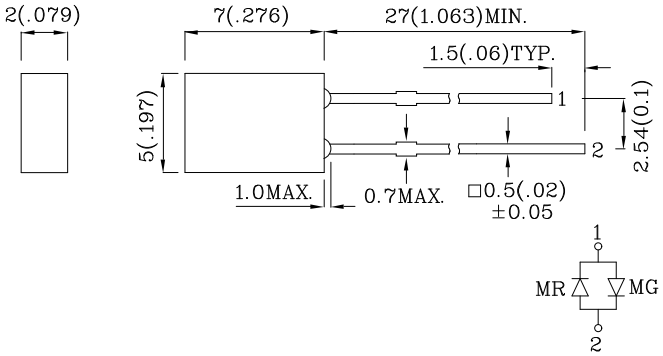
SunLED
www.SunLEDusa.com

Part Number: **XSMRMG18M**

2mmx5mm RECTANGULAR LED LAMP

Features

- LOW POWER CONSUMPTION.
- RELIABLE AND RUGGED.
- EXCELLENT UNIFORMITY OF LIGHT OUTPUT.
- SUITABLE FOR LEVEL INDICATOR.
- LONG LIFE - SOLID STATE RELIABILITY.
- RoHS COMPLIANT.



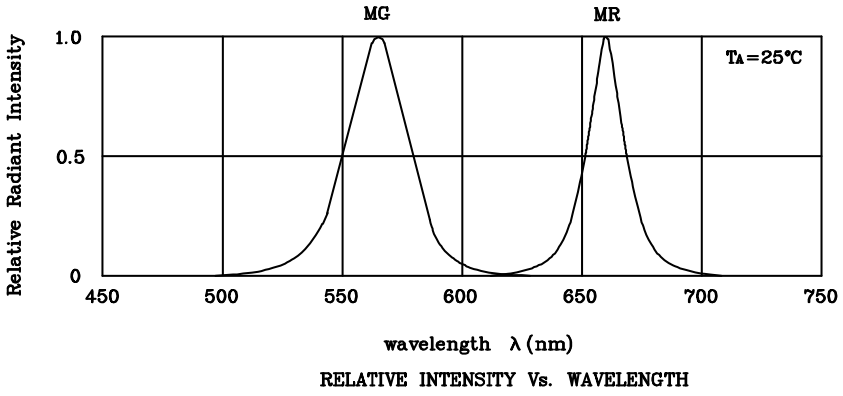
Notes:

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

Absolute Maximum Ratings (T_A=25°C)		**MR (GaAlAs)**	**MG (GaP)**	**Unit**
Forward Current	I_F	30	25	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	i_{FS}	155	140	mA
Power Dissipation	P_T	75	62.5	mW
Operating Temperature	T_A	-40 ~ +85		°C
Storage Temperature	Tstg	-40 ~ +85		
Lead Solder Temperature [2mm Below Package Base]	260°C For 3 Seconds			
Lead Solder Temperature [5mm Below Package Base]	260°C For 5 Seconds			

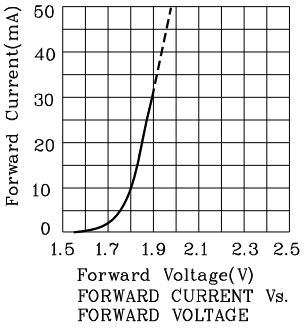
Operating Characteristics (T_A=25°C)		**MR (GaAlAs)**	**MG (GaP)**	**Unit**
Forward Voltage (Typ.) (I_F=20mA)	V_F	1.85	2.2	V
Forward Voltage (Max.) (I_F=20mA)	V_F	2.5	2.5	V
Wavelength Of Peak Emission (Typ.) (I_F=20mA)	λ P	660	565	nm
Wavelength Of Dominant Emission (Typ.) (I_F=20mA)	λ D	640	568	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I_F=20mA)	Δλ	20	30	nm
Capacitance (Typ.) (V_F=0V, f=1MHz)	C	45	15	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=20mA) mcd min.	Luminous Intensity (IF=20mA) mcd typ.	Wavelength nm λ P	Viewing Angle 2 θ 1/2
XSMRMG18M	Red	GaAlAs	White Diffused	36	69	660	110°
	Green	GaP		7	9	565	

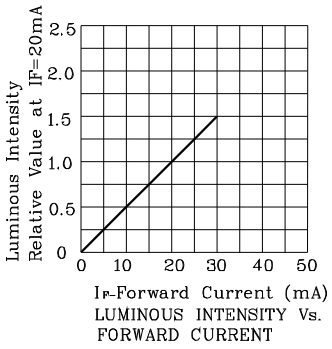


RELATIVE INTENSITY Vs. WAVELENGTH

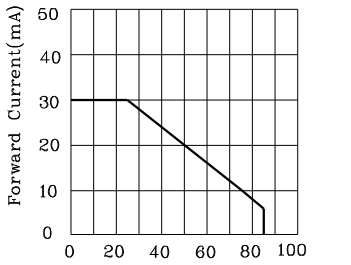
❖ **MR**



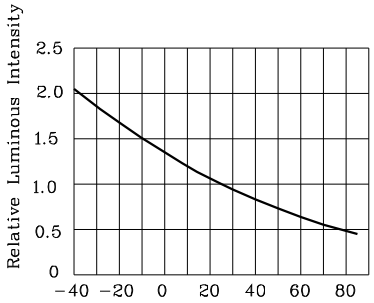
FORWARD CURRENT Vs.
FORWARD VOLTAGE



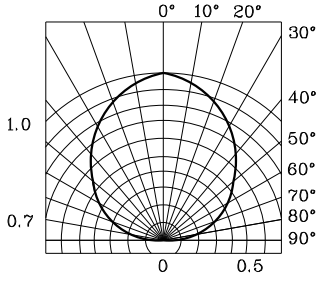
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

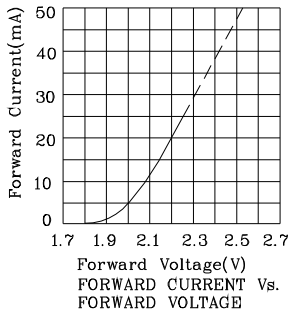


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

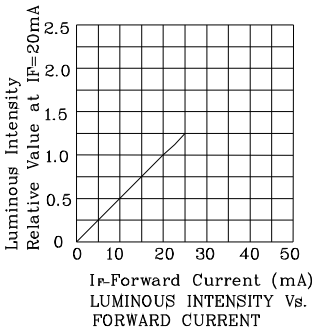


SPATIAL DISTRIBUTION

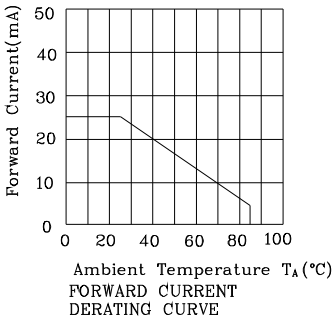
❖ **MG**



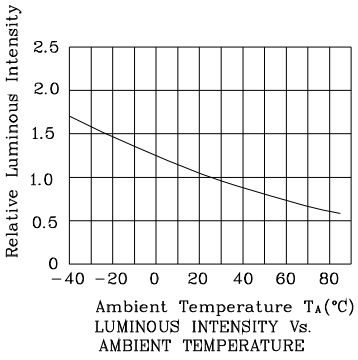
FORWARD CURRENT Vs.
FORWARD VOLTAGE



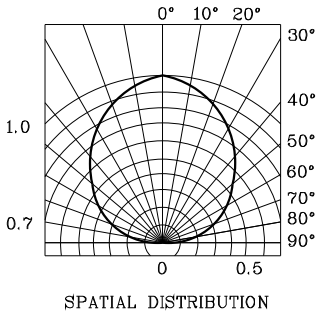
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

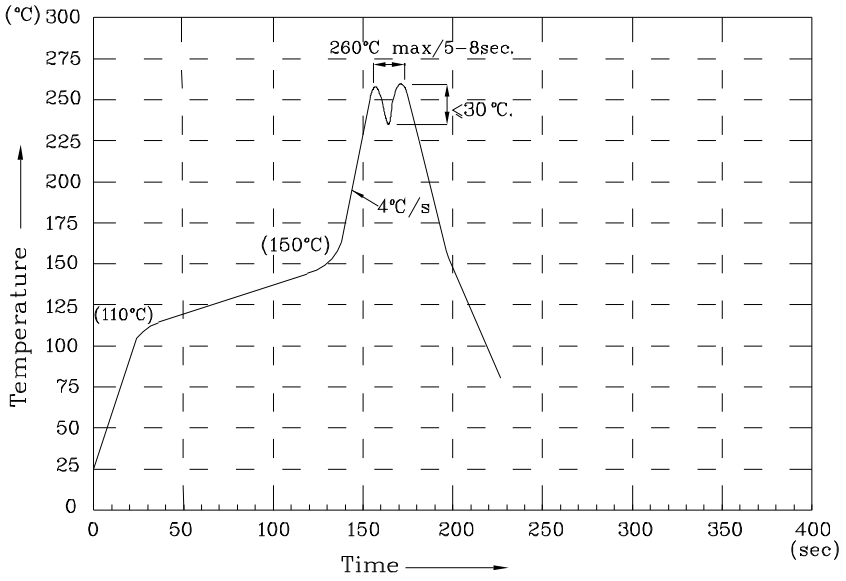


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

Wave Soldering Profile For Lead-free Through-hole LED.



NOTES:

1. Recommend the wave temperature 245℃~260℃. The maximum soldering temperature should be less than 260℃.
2. Do not apply stress on epoxy resins when temperature is over 85 degree℃.
3. The soldering profile apply to the lead free soldering (Sn/Cu/Ag alloy).
4. No more than once.

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 XSMRMG18M