

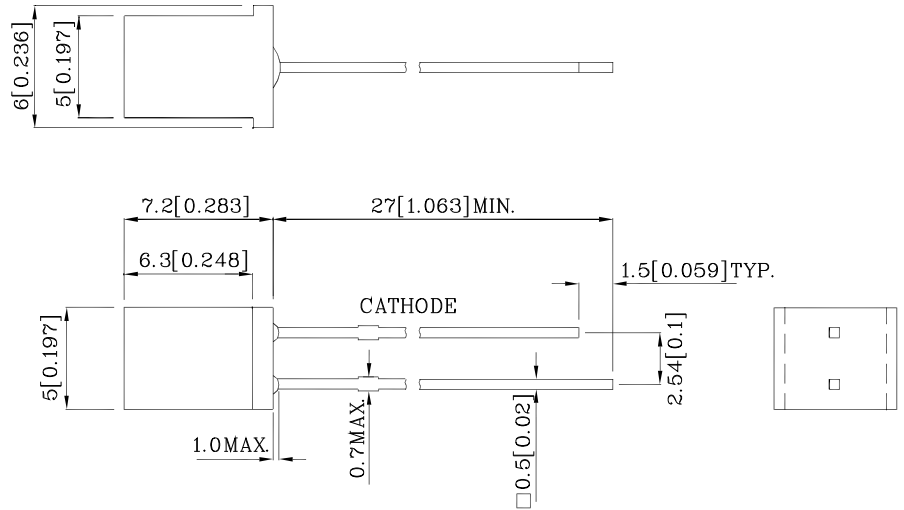
**Features**

- 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**



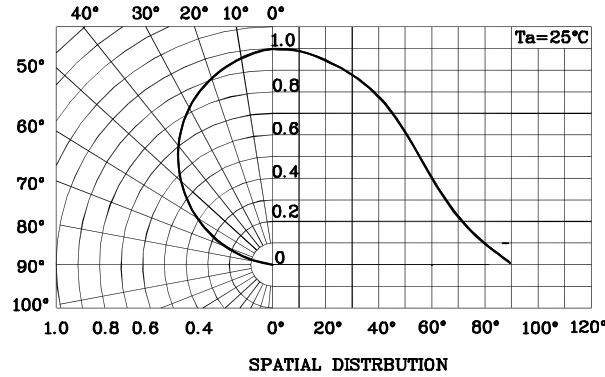
**Notes:**

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.

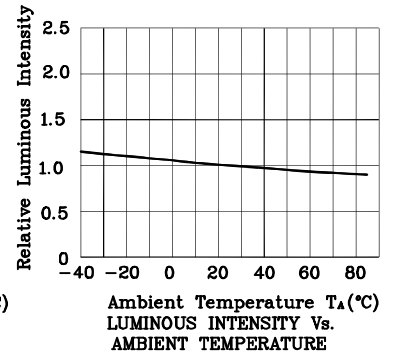
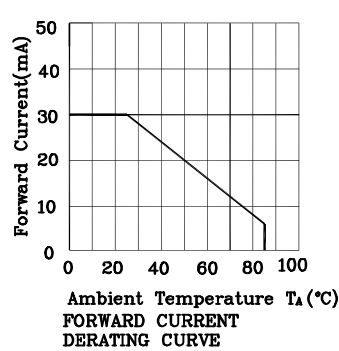
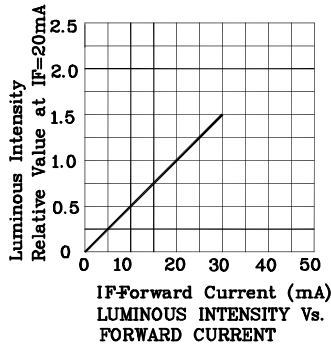
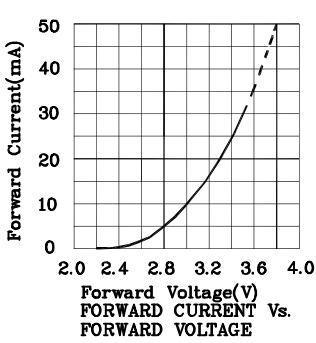
Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$ )		FRA (InGaN)	Unit
Reverse Voltage	$V_R$	5	V
Forward Current	$I_F$	30	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	$i_{FS}$	100	mA
Power Dissipation	$P_D$	120	mW
Operating Temperature	$T_A$	-40 ~ +85	°C
Storage Temperature	$T_{stg}$	-40 ~ +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	$\mu\text{A}$
Chromaticity Coordinates (Typ.)	x	0.20	
	y	0.46	
Capacitance (Typ.) ( $V_F=0\text{V}$ , $f=1\text{MHz}$ )	C	100	pF

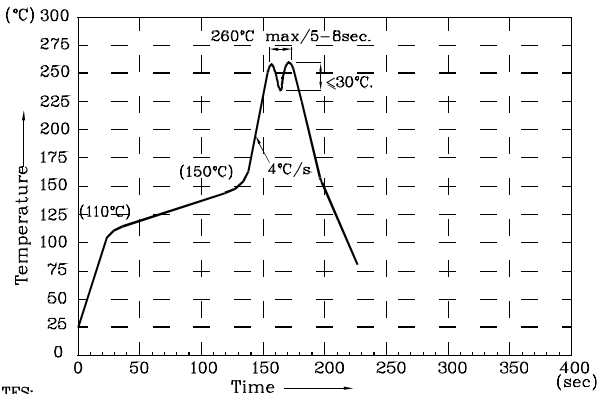
Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity ( $I_F=20\text{mA}$ ) mcd		Viewing Angle 2 $\theta$ 1/2
				min.	typ.	
XSFRA23MBCA	Cyan	InGaN	White Triple Diffused	100	278	110°



❖ FRA



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



- 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°C.
  3. The soldering profile apply to the lead free soldering (Sn/Cu/Ag alloy).
  4. During wave soldering, the PCB top-surface temperature should be kept below 105°C.
  5. No more than once.

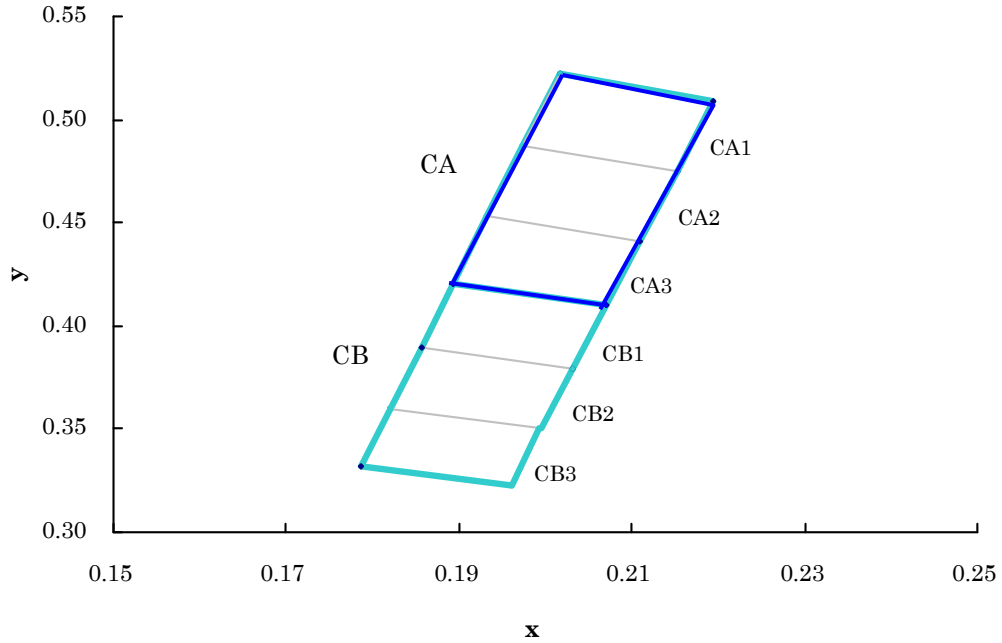
Remarks:

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  $\pm 0.02$ .
2. Luminous Intensity/ Luminous Flux:  $\pm 15\%$
3. Forward Voltage:  $\pm 0.1V$

Note: Accuracy may depend on the sorting parameters.

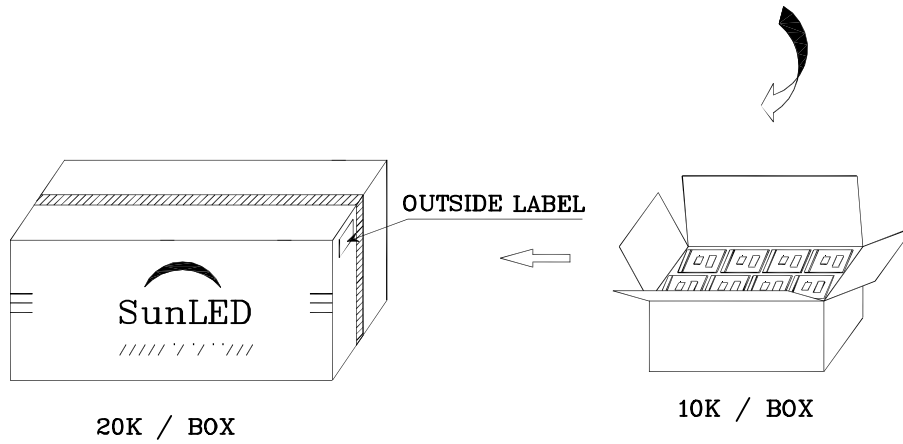
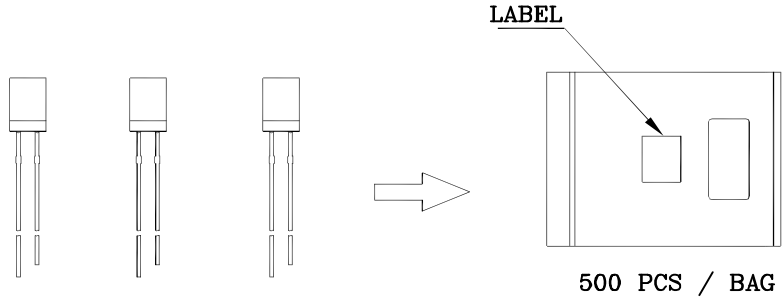

XSFRA23MBCA

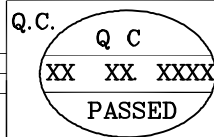



Bin code	x	y	Bin code	x	y
CA1	0.2016	0.5221	CB1	0.1894	0.4206
	0.1973	0.4868		0.1856	0.3897
	0.2152	0.4744		0.2032	0.3794
	0.2195	0.5089		0.2070	0.4097
CA2	0.1973	0.4868	CB2	0.1856	0.3897
	0.1933	0.4530		0.1821	0.3601
	0.2110	0.4413		0.1996	0.3505
	0.2152	0.4744		0.2032	0.3794
CA3	0.1933	0.4530	CB3	0.1821	0.3601
	0.1894	0.4206		0.1786	0.3318
	0.2070	0.4097		0.1961	0.3228
	0.2110	0.4413		0.1996	0.3505

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  $\pm 0.02$ .

PACKING & LABEL SPECIFICATIONS

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