

# Part Number: XZFBB89S-1

4.0 x 0.8 mm RIGHT ANGLE SMD LED

## **Features**

 $\bullet$  Ideal for indication light on hand held products

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- Long life and robust package
- Standard Package: 2,000pcs/ Reel
- $\bullet$  MSL (Moisture Sensitivity Level): 3
- RoHS Compliant



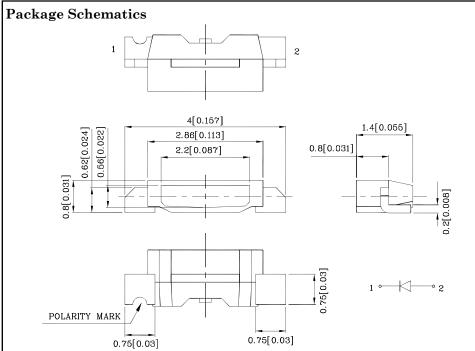




Feb 21,2014

# ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE

DEVICES



Notes:

- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is  $\pm 0.1(0.004")$  unless otherwise noted.
- 3. Specifications are subject to change without notice.

Absolute Maximum Ratings (T <sub>A</sub> =25°C)	FBB (InGaN)	Unit		
Reverse Voltage	$V_{\rm R}$	5	V	
Forward Current	$I_{\mathrm{F}}$	30	mA	
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	$i_{\mathrm{FS}}$	100	mA	
Power Dissipation	$P_{D}$	120	mW	
Operating Temperature	$T_{\rm A}$	-40 ~ +85	°C	
Storage Temperature	Tstg	-40 ~ +85		
Electrostatic Discharge Threshold (HBM)	250	V		

Operating Characteristics (T <sub>A</sub> =25°C)		FBB (InGaN)	Unit
Forward Voltage (Typ.) (I <sub>F</sub> =20mA)	$ m V_{F}$	3.3	V
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	$ m V_F$	4	V
Reverse Current (Max.) $(V_R=5V)$	$I_R$	50	uA
Wavelength of Peak Emission CIE127-2007*(Typ.) (I <sub>F</sub> =20mA)	λΡ	465*	nm
Wavelength of Dominant Emission CIE127-2007*(Typ.) $(I_F=20\text{mA})$	λD	470*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	$\triangle \lambda$	22	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	100	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous CIE127 (I <sub>F</sub> =20 mo	7-2007* OmA)	Wavelength CIE127-2007* nm λP	Viewing Angle 20 1/2
				min.	typ.		
XZFBB89S-1	Blue	InGaN	Water Clear	300*	447*	465*	120°

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

XDSB6570 V2-Z Layout: Maggie L.

 $4.0\mathrm{x}0.8\mathrm{mm}$  RIGHT ANGLE SMD LED

# **Handling Precautions**

Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.

As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might lead to damage and premature failure of the LED.

1. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.

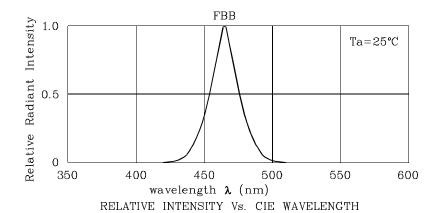


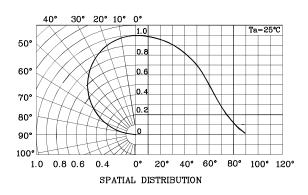
2. As silicone encapsulation is permeable to gases, some corrosive substances such as  $H_2S$  might corrode silver plating of leadframe. Special care should be taken if an LED with silicone encapsulation is to be used near such substances.



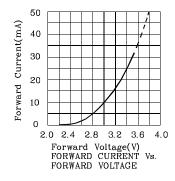


4.0x0.8mm RIGHT ANGLE SMD LED

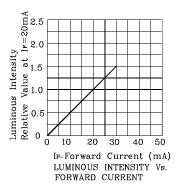


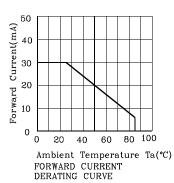


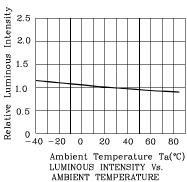
# **♦** FBB



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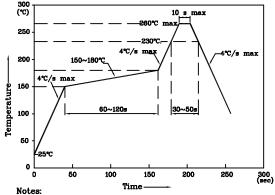






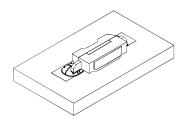
# LED is recommended for reflow soldering and soldering profile is shown below.

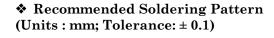
# Reflow Soldering Profile for SMD Products (Pb-Free Components)

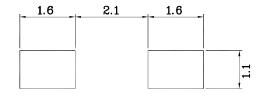


- 1. Maximum soldering temperature should not exceed 260°C
- 2. Recommended reflow temperature: 145°C-260°C
- Do not put stress to the epoxy resin during high temperatures conditions

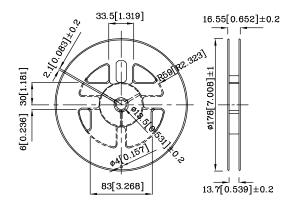
❖ The device has a single mounting surface. The device must be mounted according to the specifications.



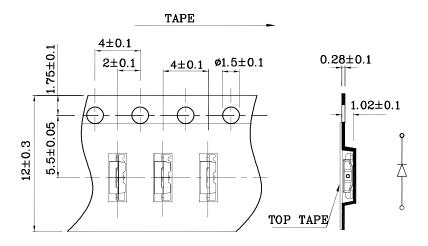




# **❖** Reel Dimension



# **❖** 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:

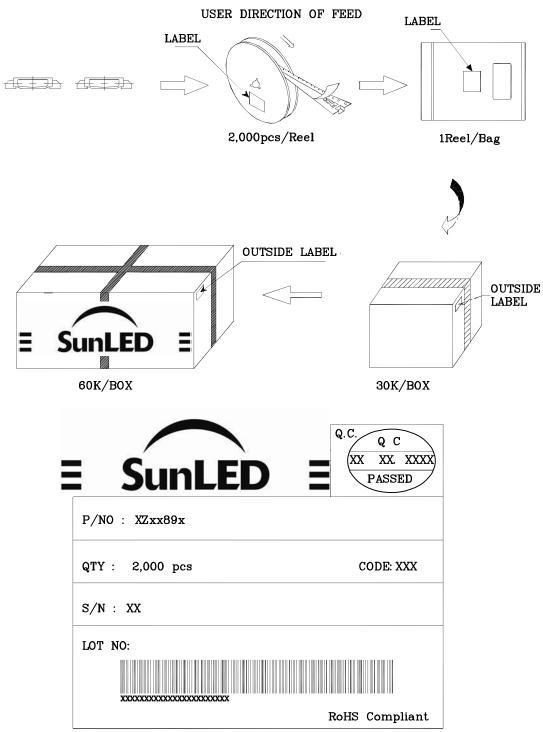
- 1. Wavelength: +/-1nm
- 2. Luminous intensity / luminous flux: +/-15%
- 3. Forward Voltage: +/-0.1V

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.
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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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