

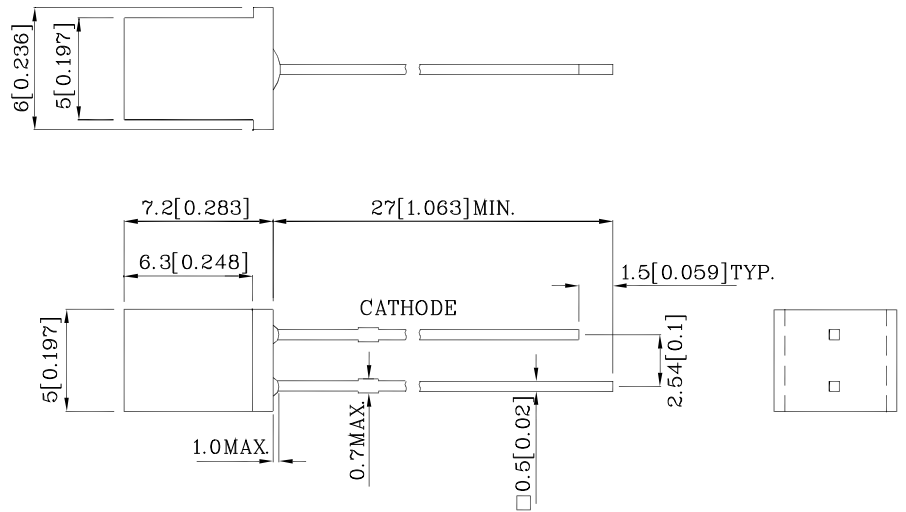
Features

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



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Package Schematics



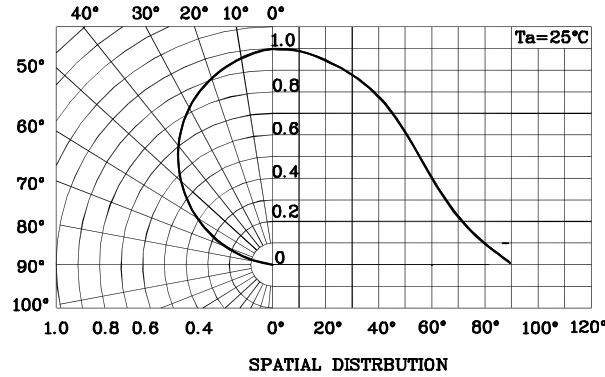
- Notes:
 1. All dimensions are in millimeters (inches).
 2. Tolerance is $\pm 0.25(0.01)$ " unless otherwise noted.
 3. Specifications are subject to change without notice.

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$)		FRA (InGaN)	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}	100	mA
Power Dissipation	P_D	120	mW
Operating Temperature	T_A	-40 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +85	
Electrostatic Discharge Threshold (HBM)		250	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		

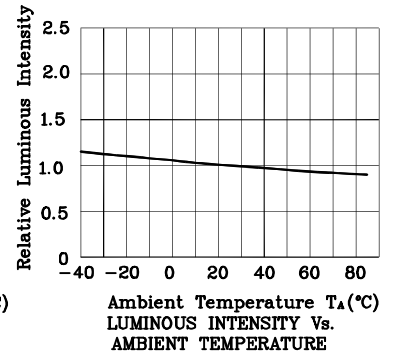
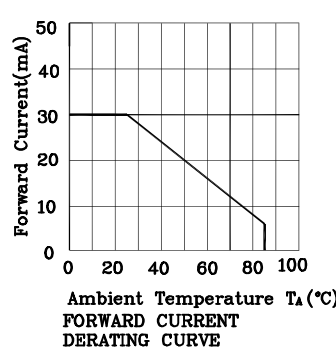
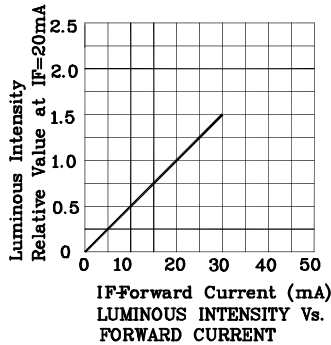
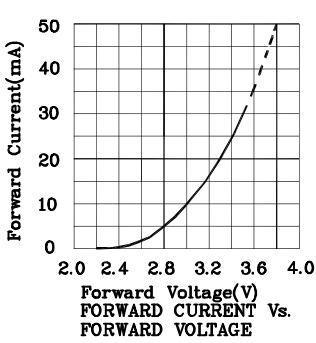
Operating Characteristics ($T_A=25^\circ\text{C}$)		FRA (InGaN)	Unit
Forward Voltage (Typ.) ($I_F=20\text{mA}$)	V_F	3.3	V
Forward Voltage (Max.) ($I_F=20\text{mA}$)	V_F	4.0	V
Reverse Current (Max.) ($V_R=5\text{V}$)	I_R	50	μA
Chromaticity Coordinates (Typ.)	x	0.18	
	y	0.29	
Capacitance (Typ.) ($V_F=0\text{V}$, $f=1\text{MHz}$)	C	100	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity CIE127-2007* ($I_F=20\text{mA}$) mcd		Viewing Angle 2 θ 1/2
				min.	typ.	
XSFRA23MBBA	Ice Blue	InGaN	White Triple Diffused	100*	230*	110°

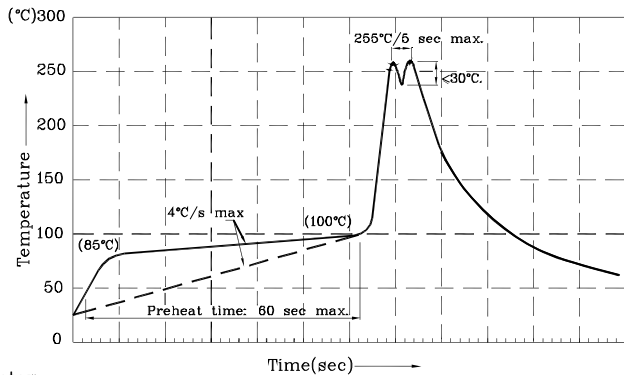
*Luminous intensity value is in accordance with CIE127-2007 standards.



❖ FRA



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



Notes:

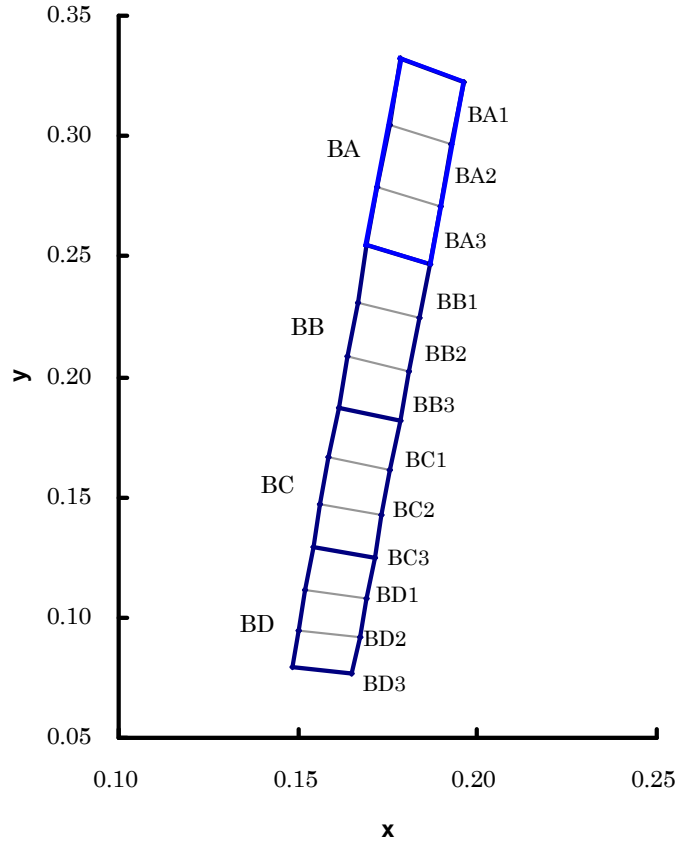
1. Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
2. Peak wave soldering temperature between 245°C ~ 255°C for 3 sec (5 sec max).
3. Do not apply stress to the epoxy resin while the temperature is above 85°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 chromaticity), the typical accuracy of the sorting process is as follows:

1. Measurement tolerance of the chromaticity coordinates is ± 0.02 .
2. Luminous Intensity/ Luminous Flux: $\pm 15\%$
3. Forward Voltage: $\pm 0.1V$

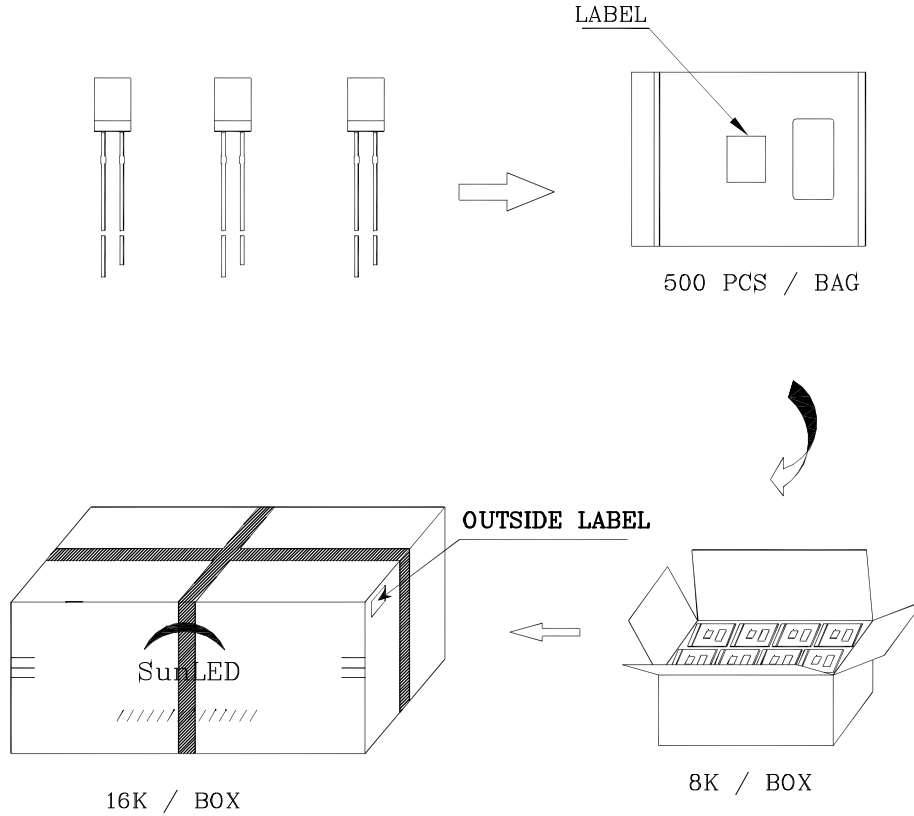

Note: Accuracy may depend on the sorting parameters.

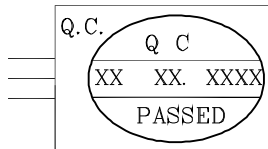



Bin code	x	y	Bin code	x	y	Bin code	x	y	Bin code	x	y
BA1	0.1786	0.3318	BB1	0.1693	0.2543	BC1	0.1612	0.1870	BD1	0.1542	0.1288
	0.1754	0.3048		0.1665	0.2308		0.1587	0.1666		0.1521	0.1114
	0.1928	0.2964		0.1837	0.2241		0.1758	0.1615		0.1691	0.1077
	0.1961	0.3228		0.1866	0.2471		0.1783	0.1814		0.1712	0.1247
BA2	0.1754	0.3048	BB2	0.1665	0.2308	BC2	0.1587	0.1666	BD2	0.1521	0.1114
	0.1723	0.2790		0.1638	0.2084		0.1564	0.1473		0.1501	0.0948
	0.1896	0.2712		0.1810	0.2022		0.1735	0.1427		0.1670	0.0917
	0.1928	0.2964		0.1837	0.2241		0.1758	0.1615		0.1691	0.1077
BA3	0.1723	0.2790	BB3	0.1638	0.2084	BC3	0.1564	0.1473	BD3	0.1501	0.0948
	0.1693	0.2543		0.1612	0.1870		0.1542	0.1288		0.1482	0.0791
	0.1866	0.2471		0.1783	0.1814		0.1712	0.1247		0.1651	0.0765
	0.1896	0.2712		0.1810	0.2022		0.1735	0.1427		0.1670	0.0917

Notes:
 Shipment may contain more than one chromaticity regions.
 Orders for single chromaticity region are generally not accepted.
 Measurement tolerance of the chromaticity coordinates is ± 0.02 .

PACKING & LABEL SPECIFICATIONS

	
P/NO : XSxxx23x	
QTY : 500 pcs	CODE: XXX
S/N : XX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	