



**THE DATASHEET OF
XZMDKDG CBD56W**



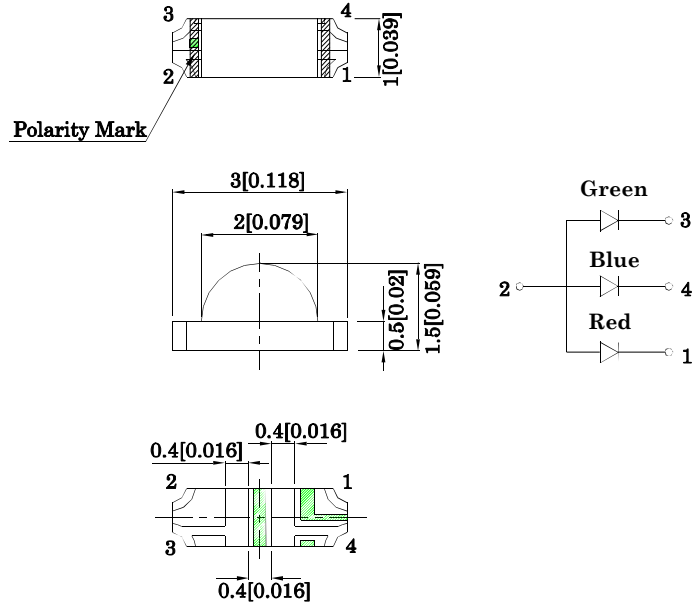
Features

- 3.0 X 1.0 X 1.5mm right angle SMD LED
- Ideal for indication on hand held products
- Low current operation
- Standard Package: 2,000pcs/ Reel
- MSL (Moisture Sensitivity Level): 3
- RoHS compliant



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Package Schematics



Notes:

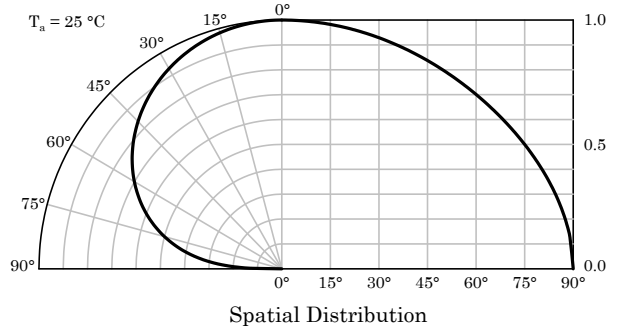
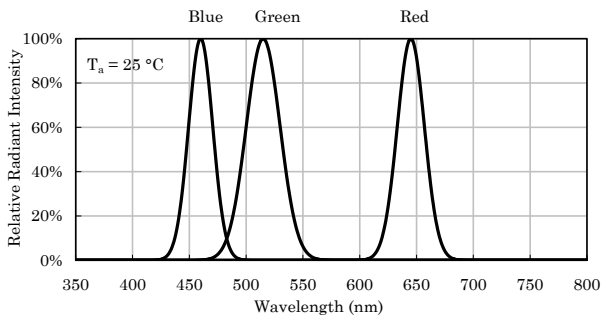
1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.2(0.008)$ " unless otherwise noted.
3. Specifications are subject to change without notice.

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$)		Red (AlGaIn P)	Green (InGaN)	Blue (InGa N)	Unit	Operating Characteristics ($T_A=25^\circ\text{C}$)		Red (AlGaIn P)	Green (InGa N)	Blue (InGa N)	Unit
Reverse Voltage	V_R	5	5	5	V	Forward Voltage (Typ.) ($I_F=20\text{mA}$)	V_F	1.95	3.3	3.3	V
Forward Current	I_F	30	25	30	mA	Forward Voltage (Max.) ($I_F=20\text{mA}$)	V_F	2.5	4.1	4.0	V
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	i_{FS}	185	150	150	mA	Reverse Current (Max.) ($V_R=5\text{V}$)	I_R	10	50	50	μA
Power Dissipation	P_D	75	102.5	120	mW	Wavelength of Peak Emission CIE127-2007*(Typ.) ($I_F=20\text{mA}$)	λ_P	645*	515*	460*	nm
Electrostatic Discharge Threshold (HBM)		3000	450	250	V	Wavelength of Dominant Emission CIE127-2007*(Typ.) ($I_F=20\text{mA}$)	λ_D	630*	525*	465*	nm
Operating Temperature	T_A	-40 ~ +85			$^\circ\text{C}$	Spectral Line Full Width At Half-Maximum (Typ.) ($I_F=20\text{mA}$)	$\Delta\lambda$	28	35	25	nm
Storage Temperature	T_{stg}					Capacitance (Typ.) ($V_F=0\text{V}$, $f=1\text{MHz}$)	C	35	45	100	pF

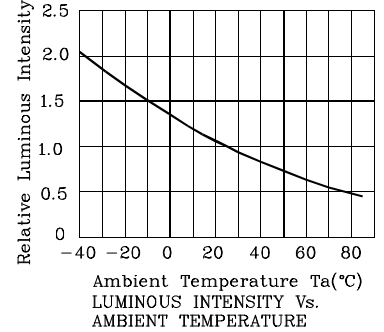
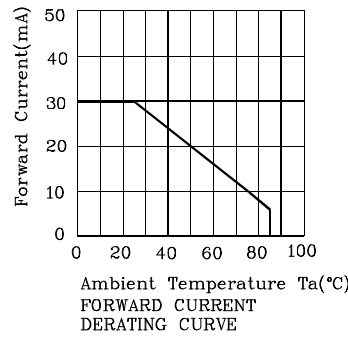
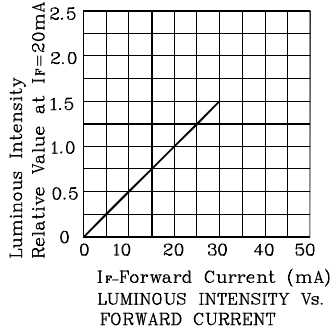
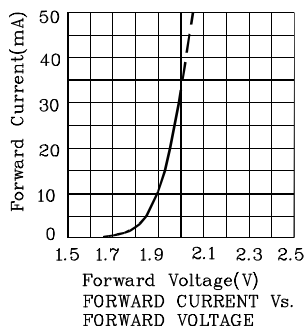
A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033)

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity CIE127-2007* ($I_F=20\text{mA}$) mcd		Wavelength CIE127-2007* nm λ_P	Viewing Angle 2 θ 1/2
				min.	typ.		
XZMDKDG CBD56W	Red	AlGaInP	Water Clear	55*	79*	645*	150°
	Green	InGaN		300*	497*	515*	
	Blue	InGaN		40*	69*	460*	

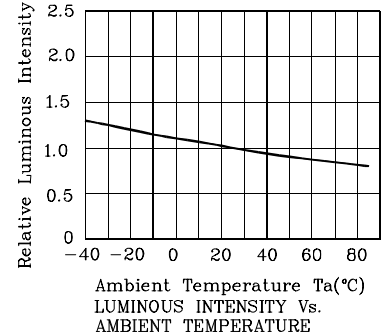
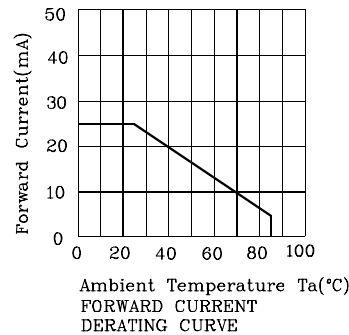
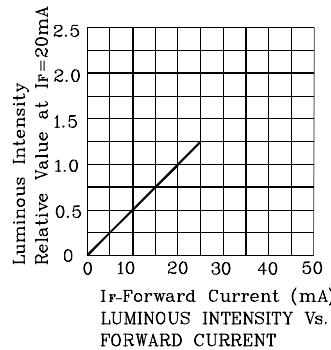
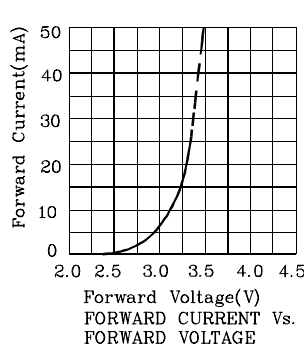
*Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.



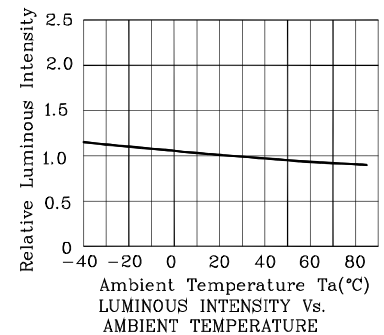
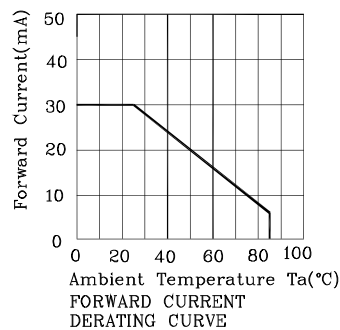
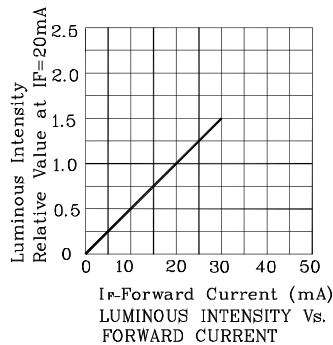
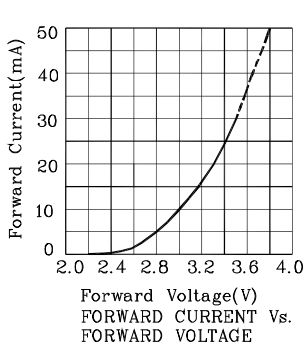
◆ Red



◆ Green

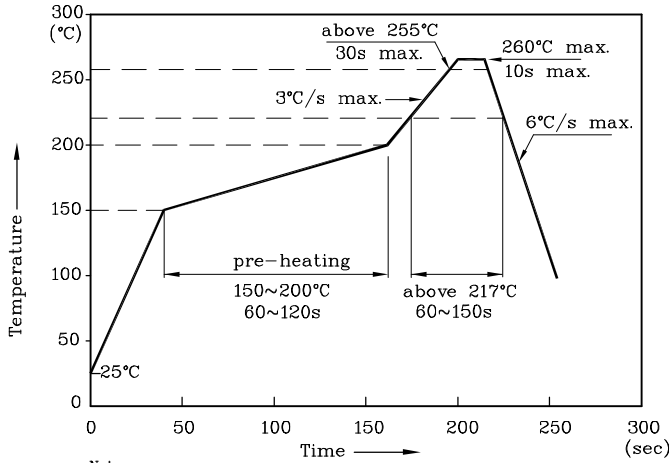


◆ Blue



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

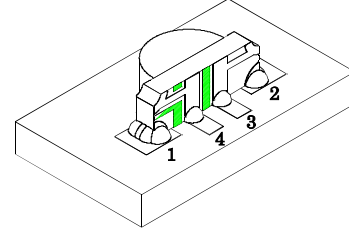
Reflow Soldering Profile for SMD Products (Pb-Free Components)



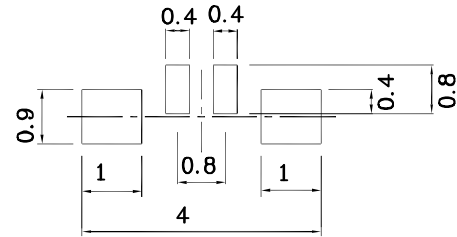
Notes:

1. All temperatures refer to the center of the package, measured on the package body surface facing up during reflow.
2. Do not apply any stress to the LED during high temperature conditions.
3. Maximum number of soldering passes: 2

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

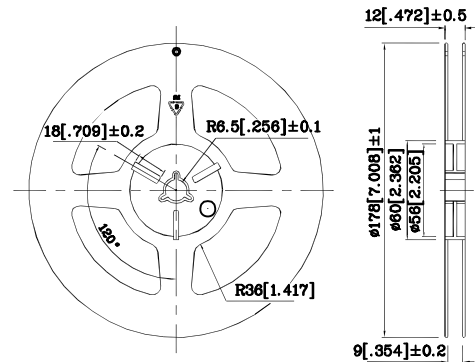
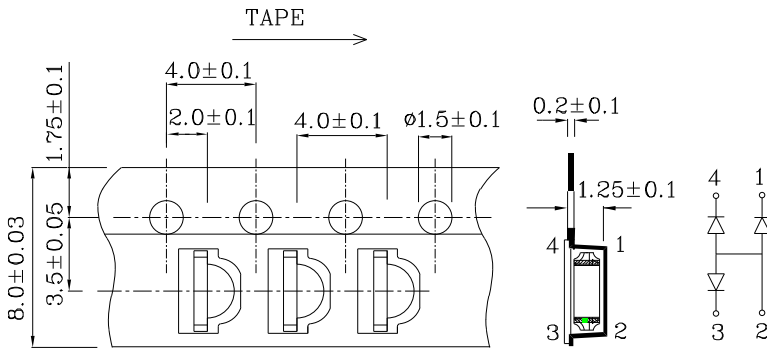


❖ Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



❖ Tape Specification (Units : mm)

❖ Reel Dimension



Remarks:

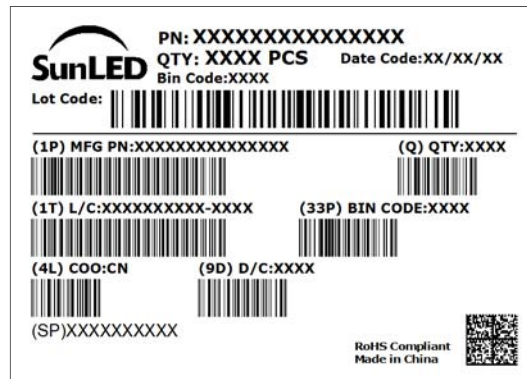
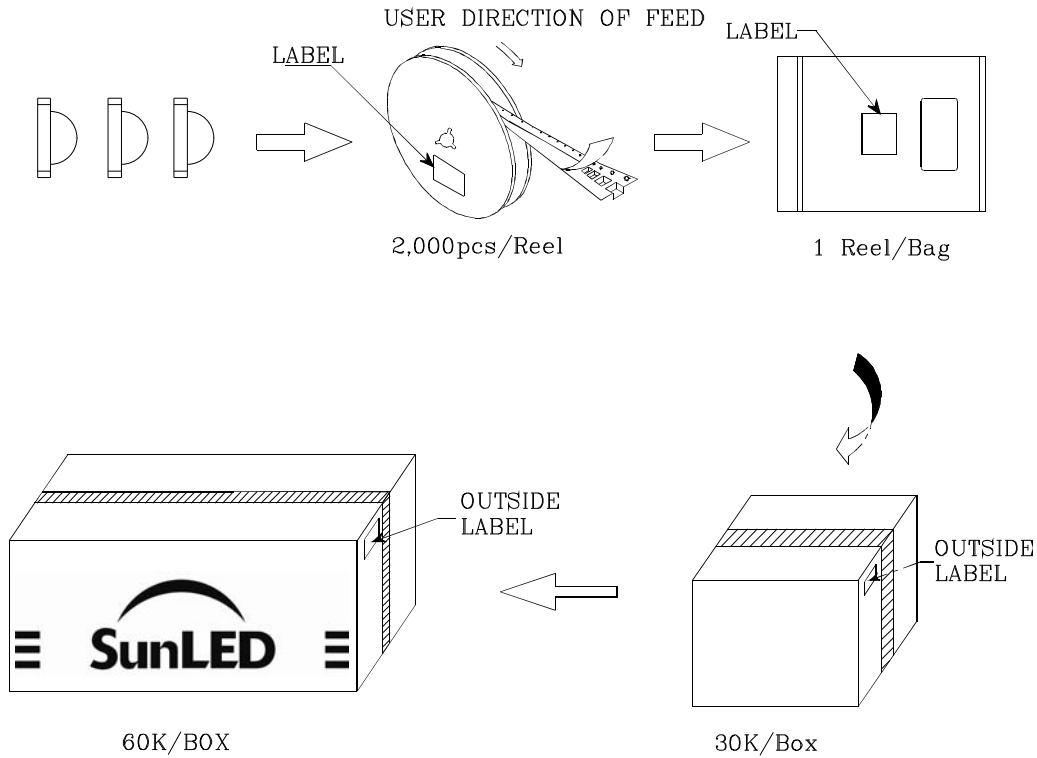
If special sorting is required (e.g. binning based on forward voltage, Luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

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

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.
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