

### **Features**

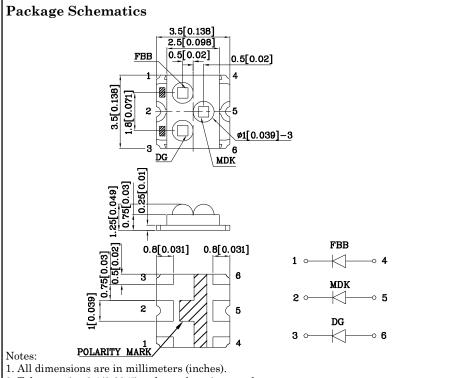
- Ideal for indication light on hand held products
- Long life and robust package
- Standard Package: 2,000pcs/ Reel
- $\bullet$  MSL (Moisture Sensitivity Level): 3
- RoHS compliant







# ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES



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

Absolute Maximum Ratings $(T_A=25^{\circ}C)$		FBB MDK (AlGa N) InP)		DG (InG aN)	Unit
Reverse Voltage	$V_{\mathrm{R}}$	5	5	5	V
Forward Current	$I_{\mathrm{F}}$	30	30	25	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	ifs	100	185	150	mA
Power Dissipation	$P_{D}$	120	75	102.5	mW
Electrostatic Discharge Threshold (HBM)		250	-	450	V
Operating Temperature	$T_{\rm A}$	-40 ~ +85			°C
Storage Temperature	Tstg				

Operating Characteristics (T <sub>A</sub> =25°C)		FBB (InGa N)	MDK (AlGaIn P)	DG (InGaN	Unit
Forward Voltage (Typ.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	3.3	1.95	3.3	V
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	4	2.5	4.1	V
Reverse Current (Max.) (V <sub>R</sub> =5V)	$I_{\mathrm{R}}$	50	10	50	uA
Wavelength of Peak Emission CIE127-2007* (Typ.) $(I_F=20\text{mA})$	λΡ	465*	645*	515*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λD	470*	630*	525*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	Δλ	22	28	30	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	100	35	45	pF

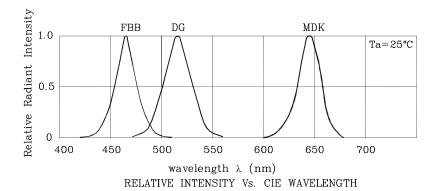
Part Number	Emitting Color	Emitting Material	Lens-color	$\begin{array}{c} \text{Luminous Intensity} \\ \text{CIE}127\text{-}2007* \\ \text{(I}_{\text{F}}\text{=}20\text{mA) mcd} \end{array}$		Wavelength CIE127-2007* nm λP	Viewing Angle 20 1/2
				min.	typ.		
XZFBBMDKDG92W-3	Blue	InGaN	- Water Clear	300 300*	497 497*	465*	45°
	Red	AlGaInP		700 300*	1295 497*	645*	60°
	Green	InGaN	-	700 700*	1195 1195*	515*	40°

<sup>\*</sup>Luminous intensity value and wavelength are in accordance with CIE127-2007 standards. Mar 06.2014

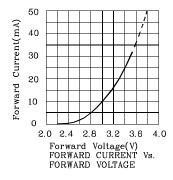
XDSB4927 V3-X Layout: Maggie L.

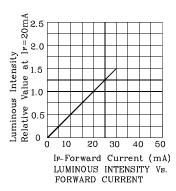


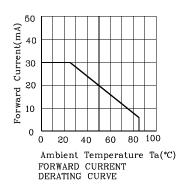


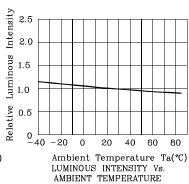


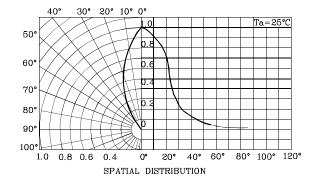
### **♦** FBB





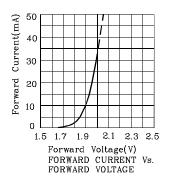


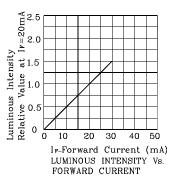


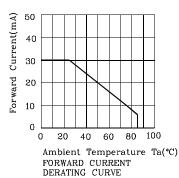


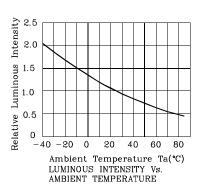


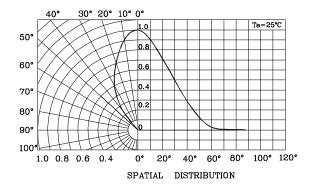
### **❖** MDK



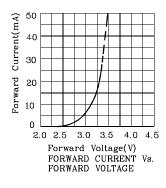


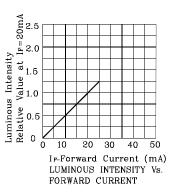


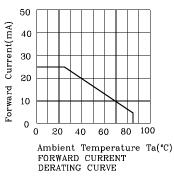


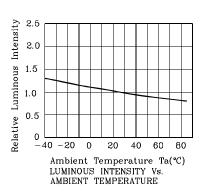


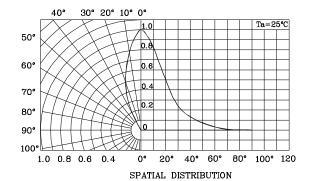
### ❖ DG









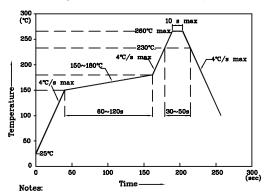






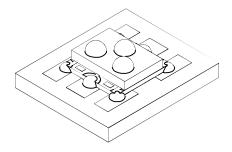
## LED is recommended for reflow soldering and soldering profile is shown below.

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

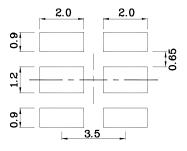


- 1. Maximum soldering temperature should not exceed 260°C
- 2. Recommended reflow temperature: 145°C-260°C
- 3. Do not put stress to the epoxy resin during high temperatures conditions

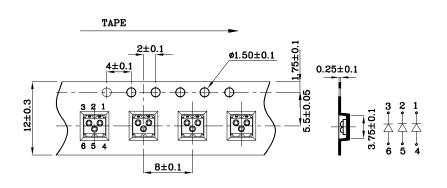
❖ The device has a single mounting surface. The device must be mounted according to the specifications.



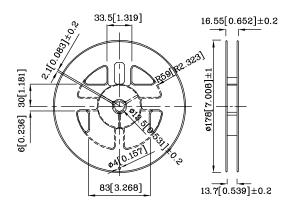
**♦** Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.1)



### **❖** Tape Specification (Units:mm)



### **❖** 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:

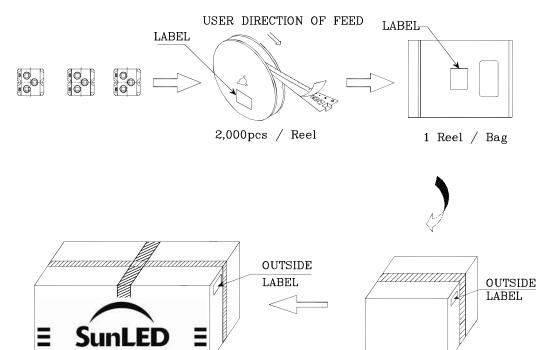
- 1. Wavelength: +/-1nm
- 2. Luminous intensity / luminous flux: +/-15%
- 3. Forward Voltage: +/-0.1V

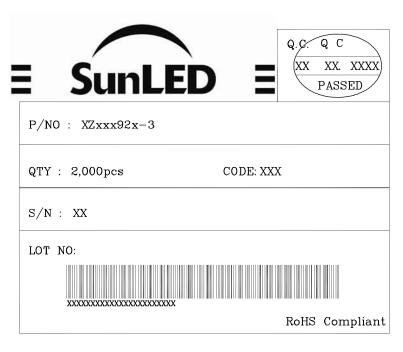
Note: Accuracy may depend on the sorting parameters.

30K /Box



### 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.

60K /Box

6. Additional technical notes are available at <a href="http://www.SunLEDusa.com/TechnicalNotes.asp">http://www.SunLEDusa.com/TechnicalNotes.asp</a>