Features
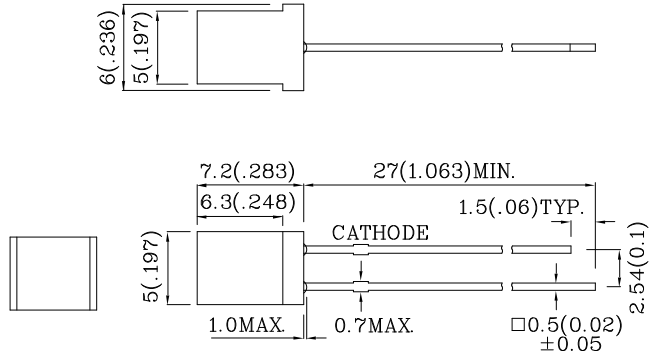
- LOW POWER CONSUMPTION.
- ULTRA BRIGHTNESS IS AVAILABLE.
- WIDE VIEWING ANGLE.
- RELIABLE AND RUGGED.
- EXCELLENT UNIFORMITY OF LIGHT OUTPUT.
- IDEAL AS FLUSH MOUNTED PANEL INDICATORS.
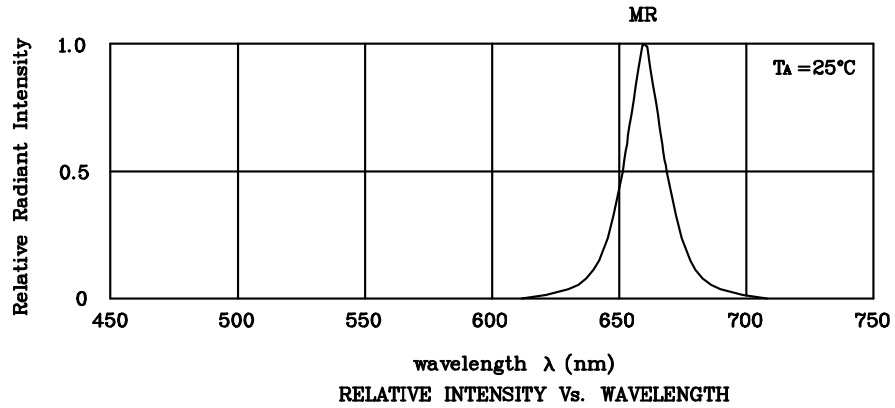- LONG LIFE - SOLID STATE RELIABILITY.
- RoHS COMPLIANT.

Notes:

1. All dimensions are in millimeters (inches).

2. Tolerance is ± 0.25(0.01") unless otherwise noted.

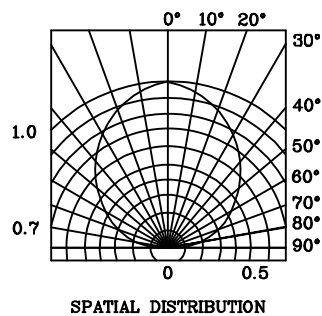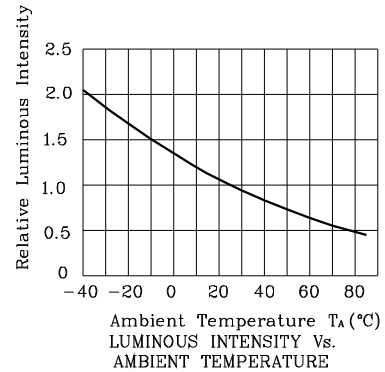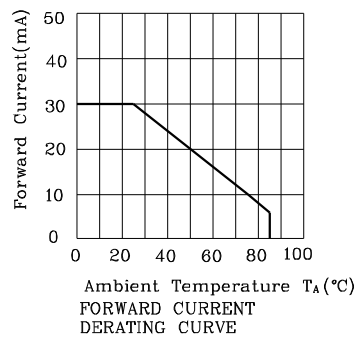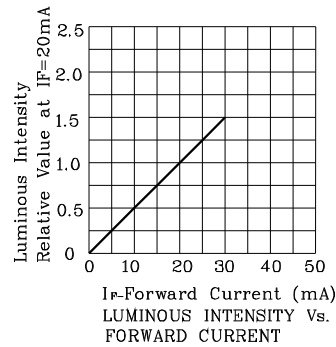3. Specifications are subject to change without notice.

Absolute Maximum Ratings (T$_A$=25°C)		MR (GaAlAs)	Unit
Reverse Voltage	V$_R$	5	V
Forward Current	I$_F$	30	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	i$_{FS}$	155	mA
Power Dissipation	P$_T$	75	mW
Operating Temperature	T$_A$	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +85	°C
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)	Unit
Forward Voltage (Typ.) (I$_F$=20mA)	V$_F$	1.85	V
Forward Voltage (Max.) (I$_F$=20mA)	V$_F$	2.5	V
Reverse Current (Max.) (V$_R$=5V)	I$_R$	10	uA
Wavelength Of Peak Emission (Typ.) (I$_F$=20mA)	λ P	660	nm
Wavelength Of Dominant Emission (Typ.) (I$_F$=20mA)	λ D	640	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I$_F$=20mA)	Δλ	20	nm
Capacitance (Typ.) (V$_F$=0V, f=1MHz)	C	45	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
XSMR23D	Red	GaAlAs	Red Diffused	36	79	660	110°

MR

$T_A = 25°C$

Relative Radiant Intensity vs **wavelength λ (nm)**

RELATIVE INTENSITY Vs. WAVELENGTH

❖ **MR**

Forward Current(mA) vs Forward Voltage(V)

FORWARD CURRENT Vs.
FORWARD VOLTAGE

Luminous Intensity Relative Value at IF=20mA vs I_F-Forward Current (mA)

LUMINOUS INTENSITY Vs.
FORWARD CURRENT

Forward Current(mA) vs Ambient Temperature T_A(°C)

FORWARD CURRENT
DERATING CURVE

Relative Luminous Intensity vs Ambient Temperature T_A(°C)

LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

0° 10° 20° 30° 40° 50° 60° 70° 80° 90°

SPATIAL DISTRIBUTION

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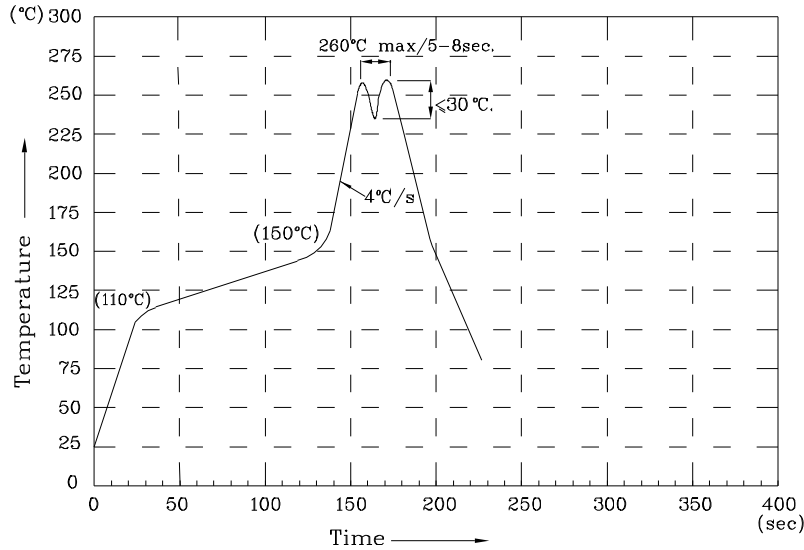
NOTES:

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:
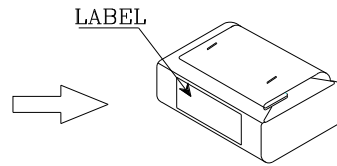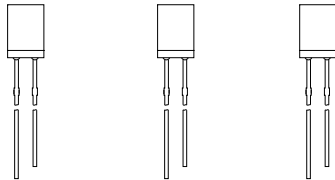
1. Wavelength: +/-1nm

2. Luminous intensity/ luminous flux: +/-15%

3. Forward Voltage: +/-0.1V

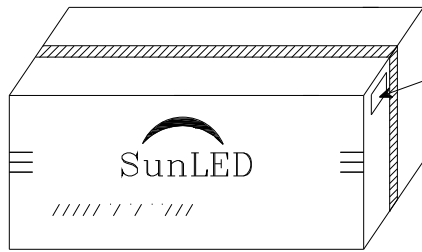Note: Accuracy may depend on the sorting parameters.
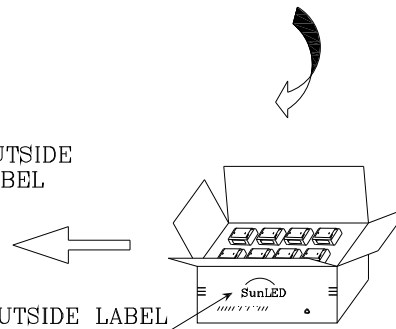
PACKING & LABEL SPECIFICATIONS   XSMR23D

LABEL

1000 PCS/Bag

OUTSIDE
LABEL

OUTSIDE LABEL

28K/BOX

14K/BOX

Q.C.

Q C

XX   XX. XXXX

PASSED

P/NO : XSxxx23x

QTY : 1000 pcs   CODE: XXX

S/N : XX

LOT NO :

XXXXXXXXXXXXXXXXXXXXX

RoHS Compliant