

SunLED www.SunLEDusa.com

 $3.2 \times 1.6 \text{mm}$ SMD Chip LED Lamp

Features

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



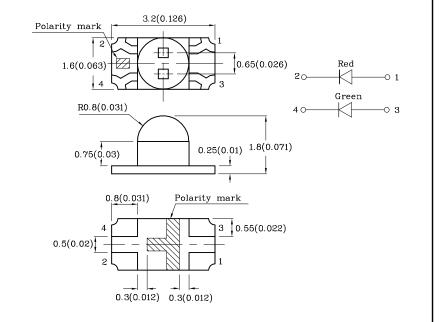




ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE

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°C)		Green (InGaN)	Unit
V_{R}	5	5	V
I_{F}	30	25	mA
i_{FS}	185	150	mA
P_D	75	102.5	mW
Electrostatic Discharge Threshold (HBM)			V
$T_{\rm A}$	-40 ~ +85		°C
Tstg	-40 ~ +85		
	V_R I_F i_{FS} P_D $hresh$	$ \begin{array}{c cccc} & \textbf{(AlGaInP)} \\ \hline V_R & 5 \\ \hline I_F & 30 \\ \\ \hline i_{FS} & 185 \\ \hline P_D & 75 \\ \\ hresh- & 3000 \\ \hline T_A & -40 \\ \hline Tstg & -40 \\ \hline \end{array} $	$ \begin{array}{c ccccc} \textbf{(AlGaInP)} & \textbf{(InGaN)} \\ \hline V_R & 5 & 5 \\ \hline I_F & 30 & 25 \\ \hline i_{FS} & 185 & 150 \\ \hline P_D & 75 & 102.5 \\ \hline hresh- & 3000 & 450 \\ \hline T_A & -40 \sim +85 \\ \hline Tstg & -40 \sim +85 \\ \hline \end{array} $

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)	Unit
Forward Voltage (Typ.) (I _F =20mA)	V_{F}	1.95	3.3	V
Forward Voltage (Max.) (I _F =20mA)	V_{F}	2.5	4.1	V
Reverse Current (Max.) $(V_R=5V)$	I_{R}	10	50	μA
Wavelength of Peak Emission CIE127-2007* (Typ.) (I _F =20mA)	λP	645*	515*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) (I _F =20mA)	λD	630*	525*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I _F =20mA)	Δλ	28	35	nm
Capacitance (Typ.) $(V_F=0V, f=1MHz)$	С	35	45	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity CIE127-2007* $(I_F=20mA) mcd$		Wavelength CIE127-2007* nm λP	Viewing Angle 2θ 1/2
				min.	typ.		
XZMDKDGK55W-8RT Green	Red	AlGaInP	Water Clear	700 300*	1495 597*	645*	30°
	Green	InGaN		400 400*	647 647*	515*	

^{*}Luminous intensity value and wavelength are in accordance with CIE127-2007 standards. Nov 26.2020

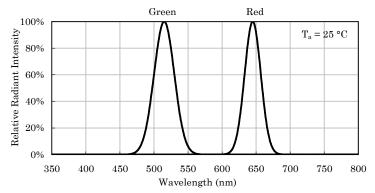
XDSB8233 V5-X Layout: Maggie L.



1.0

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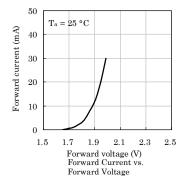


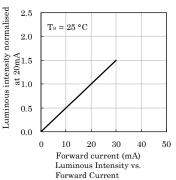
90° 15° 30° 45° 60° 75° 90°

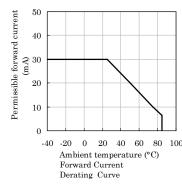
Relative Intensity Vs. CIE Wavelength

Spatial Distribution

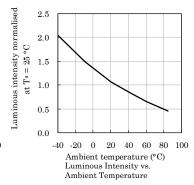
❖ Red



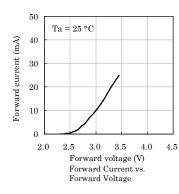


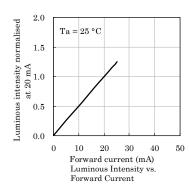


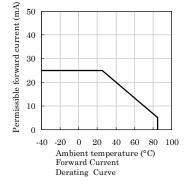
 $T_a = 25 \ ^{\circ}C$

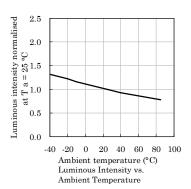


❖ Green







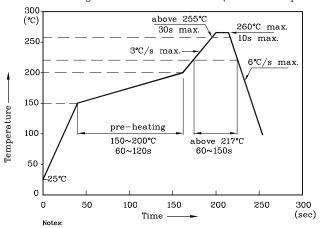






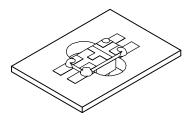
LED is recommended for reflow soldering and soldering profile is shown below.

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

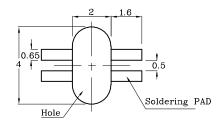


- 1. All temperatures refer to the center of the package measured on the package body surface facing up during reflow.
- 2. Do not apply any stress to the LED during high temperature conditions 3. Maximum number of soldering passes: 2

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

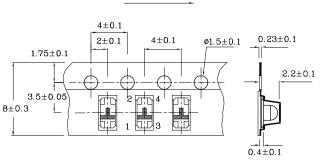


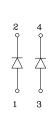
❖ Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.1)

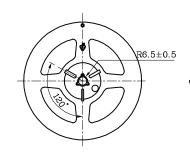


❖ Tape Specification (Units:mm)

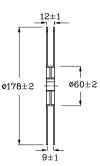
TAPE







❖ Reel Dimension (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:

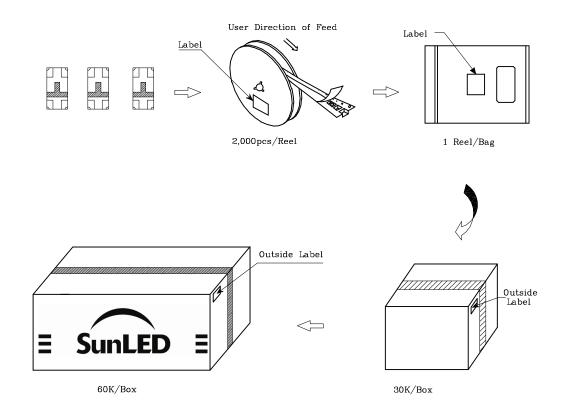
- 1. Wavelength: +/-1nm
- 2. Luminous intensity / luminous flux: +/-15%
- 3. Forward Voltage: +/-0.1V

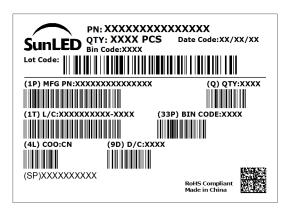
Note: Accuracy may depend on the sorting parameters.





PACKING & LABEL SPECIFICATIONS





TERMS OF USE

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- 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.
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- 6. Additional technical notes are available at https://www.SunLEDusa.com/TechnicalNotes.asp

Nov 26,2020