

1.6X1.25mm BI-COLOR SMD CHIP LED LAMP

# **Features**

• Ideal for indication light on hand held products

• Long life and robust package

• Standard Package: 2,000pcs/ Reel

 $\bullet$  MSL (Moisture Sensitivity Level): 3

• RoHS compliant







ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES

# 1.6(0.063) LED CHIP MDK CBD POLARITY MARK 1.2(0.047) .25(0.01) 1.1(0.043)

Notes:

POLARITY MARK 1. All dimensions are in millimeters (inches).

Package Schematics

- 2. Tolerance is  $\pm 0.2(0.008")$  unless otherwise noted.
- 3. Specifications are subject to change without notice.

0.9(0.035)

Absolute Maximum Ratings $(T_A=25^{\circ}C)$		MDK (AlGaInP)	CBD (InGaN)	Unit
Reverse Voltage	$V_{\mathrm{R}}$	5	5	V
Forward Current	$I_{\mathrm{F}}$	30	30	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	i <sub>FS</sub>	185	150	mA
Power Dissipation	$P_D$	75	120	mW
Electrostatic Discharge Threshold (HBM)		-	250	V
Operating Temperature	$T_{\rm A}$	-40 ~ +85		°C
Storage Temperature	Tstg	-40 ~ +85		C

Operating Characteristics $(T_A=25$ °C)		MDK (AlGaInP)	CBD (InGaN)	Unit
Forward Voltage (Typ.) $(I_F=20 \text{mA})$	$V_{\mathrm{F}}$	1.95	3.3	V
Forward Voltage (Max.) $(I_F=20 \text{mA})$	$V_{\mathrm{F}}$	2.5	4	V
Reverse Current (Max.) $(V_R=5V)$	$I_R$	10	50	uA
Wavelength of Peak Emission CIE127-2007* (Typ.) $(I_F=20\text{mA})$	λΡ	645*	460*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) $(I_F=20\text{mA})$	λD	630*	465*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	Δλ	28	25	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	35	100	pF

Part Number	Emitting Color	Emitting Material	Lens-color	$\begin{array}{c} Luminous\ Intensity\\ CIE127\text{-}2007*\\ (I_F\text{=}20\text{mA})\ mcd \end{array}$		Wavelength CIE127-2007* nm λP	Viewing Angle 20 1/2
				min.	typ.		
XZMDKCBD62W-1	Red	AlGaInP	- Water Clear	120 40*	198 79*	645*	120°
	Blue	InGaN	water Clear	40 40*	79 79*	460*	

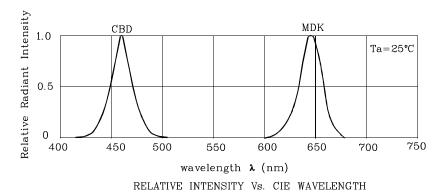
<sup>\*</sup>Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

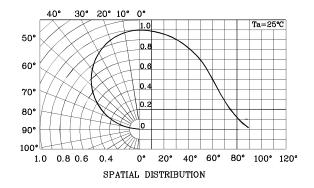
Mar 07,2014

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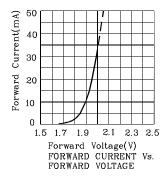


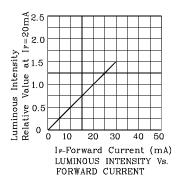


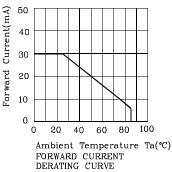


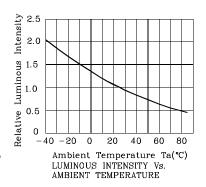


# **❖** MDK

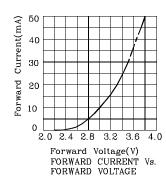


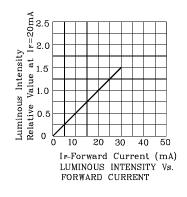


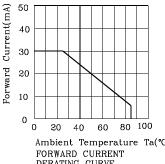




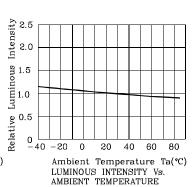
# **♦** CBD







Ambient Temperature Ta(°C) DERATING CURVE

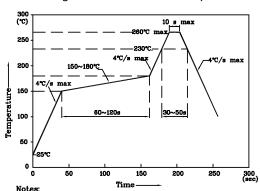






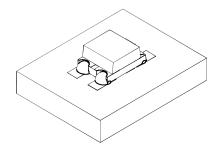
# LED is recommended for reflow soldering and soldering profile is shown below.

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

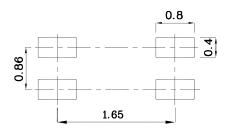


- 1. Maximum soldering temperature should not exceed 260°C
- 2. Recommended reflow temperature: 145°C-260°C
- 3. Do not put stress to the epoxy resin during high temperatures conditions

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



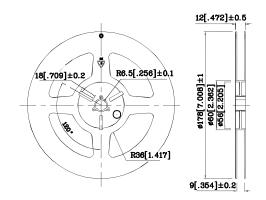
# **♦** Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.1)



# **❖** Tape Specification (Units:mm)

# TAPE 4.0±0.1 2.0±0.1 4.0±0.1 0.23±0.1 0.92±0.1 4 2 4 2 4 2 4 3 1 3 1

# **❖** Reel Dimension

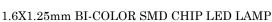


## Remarks:

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:

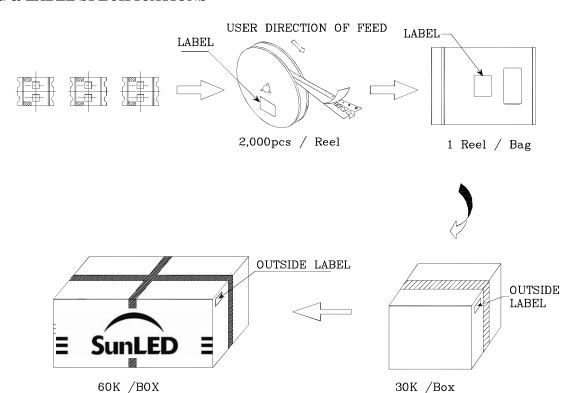
- 1. Wavelength: +/-1nm
- 2. Luminous intensity / luminous flux: +/-15%
- 3. Forward Voltage: +/-0.1V

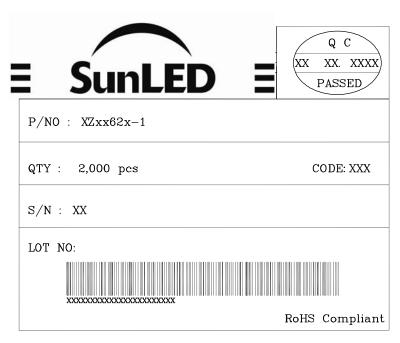
Note: Accuracy may depend on the sorting parameters.





# PACKING & LABEL SPECIFICATIONS





## TERMS OF USE

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- 2. Contents within this document are subject to improvement and enhancement changes without notice.
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- 6. Additional technical notes are available at <a href="http://www.SunLEDusa.com/TechnicalNotes.asp">http://www.SunLEDusa.com/TechnicalNotes.asp</a>

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