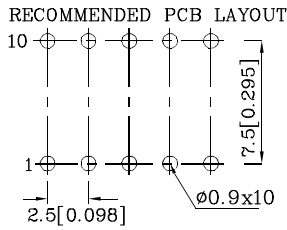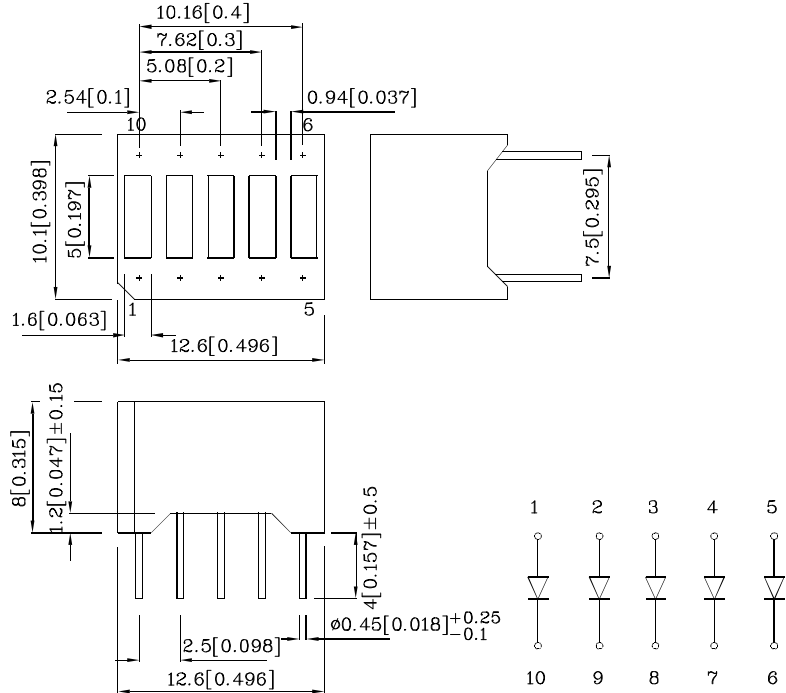**SunLED**
www.SunLEDusa.com

Features

● Robust package

● Uniform light disbursement

● Ideal for backlighting logos or icons

● Excellent for flush mounting

● Standard configuration: Gray face w/ white segments

● RoHS compliant

RECOMMENDED PCB LAYOUT

Package Schematics

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

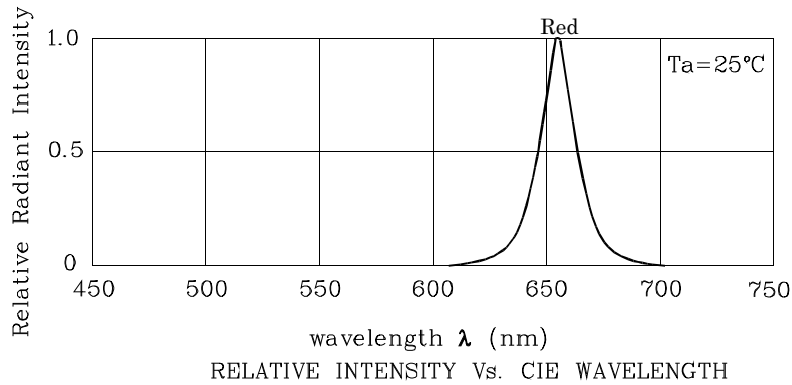**ATTENTION**
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES

Absolute Maximum Ratings (T$_A$=25°C)		Red (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$_D$	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 3-5 Seconds	

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)
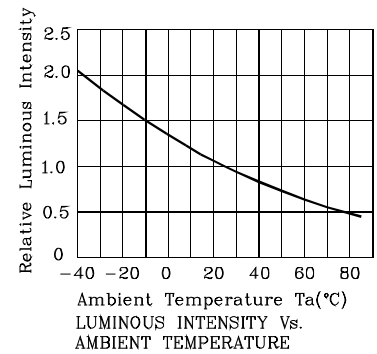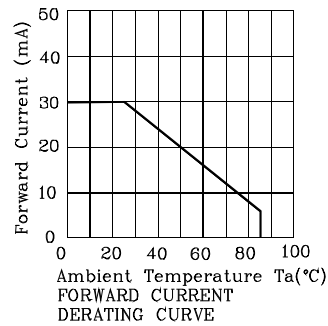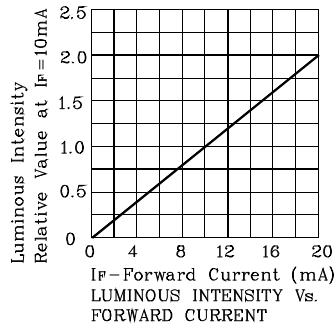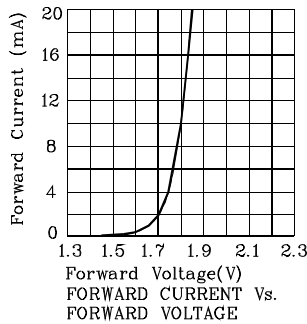
Operating Characteristics (T$_A$=25°C)		Red (GaAlAs)	Unit
Forward Voltage (Typ.) (I$_F$=10mA)	V$_F$	1.8	V
Forward Voltage (Max.) (I$_F$=10mA)	V$_F$	2.5	V
Reverse Current (Max.) (V$_R$=5V)	I$_R$	10	uA
Wavelength of Peak Emission CIE127-2007* (Typ.) (I$_F$=10mA)	λP	655*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) (I$_F$=10mA)	λD	640*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I$_F$=10mA)	△λ	20	nm
Capacitance (Typ.) (V$_F$=0V, f=1MHz)	C	45	pF

Part Number	Emitting Color	Emitting Material	Luminous Intensity CIE127-2007* (I$_F$=10mA) ucd		Wavelength CIE127-2007* nm λP	Description
			min.	typ.		
XGMRX5D	Red	GaAlAs	14000 3600*	29990* 7990*	655*	5 Segment Bar graph-Display

*Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

Oct 17,2016

RELATIVE INTENSITY Vs. CIE WAVELENGTH

❖ **Red**

FORWARD CURRENT Vs.
FORWARD VOLTAGE

LUMINOUS INTENSITY Vs.
FORWARD CURRENT

FORWARD CURRENT
DERATING CURVE

LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

Wave Soldering Profile for Thru-Hole Products (Pb-Free Components)
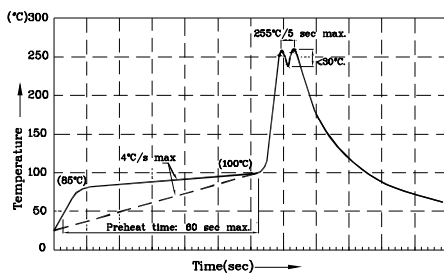
Notes:
1. Recommend pre-heat temperature of 105℃ or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260℃
2. Peak wave soldering temperature between 245℃ ~ 255℃ for 3 sec (5 sec max).
3. Do not apply stress to the epoxy resin while the temperature is above 85℃.
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.
7. During wave soldering, the PCB top-surface temperature should be kept below 105℃.
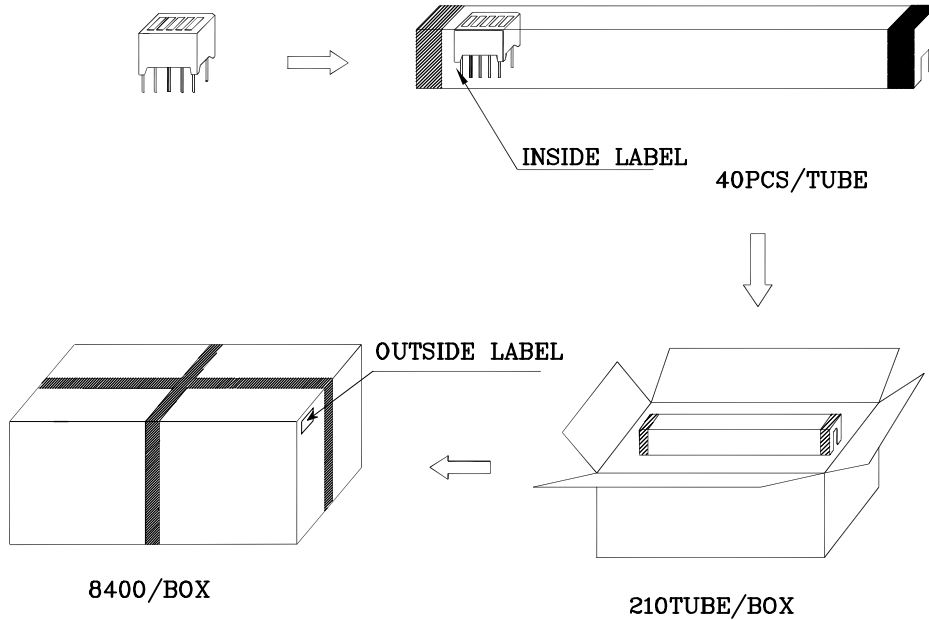
Remarks:

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%
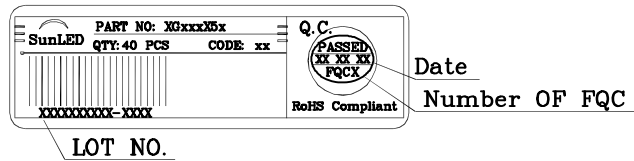
3. Forward Voltage: +/-0.1V

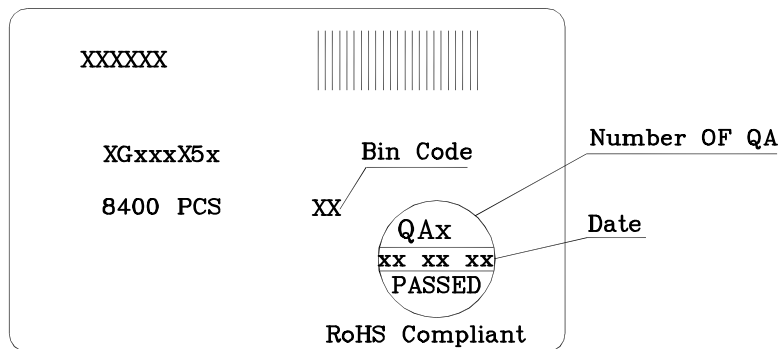Note: Accuracy may depend on the sorting parameters.

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PACKING & LABEL SPECIFICATIONS

INSIDE LABEL

40PCS/TUBE

OUTSIDE LABEL

8400/BOX

210TUBE/BOX

Inside Label On IC-tube

PART NO: XGxxxX5x
QTY: 40 PCS   CODE: xx
XXXXXXXXXX-XXXX

Q.C.
PASSED
XX XX XX
FQCX
RoHS Compliant

Date
Number OF FQC

LOT NO.

Outside Label On Box

XXXXXX

XGxxxX5x

8400 PCS

Bin Code

XX

QAx
xx xx xx
PASSED

Number OF QA

Date

RoHS Compliant

TERMS OF USE

1. Data presented in this document reflect statistical figures and should be treated as technical reference only.

2. Contents within this document are subject to improvement and enhancement changes without notice.

3. The product(s) in this document are designed to be operated within the electrical and environmental specifications indicated on the datasheet.
   User accepts full risk and responsibility when operating the product(s) beyond their intended specifications.

4. The product(s) described in this document are intended for electronic applications in which a person's life is not reliant upon the LED. Please
   consult with a SunLED representative for special applications where the LED may have a direct impact on a person's life.

5. The contents within this document may not be altered without prior consent by SunLED.

6. Additional technical notes are available at http://www.SunLEDusa.com/TechnicalNotes.asp