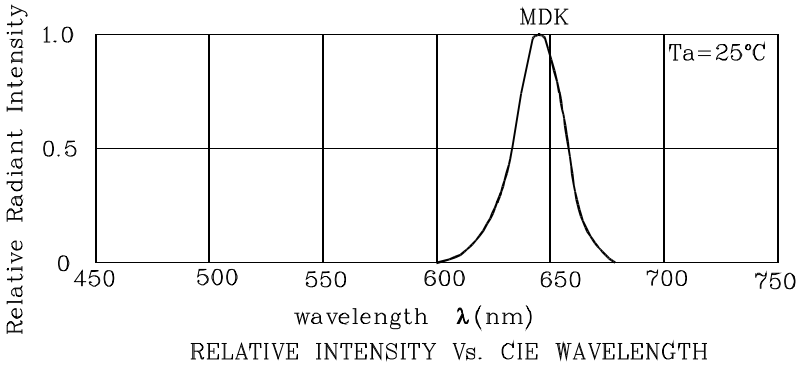
Notes:
1. All dimensions are in millimeters (inches).
2.Tolerance is ±0.1(0.004") unless otherwise noted.
3. Specifications are subject to change without notice.

Absolute Maximum Ratings (T_A=25°C)		**MDK (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}	185	mA
Power Dissipation	P_D	75	mW
Operating Temperature	T_A	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +85	

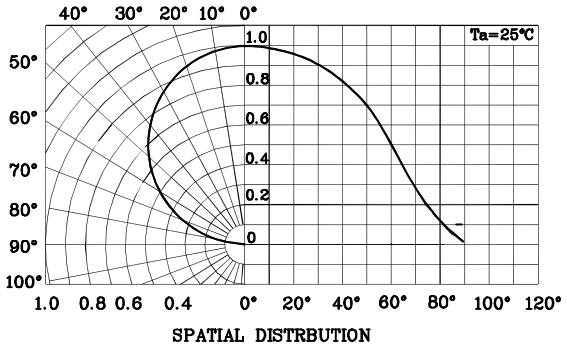
Operating Characteristics (T_A=25°C)		**MDK (AlGaInP)**	**Unit**
Forward Voltage (Typ.) (I_F=20mA)	V_F	1.95	V
Forward Voltage (Max.) (I_F=20mA)	V_F	2.5	V
Reverse Current (Max.) (V_R=5V)	I_R	10	uA
Wavelength of Peak Emission CIE127-2007*(Typ.) (I_F=20mA)	λP	645*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) (I_F=20mA)	λD	630*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I_F=20mA)	△λ	28	nm
Capacitance (Typ.) (V_F=0V, f=1MHz)	C	35	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity CIE127-2007* (I_F=20mA) mcd		Wavelength CIE127-2007* nm λP	Viewing Angle 2θ 1/2
				min.	typ.		
XZMDK53W-3	Red	AlGaInP	Water Clear	120 40*	228 79*	645*	120°

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

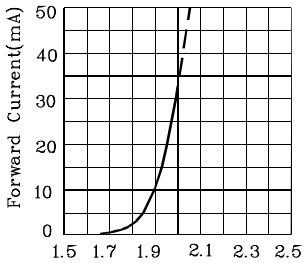


RELATIVE INTENSITY Vs. CIE WAVELENGTH

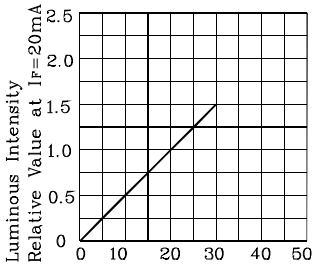


SPATIAL DISTRBUTION

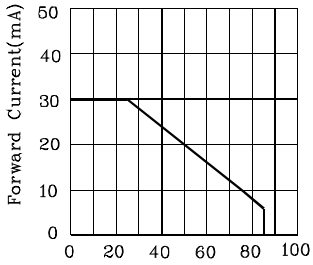
❖ MDK



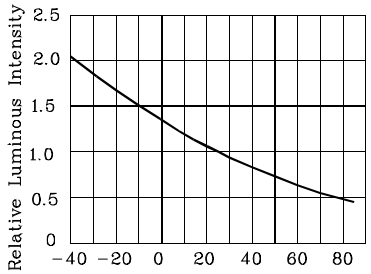
FORWARD CURRENT Vs.
FORWARD VOLTAGE



LUMINOUS INTENSITY Vs.
FORWARD CURRENT



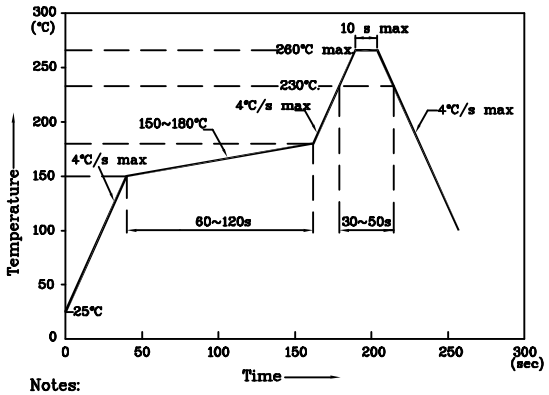
FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

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

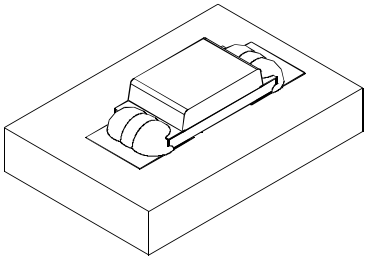
Reflow Soldering Profile for SMD Products (Pb−Free Components)



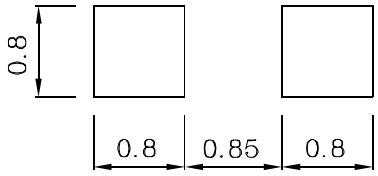
Notes:

1. **Maximum soldering temperature should not exceed 260℃**
2. **Recommended reflow temperature: 145℃−260℃**
3. **Do not put stress to the epoxy resin during high temperatures conditions**

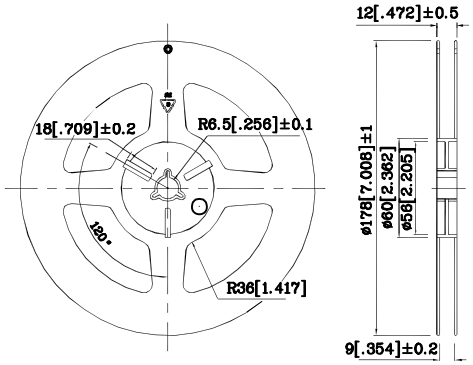
❖ **The device has a single mounting surface. The device must be mounted according to the specifications.**



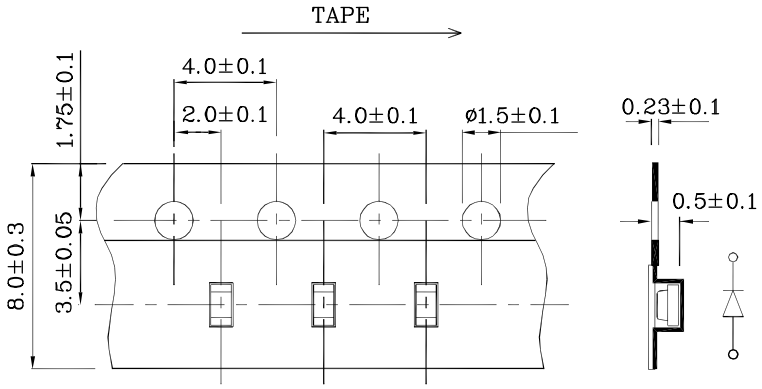
❖ **Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)**



❖ **Reel Dimension**



❖ **Tape Specification (Units : mm)**



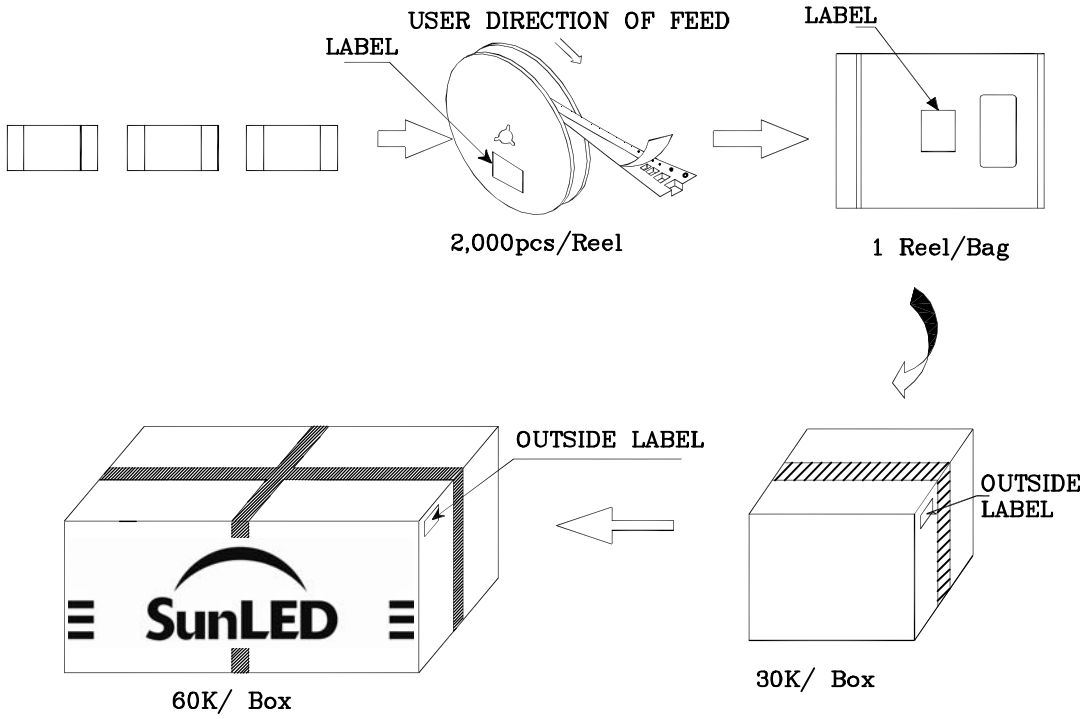
Remarks:

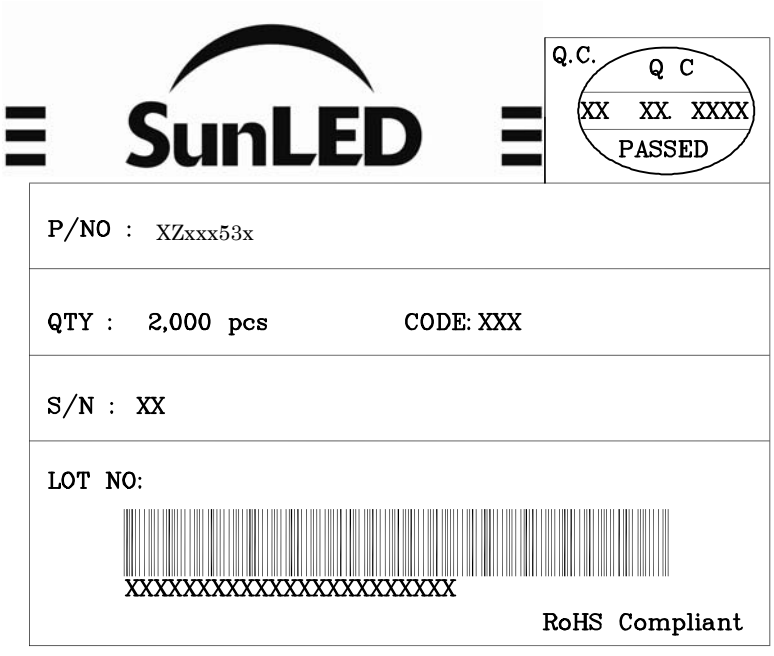
If special sorting is required (e.g. binning based on forward voltage, Luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous intensity / luminous flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.

PACKING & LABEL SPECIFICATIONS





TERMS OF USE

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2. Contents within this document are subject to improvement and enhancement changes without notice.
3. The product(s) in this document are designed to be operated within the electrical and environmental specifications indicated on the datasheet. User accepts full risk and responsibility when operating the product(s) beyond their intended specifications.
4. The product(s) described in this document are intended for electronic applications in which a person's life is not reliant upon the LED. Please consult with a SunLED representative for special applications where the LED may have a direct impact on a person's life.
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