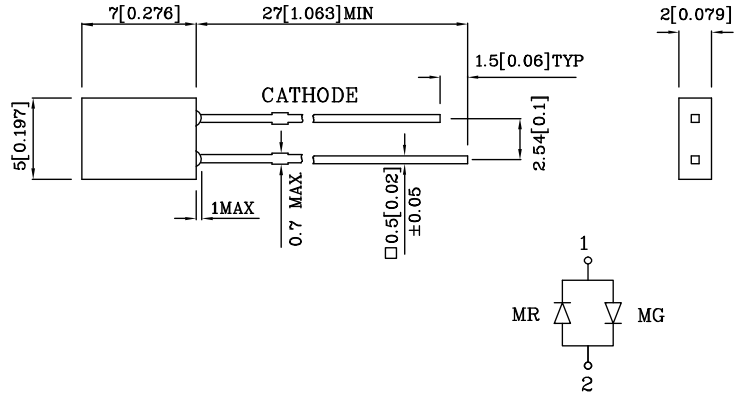


Features

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



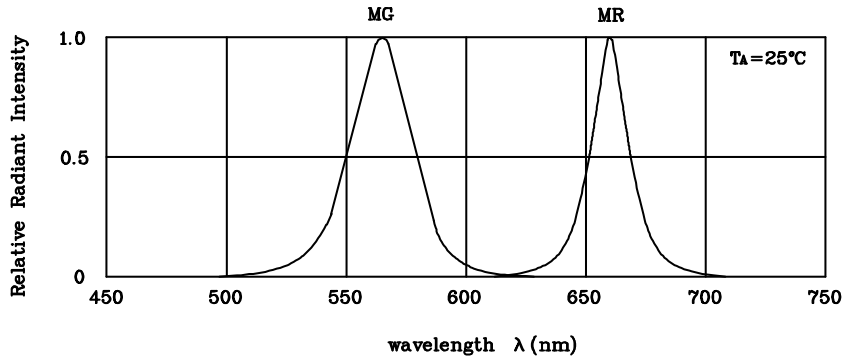
Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25(0.01") unless otherwise noted.

Absolute Maximum Ratings (TA=25°C)		MR (GaAlAs)	MG (GaP)	Unit
Forward Current	IF	30	25	mA
Forward Current (peak) 1/10Duty Cycle 0.1ms Pulse Width	iFS	155	140	mA
Power Dissipation	PT	100	105	mW
Operating Temperature	TA	-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			

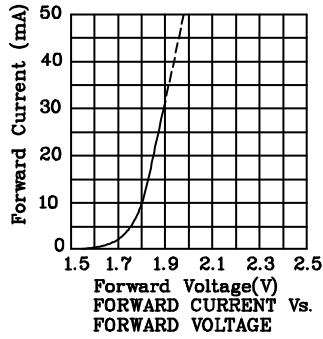
Operating Characteristics (TA=25°C)		MR (GaAlAs)	MG (GaP)	Unit
Forward Voltage (typ.) (IF=20mA)	VF	1.85	2.2	V
Forward Voltage (max.) (IF=20mA)	VF	2.5	2.5	V
Wavelength of Peak Emission (IF=20mA)	λ P	660	565	nm
Wavelength of Dominant Emission (IF=20mA)	λ D	640	568	nm
Spectral Line Full Width At Half-Maximum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

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=20mA) mcd		Wavelength nm λ P	Viewing Angle 2 θ 1/2
				min.	typ.		
XSMRMG18M	Red	GaAlAs	White Diffused	36	69	660	100°
	Green	GaP		7	9		
Published Date : MAY 22, 2005		Drawing No : XDSA2473		V3		Checked : B.L.LIU P.1/4	

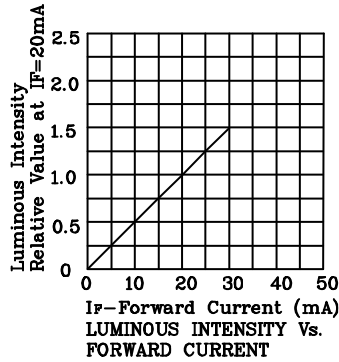


RELATIVE INTENSITY Vs. WAVELENGTH

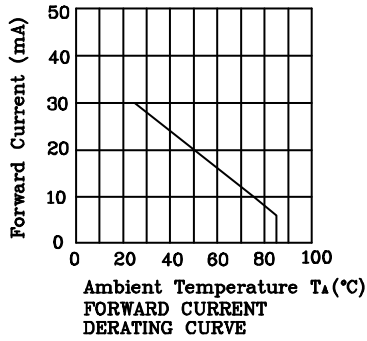
❖ MR



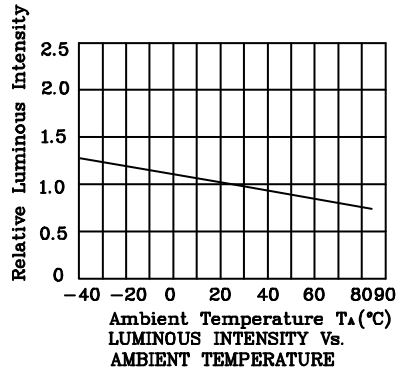
FORWARD CURRENT Vs. FORWARD VOLTAGE



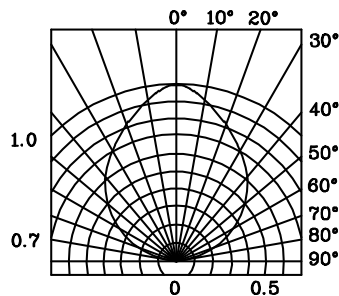
LUMINOUS INTENSITY Vs. FORWARD CURRENT



FORWARD CURRENT DERATING CURVE

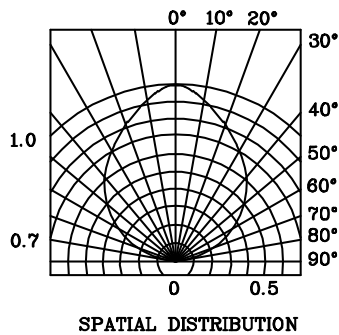
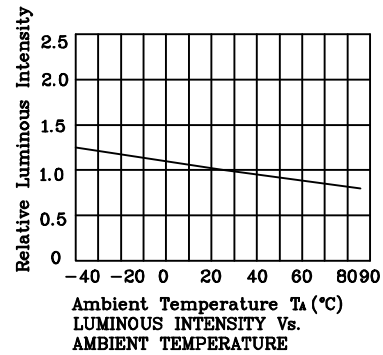
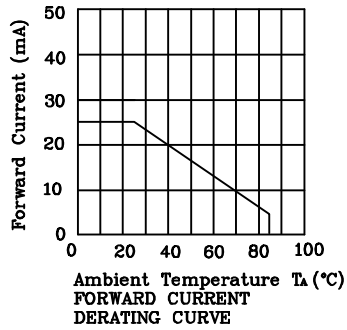
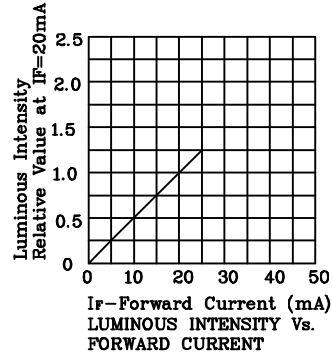
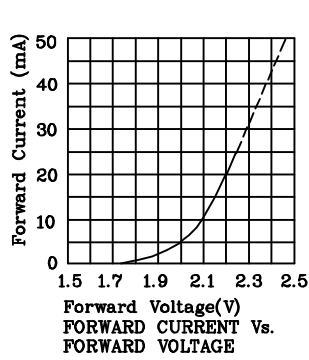


LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

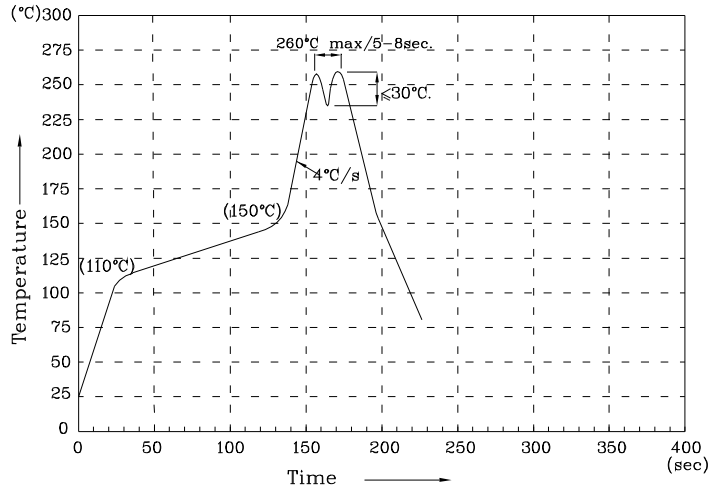


SPATIAL DISTRIBUTION

❖ MG



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



NOTES:

1. Recommend the wave temperature 245°C~260°C. The maximum soldering temperature should be less than 260°C.
2. Do not apply stress on epoxy resins when temperature is over 85 degree°C.
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, or wavelength), the typical accuracy of the sorting process is as follows:

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

Note: Accuracy may depend on the sorting parameters.