

#### Part Number: ZDG50WT-2

3.0x2.0mm RIGHT ANGLE SMD LED

#### **Features**

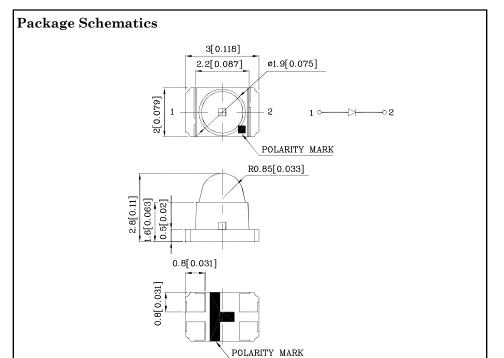
- Ideal for indication light on hand held products
- Long life and robust package
- Variety of lens types and color choices available
- Tinned pads for improved solderability
- Package : 2000pcs / reel
- $\bullet$  Moisture sensitivity level : level 3
- RoHS compliant







# ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES



#### 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 <sub>A</sub> =25°C)	DG (InGaN)	Unit		
Reverse Voltage	$V_{\rm R}$	5	V	
Forward Current	$I_{\mathrm{F}}$	25	mA	
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	ifs	150	mA	
Power Dissipation	$P_{D}$	102.5	mW	
Operating Temperature	$T_{\rm A}$	-40 ~ +85	°C	
Storage Temperature	Tstg	-40 ~ +85		
Electrostatic Discharge Threshold (HBM)	450	V		

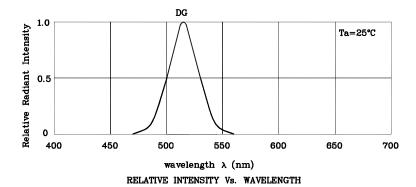
Operating Characteristics (T <sub>A</sub> =25°C)		DG (InGaN)	Unit
Forward Voltage (Typ.) (I <sub>F</sub> =20mA)	$V_{ m F}$	3.3	V
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	$V_{ m F}$	4.1	V
Reverse Current (Max.) $(V_R=5V)$	$I_R$	50	uA
Wavelength of Peak Emission (Typ.) $(I_F=20 \text{mA})$	λΡ	515	nm
Wavelength of Dominant Emission (Typ.) $(I_F=20 \text{mA})$	λD	525	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	$\triangle \lambda$	30	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	C	45	pF

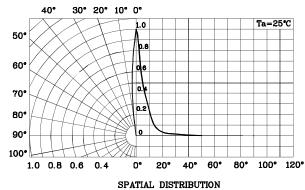
Part Number	Emitting Color	Emitting Material	Lens-color	$\begin{array}{c} \text{Luminous} \\ \text{Intensity} \\ \text{(I}_{\text{F}}\text{=}20\text{mA)} \\ \text{mcd} \end{array}$		Wavelength $nm \ \lambda P$	Viewing Angle 20 1/2
				min.	typ.		
ZDG50WT-2	Green	InGaN	Water Clear	900	1495	515	10°

Apr 12,2011 SDSA8172 V1 Layout: Maggie L.

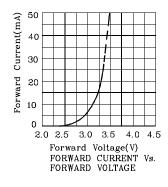


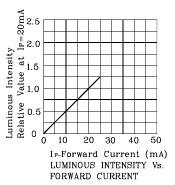


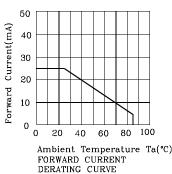


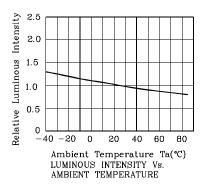


#### **♦** DG



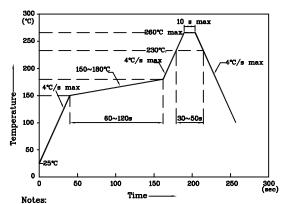






## LED is recommended for reflow soldering and soldering profile is shown below.

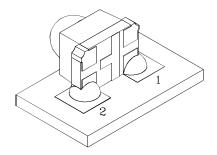
### Reflow Soldering Profile for SMD Products (Pb-Free Components)



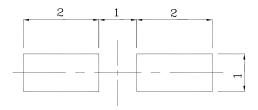
- 1. Maximum soldering temperature should not exceed 260°C
- 2. Recommended reflow temperature: 145°C-260°C
- 3. Do not put stress to the epoxy resin during high temperatures conditions



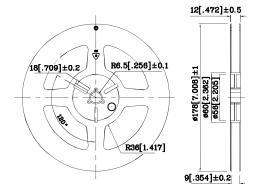
❖ The device has a single mounting surface. The device must be mounted according to the specifications.



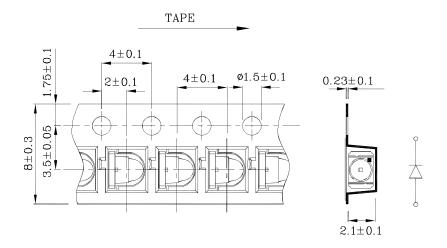
## **❖** Recommended Soldering Pattern (Units:mm; Tolerance: ± 0.1)



#### **❖** 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:

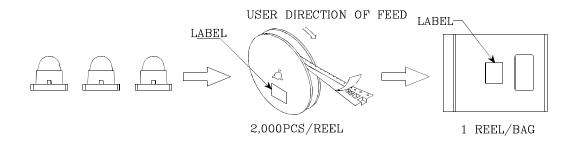
- 1. Wavelength: +/-1nm
- 2. Luminous intensity / luminous flux: +/-15%
- 3. Forward Voltage: +/-0.1V

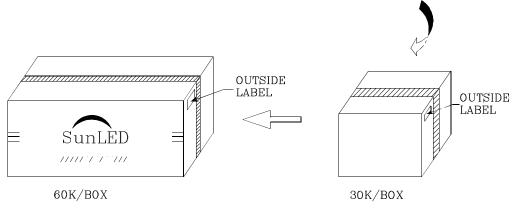
Note: Accuracy may depend on the sorting parameters.

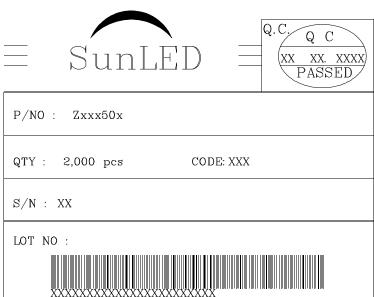




#### PACKING & LABEL SPECIFICATIONS







RoHS Compliant