



${ m SOT\text{-}23}$ SURFACE MOUNT LED LAMP

Features

 \bullet Ideal for indication light on hand held products

• Long life and robust package

• Standard Package: 2,000pcs/ Reel

 \bullet MSL (Moisture Sensitivity Level): 3

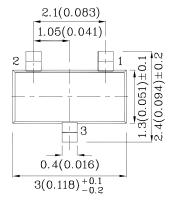
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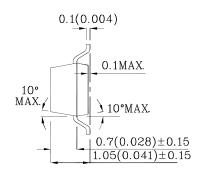
• RoHS compliant





Package Schematics





1 ANODE

2 N.C.

3 CATHODE

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 $(T_A=25^{\circ}C)$		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	ifs	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.) $(V_R=5V)$	${ m I}_{ m R}$	10	uA
Wavelength of Peak Emission CIE127-2007* (Typ.) (I _F =20mA)	λΡ	645*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) $(I_F=20\text{mA})$	λD	630*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I _F =20mA)	$\triangle \lambda$	28	nm
Capacitance (Typ.) (V _F =0V, f=1MHz)	С	35	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous CIE127 (I _F =20 mo	7-2007* OmA)	Wavelength CIE127-2007* nm λP	Viewing Angle 20 1/2
				min.	typ.		
ZMDK48WA	Red	AlGaInP	Water Clear	120 40*	198 59*	645*	140°

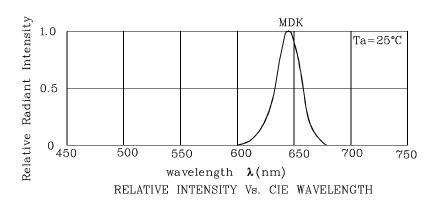
^{*}Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

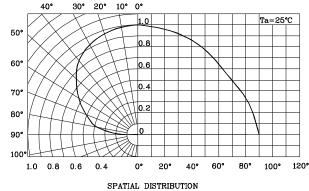
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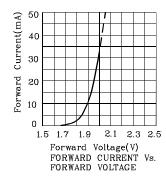


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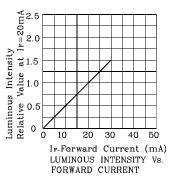


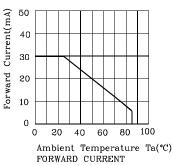


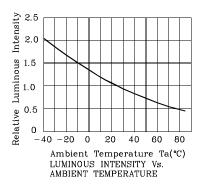
❖ MDK



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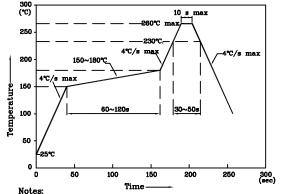






LED is recommended for reflow soldering and soldering profile is shown below.

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

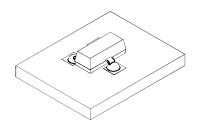


- 1. Maximum soldering temperature should not exceed 260°C
- 2. Recommended reflow temperature: 145°C-260°C
- 3. Do not put stress to the epoxy resin during high temperatures conditions

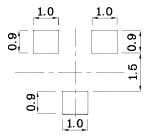




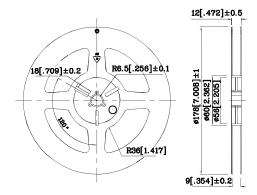
❖ The device has a single mounting surface. The device must be mounted according to the specifications.



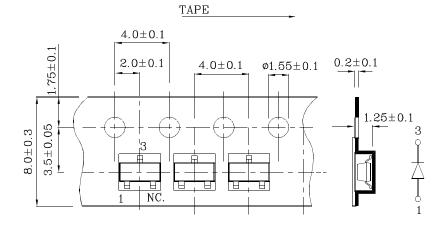
♦ Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.1)



❖ 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:

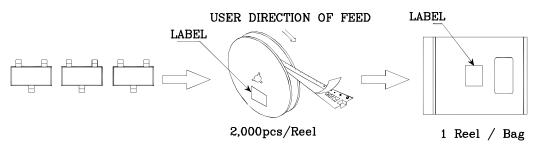
- 1. Wavelength: +/-1nm
- 2. Luminous intensity / luminous flux: +/-15%
- 3. Forward Voltage: +/-0.1V

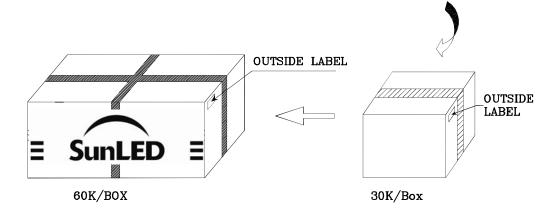
Note: Accuracy may depend on the sorting parameters.

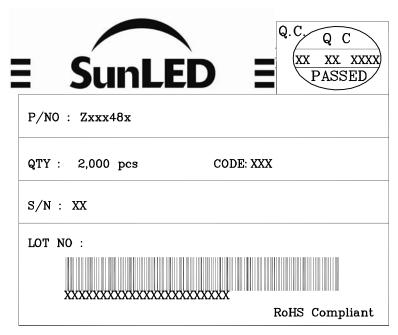




PACKING & LABEL SPECIFICATIONS







TERMS OF USE

- 1. Data presented in this document reflect statistical figures and should be treated as technical reference only.
- $2. \ Contents \ within \ this \ document \ are \ subject \ to \ improvement \ and \ enhancement \ changes \ without \ notice.$
- 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.
- 5. The contents within this document may not be altered without prior consent by SunLED.
- 6. Additional technical notes are available at http://www.SunLED.com/TechnicalNotes

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