SunLED
www.SunLEDusa.com

Part Number: XZCMEDGCBD56W

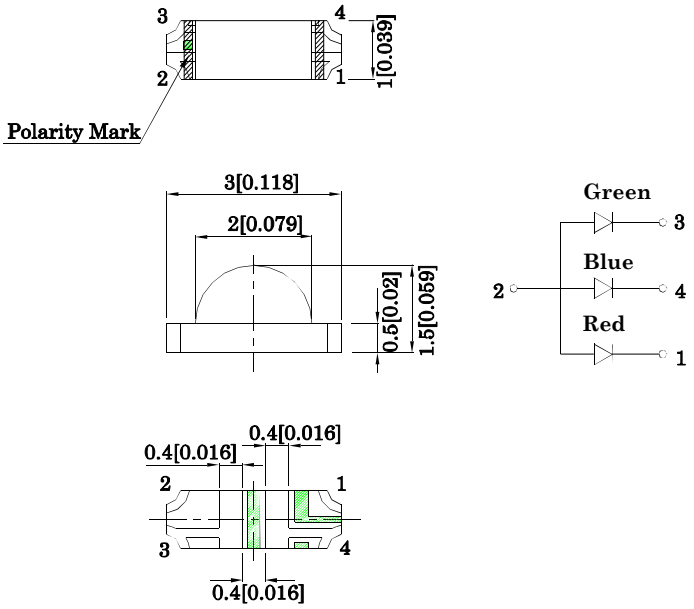
3.0x1.0mm Ultra Low Current Series

Features

- 3.0x1.0x1.5mm right angle SMD LED
- Ideal for indication on hand held products
- Low current operation
- Standard Package: 2,000pcs/ Reel
- MSL (Moisture Sensitivity Level): 3
- Low current IF=2mA operating.
- RoHS compliant

ATTENTION
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES

Package Schematics



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

Absolute Maximum Ratings (T_A=25°C)		Red (AlGaInP)	Green (InGaN)	Blue (InGaN)	Unit
Reverse Voltage	V_R	5	5	5	V
Forward Current	I_F	30	25	30	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	i_{FS}	195	150	150	mA
Power Dissipation	P_D	75	102.5	120	mW
Electrostatic Discharge Threshold (HBM)		3000	450	250	V
Operating Temperature	T_A	-40 ~ +85			°C
Storage Temperature	Tstg				

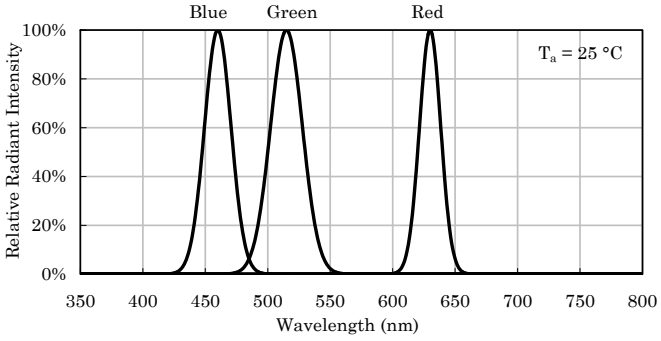
A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033)

Operating Characteristics (T_A=25°C)		Red (AlGaInP)	Green (InGaN)	Blue (InGaN)	Unit
Forward Voltage (Typ.) (I_F=2mA)	V_F	1.8	2.65	2.65	V
Forward Voltage (Max.) (I_F=2mA)	V_F	2.1	3.1	3.1	V
Reverse Current (Max.) (V_R=5V)	I_R	10	50	50	μA
Wavelength of Peak Emission CIE127-2007* (Typ.) (I_F=2mA)	λP	630*	515*	460*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) (I_F=2mA)	λD	621*	525*	465*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I_F=2mA)	△λ	20	35	25	nm
Capacitance (Typ.) (V_F=0V, f=1MHz)	C	25	45	100	pF

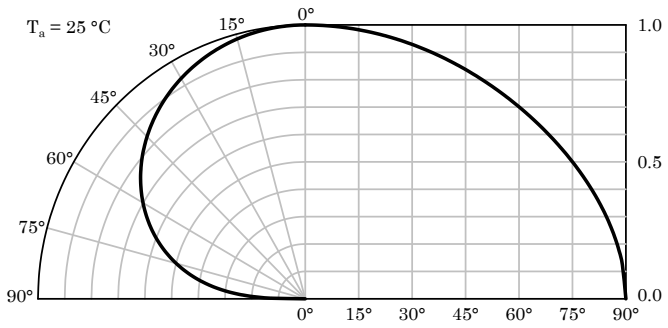
Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity CIE127-2007* (I_F=2mA) mcd min.	Luminous Intensity CIE127-2007* (I_F=2mA) mcd typ.	Wavelength CIE127-2007* nm λP	Viewing Angle 2θ 1/2
XZCMEDGCBD56W	Red	AlGaInP	Water Clear	6*	14*	630*	150°
	Green	InGaN		20*	59*	515*	
	Blue	InGaN		4*	9*	460*	

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

Oct 09,2019 XDSB8864 V3-Z Layout: Maggie L.

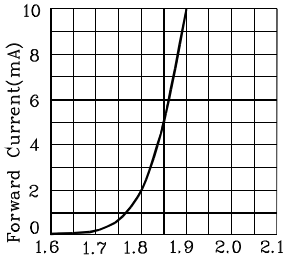


Relative Intensity Vs. CIE Wavelength

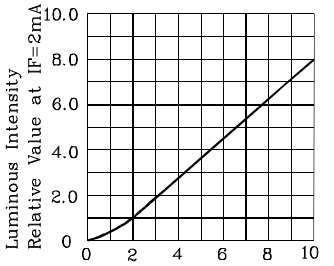


Spatial Distribution

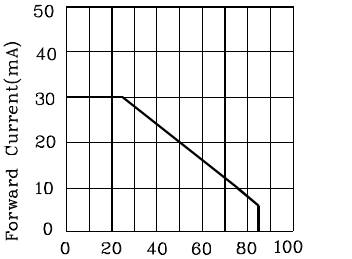
❖ Red



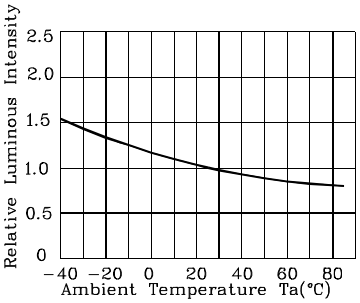
Forward Voltage(V)
Forward Current Vs.
Forward Voltage



IF–Forward Current (mA)
Luminous IntensityVs.
Forward Current

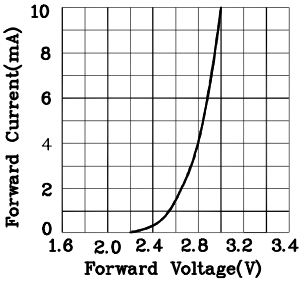


Ambient Temperature Ta (℃)
Forward Current
Derating Curve

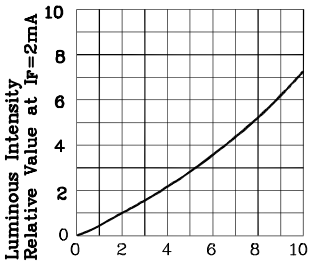


Ambient Temperature Ta(℃)
Luminous Intensity Vs.
Ambient Temperature

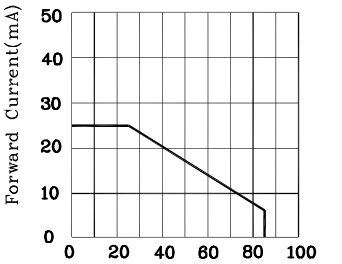
❖ Green



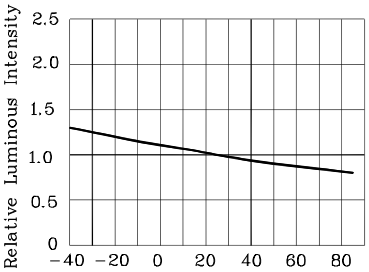
Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE



IF–Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT

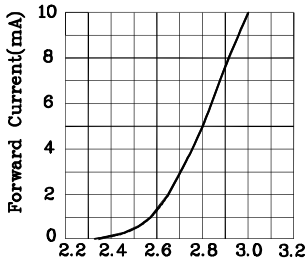


Ambient Temperature Ta(℃)
FORWARD CURRENT
DERATING CURVE

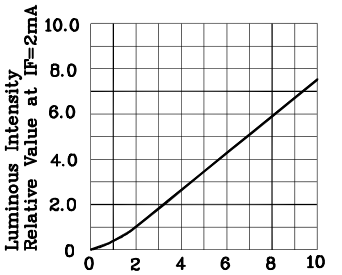


Ambient Temperature Ta(℃)
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

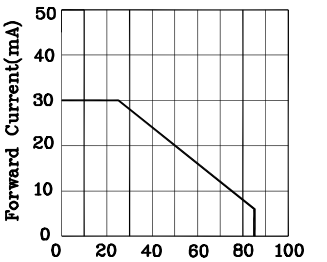
❖ Blue



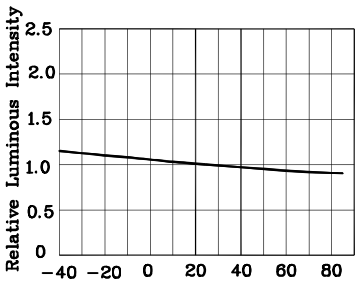
Forward Voltage(V)
FORWARD CURRENT Vs
FORWARD VOLTAGE



IF–Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT

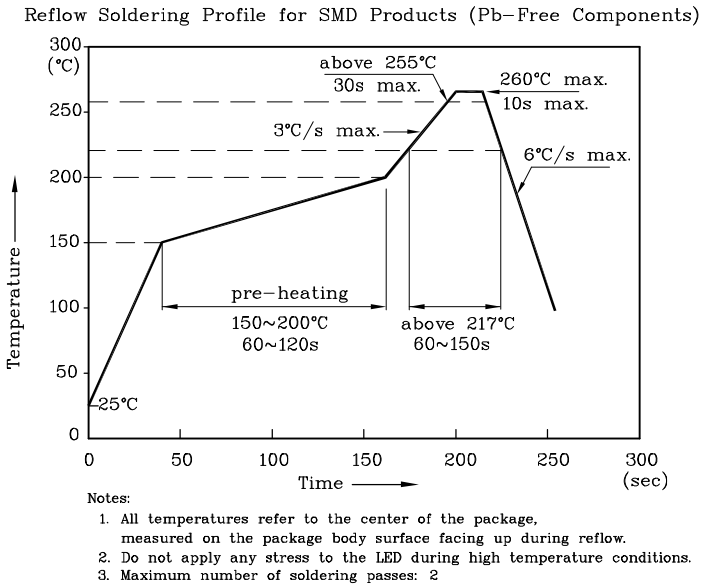


Ambient Temperature Ta(℃)
FORWARD CURRENT
DERATING CURVE

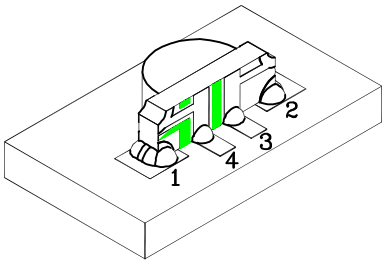


Ambient Temperature Ta(℃)
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

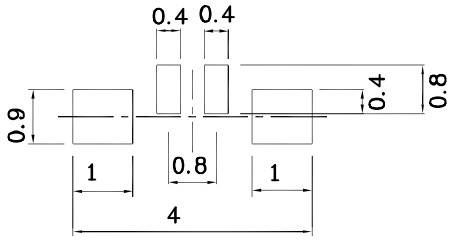
LED is recommended for reflow soldering and soldering profile is shown below.



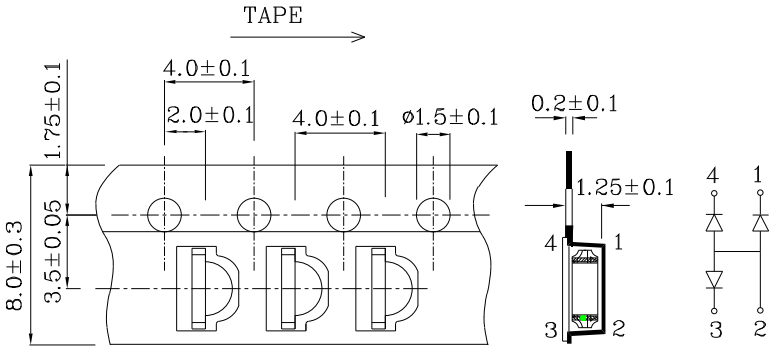
❖ The device has a single mounting surface. The device must be mounted according to the specifications.



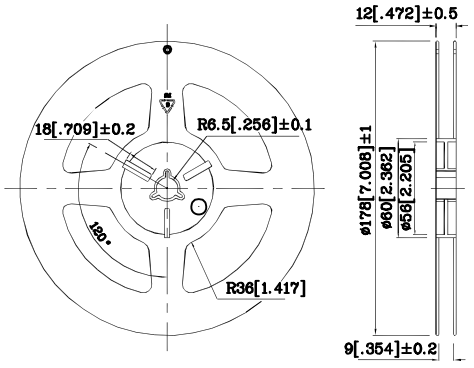
❖ Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



❖ Tape Specification (Units : mm)



❖ Reel Dimension



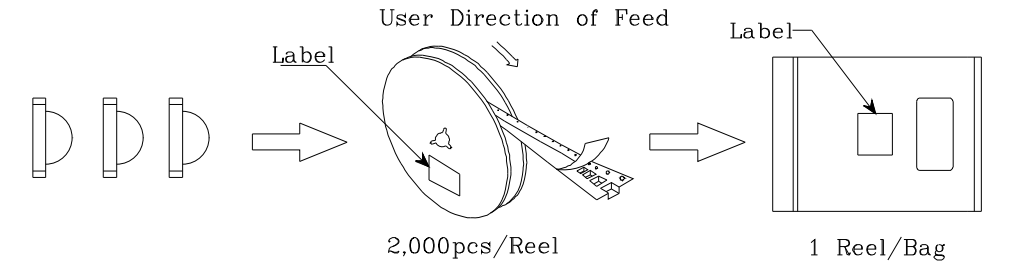
Remarks:

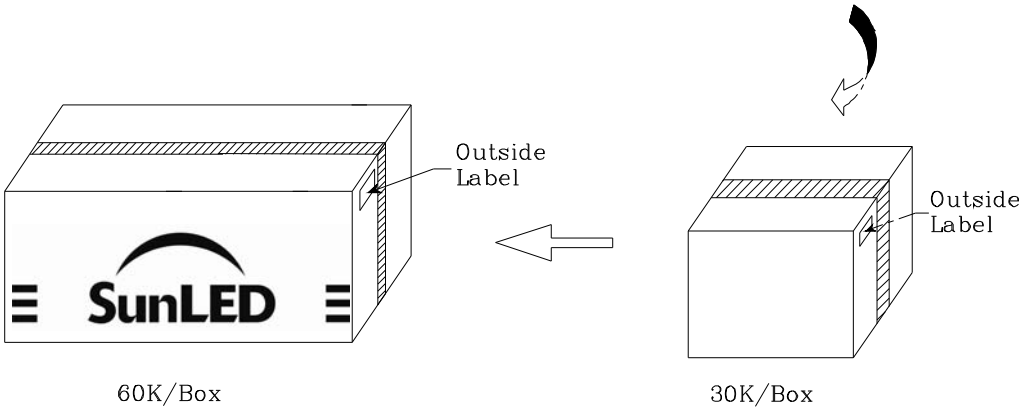
If special sorting is required (e.g. binning based on forward voltage, Luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

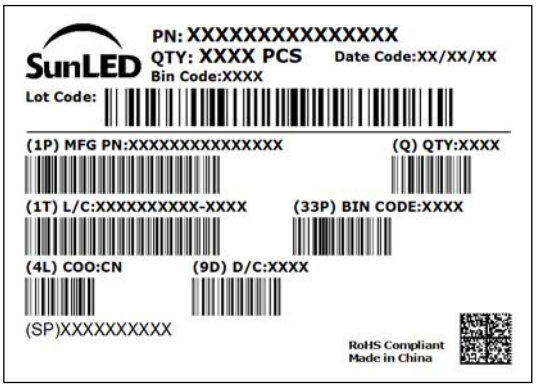
1. Wavelength: +/-1nm
2. Luminous intensity / luminous flux: +/-15%
3. Forward Voltage: +/-0.1V

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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