

T-1 (3mm) SOLID STATE LAMP

## **Features**

- Radial / Through hole package
- $\bullet$  Reliable & robust
- Low power consumption
- Available on tape and reel
- RoHS Compliant







# ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES

# Package Schematics 4.6(0.181)±0.3 27(1.063)MIN. 1.5(0.059)±1 CATHODE CATHODE 1.0MAX XVIII 3.2(0.126) RECOMMENDED PCB LAYOUT 4.10 3.2(0.126) RECOMMENDED PCB LAYOUT 4.10 3.2(0.126) RECOMMENDED PCB LAYOUT 4.10 3.2(0.126) 8.10 8.10 9.10

## Notes:

- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is  $\pm 0.25(0.01")$  unless otherwise noted.
- 3. Specifications are subject to change without notice.

Absolute Maximum Ratings (T <sub>A</sub> =25°C)		M2DG (InGaN)	Unit	
Reverse Voltage	$V_{\mathrm{R}}$	5	V	
Forward Current	$I_{\mathrm{F}}$	30	mA	
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	ifs	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)		450	V	
Lead Solder Temperature [2mm Below Package Base]	260°C For 3 Seconds			
Lead Solder Temperature [5mm Below Package Base]	260°C For 5 Seconds			

Operating Characteristics $(T_A=25^{\circ}C)$		M2DG (InGaN)	Unit
Forward Voltage (Typ.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	3.2	V
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	4	V
Reverse Current (Max.) $(V_R=5V)$	$I_R$	50	uA
Wavelength of Peak Emission CIE127-2007*(Typ.) (I <sub>F</sub> =20mA)	λP	520*	nm
Wavelength of Dominant Emission CIE127-2007*(Typ.) (I <sub>F</sub> =20mA)	λD	525*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	Δλ	35	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	100	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.		
XLM2DG11W	Green	InGaN	Water Clear	8000*	13990*	520*	34°

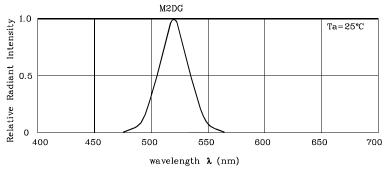
<sup>\*</sup>Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

Dec 11,2013 XDSB3731 V5-Z Layout: Maggie L.

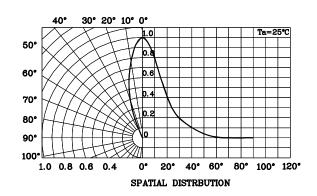




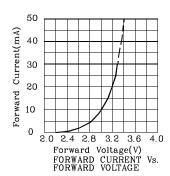


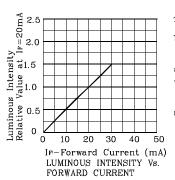


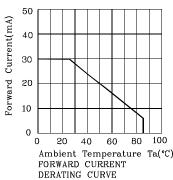
RELATIVE INTENSITY Vs. CIE WAVELENGTH

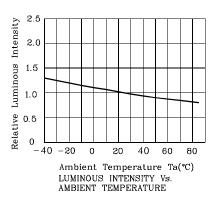


## **❖** M2DG

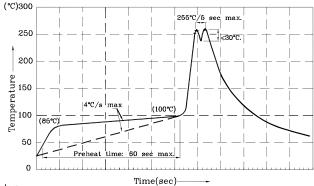








Wave Soldering Profile For Thru-Hole Products (Pb-Free Components)



Notes:

- Notes. I. Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of  $260^{\circ}C$  2. Peak wave soldering temperature between  $245^{\circ}C \sim 255^{\circ}C$  for 3 sec
- (5 sec max).
- 3.Do not apply stress to the epoxy resin while the temperature is above  $85\,^{\circ}\text{C}.$  4.Fixtures should not incur stress on the component when mounting and
- during soldering process. 5.SAC 305 solder alloy is recommended.
- 6. No more than one wave soldering pass

## 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:

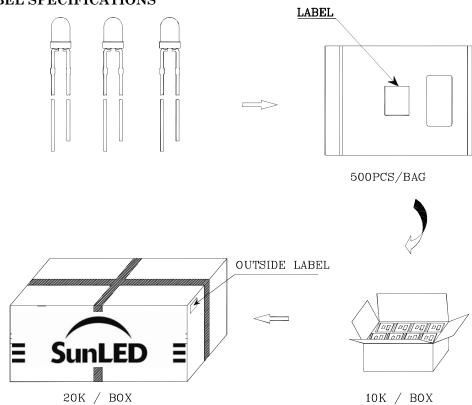
- 1. Wavelength: +/-1nm
- 2. Luminous Intensity / Luminous Flux: +/-15%
- 3. Forward Voltage: +/-0.1V

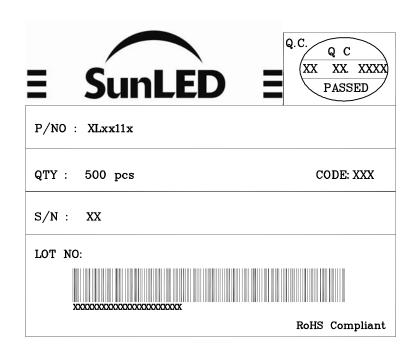
Note: Accuracy may depend on the sorting parameters.



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# PACKING & LABEL SPECIFICATIONS





## TERMS OF USE

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Dec 11,2013