



1.6x1.5mm BI-COLOR SMD CHIP LED LAMP

#### **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



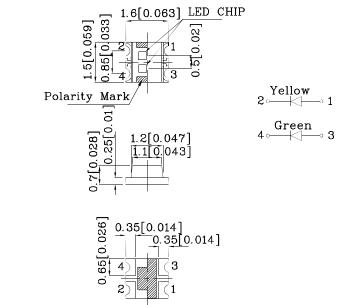




# ATTENTION

OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES

#### 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 <sub>A</sub> =25°C)		Yellow (AlGaInP)	Green (AlGaInP)	Unit
Reverse Voltage	$V_{\mathrm{R}}$	5	5	V
Forward Current	$I_{\mathrm{F}}$	30	30	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	ifs	175	150	mA
Power Dissipation	P <sub>D</sub> 75		75	mW
Operating Temperature	$T_{\rm A}$	-40 ~ +85		°C
Storage Temperature	Tstg	-40 ~ +85		

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 $(T_A=25^{\circ}C)$	Yellow (AlGaInP)	Green (AlGaInP)	Unit	
Forward Voltage (Typ.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	2	2.1	V
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	2.5	2.5	V
Reverse Current (Max.) $(V_R=5V)$	$I_R$	10	10	uA
Wavelength of Peak Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λΡ	590*	574*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λD	590*	570*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	Δλ	20	20	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	20	15	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity CIE127-2007* (I <sub>F</sub> =20mA) mcd		Wavelength CIE127-2007* nm λP	Viewing Angle 20 1/2
				min.	typ.		
XZMYKVG59W-1	Yellow	AlGaInP	- Water Clear	80*	118*	590*	150°
	Green	AlGaInP	water Clear	20*	49*	574*	

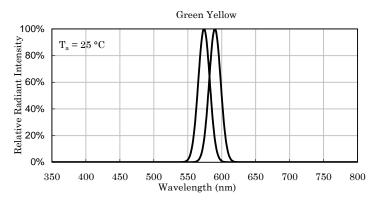
<sup>\*</sup>Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

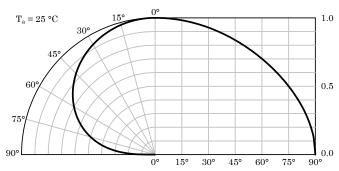
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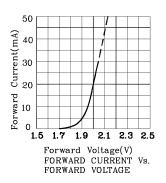


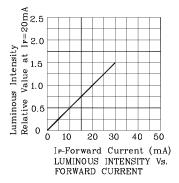


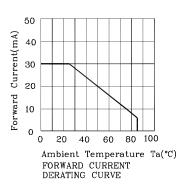
Relative Intensity Vs. CIE Wavelength

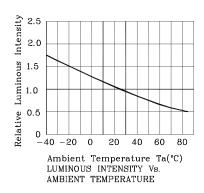
Spatial Distribution

#### **❖** Yellow

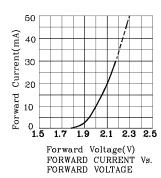


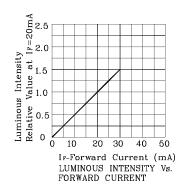


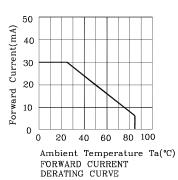


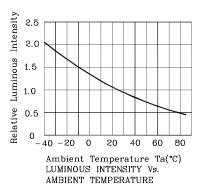


#### Green









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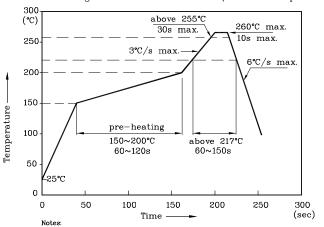
XDSB1898 V4-Z Layout: Maggie L.





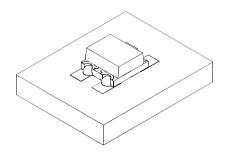
# LED is recommended for reflow soldering and soldering profile is shown below.

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

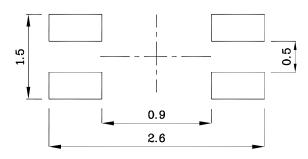


- All temperatures refer to the center of the package, measured on the package body surface facing up during reflow.
  Do not apply any stress to the LED during high temperature conditions.
  Maximum number of soldering passes: 2

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

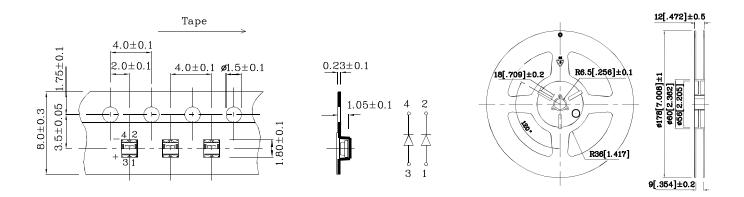


# **❖** Recommended Soldering Pattern (Units: mm; Tolerance: $\pm 0.1$ )



# **❖** 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:

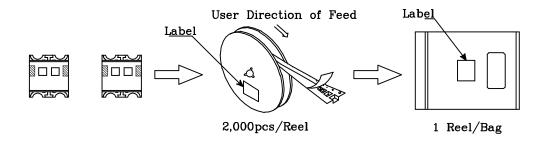
- 1. Wavelength: +/-1nm
- 2. Luminous intensity / luminous flux: +/-15%
- 3. Forward Voltage: +/-0.1V

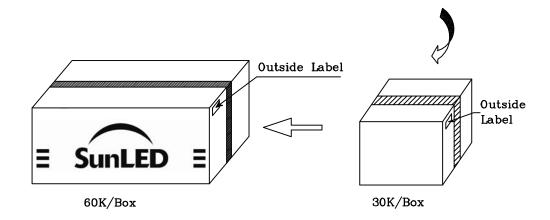
Note: Accuracy may depend on the sorting parameters.

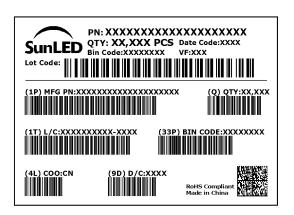




#### PACKING & LABEL SPECIFICATIONS







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XDSB1898 V4-Z Layout: Maggie L.