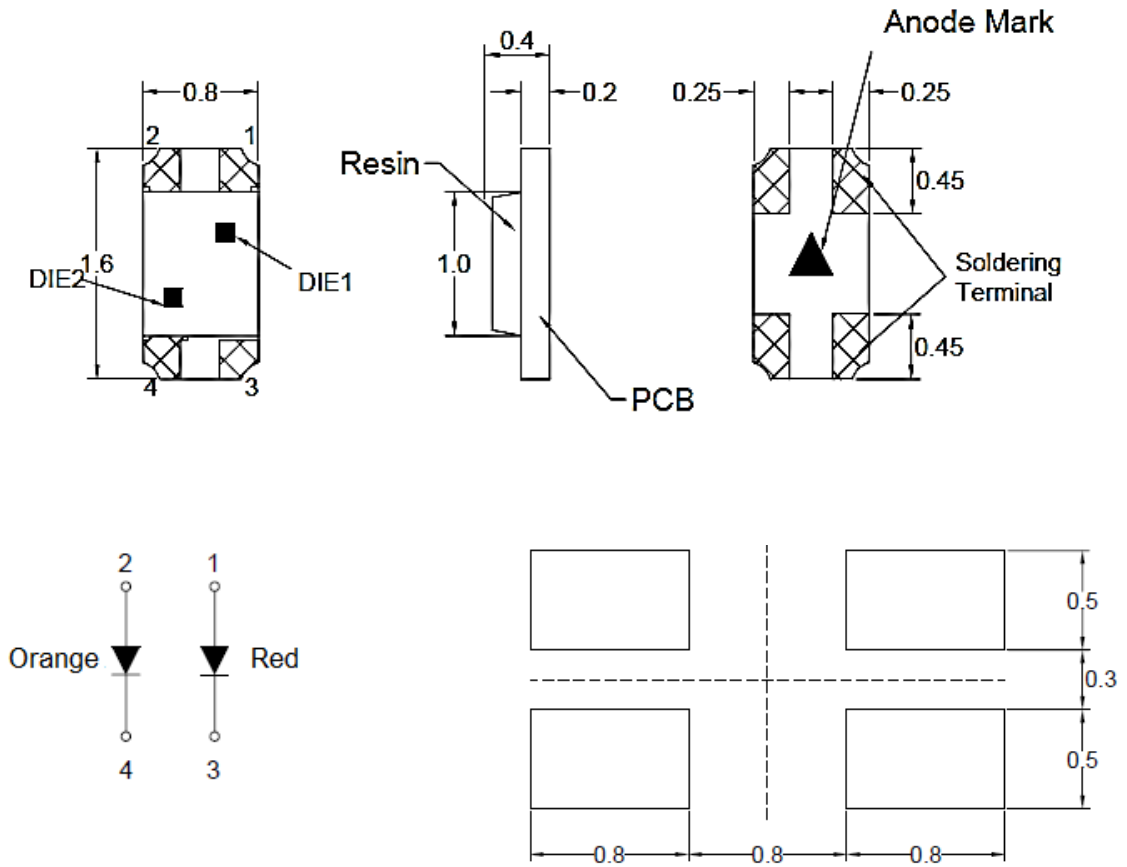


SPECIFICATIONS **CSB63CR202C**

OUTLINES DIMENSIONS



Notes:

1. All Dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CSB63CR202C	InGaAlP	Red/Orange	Water Clear	130°



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ABSOLUTE MAXIMUM RATINGS
(TA=25°C)

Parameter	Symbol	Color	Max Rating	Unit
Power Dissipation	PD	Red	78	mW
		Orange		
Pulse Current Forward Current	IFP	Red	60	mA
		Orange		
Continuous Forward Current	IF	Red	30	mA
		Orange		
Reverse Voltage	VR	5		V
Operating Temperature Range	TOPR	-40~+85		°C
Storage Temperature Range	TSTG	-40~+100		°C

IFP = Pulse Width ≤ 10 ms, Duty Ratio ≤ 1/8. Soldering Condition: 260 °C/ 5sec

OPTICAL-ELECTRICAL CHARACTERISTICS
(TA=25°C)

Parameter	Symbol	Test Con- dition	Color	Value			Unit
				Min	Typ	Max	
Luminous Intensity	IV	IF = 20mA	Red	200	350	-	mcd
			Orange	320	500	-	
Forward Voltage	VF	IF = 20mA	Red	-	2.0	2.6	V
			Orange	-	2.0	2.6	
Reverse Leakage Current	IR	VR = 5V	Red	-	-	10	µA
			Orange	-	-	10	
Viewing Angle	2θ1/2	IF = 10mA	Red	-	120	-	deg
			Orange	-	120	-	
Dominant Wavelength	λD	IF = 20mA	Red	618	-	630	nm
			Orange	598	-	606	

*Tolerance of viewing angle: -10 / +5 deg.



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OPTICAL CHARACTERISTIC CURVES (RED)

Fig.1 Forward current vs. Forward Voltage

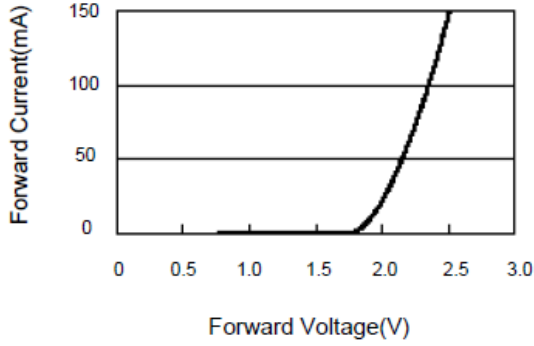


Fig.2 Luminous Intensity vs. Forward Current

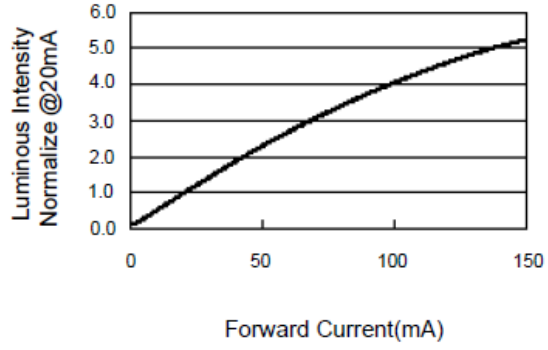


Fig.3 Forward Voltage vs. Temperature

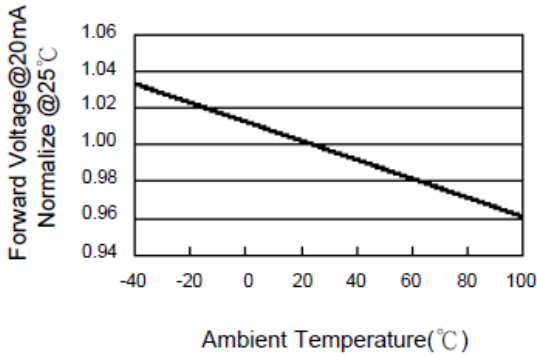


Fig.4 Luminous Intensity vs. Temperature

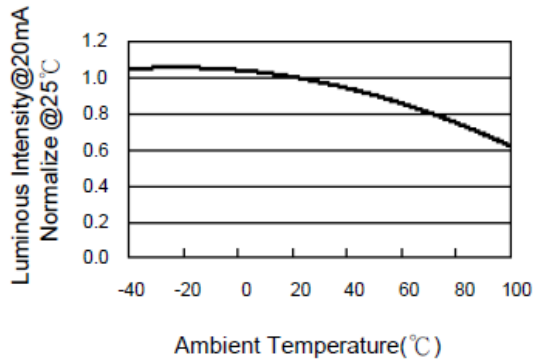


Fig.5 Relative Intensity vs. Wavelength

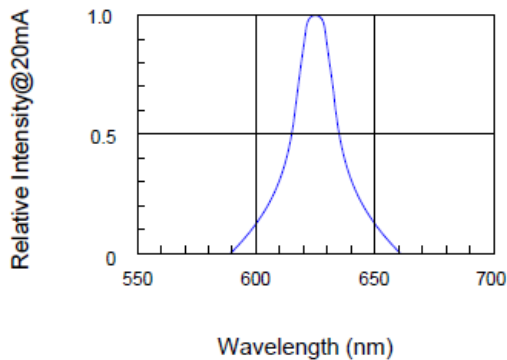
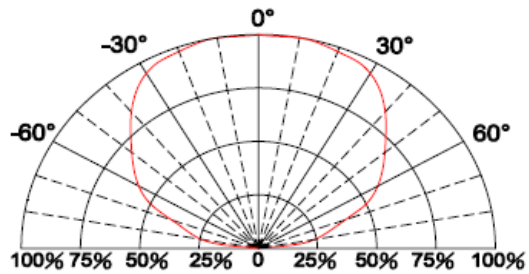


Fig.6 Directive Radiation



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OPTICAL CHARACTERISTIC CURVES (ORANGE)

Fig.1 Forward current vs. Forward Voltage

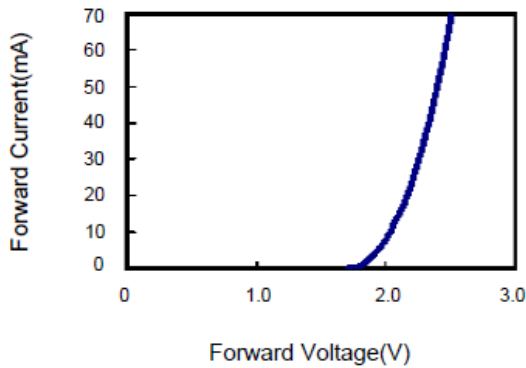


Fig.2 Relative Intensity vs. Forward Current

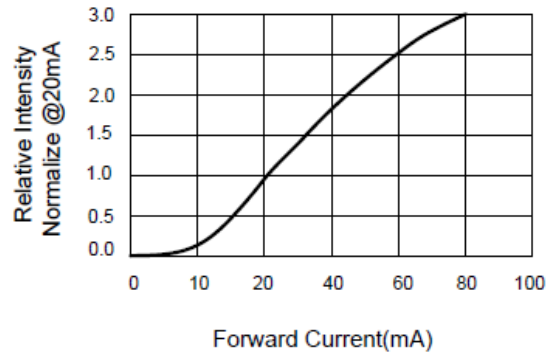


Fig.3 Forward Voltage vs. Temperature

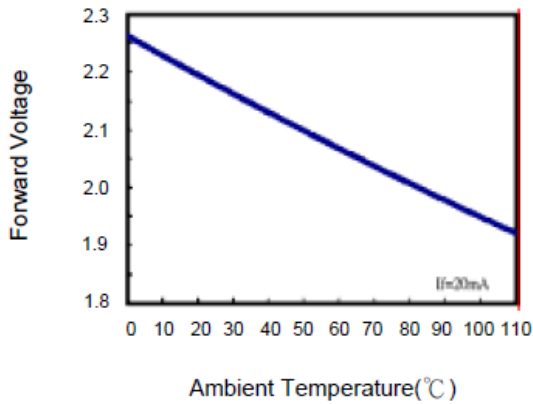


Fig.4 Relative Intensity vs. Temperature

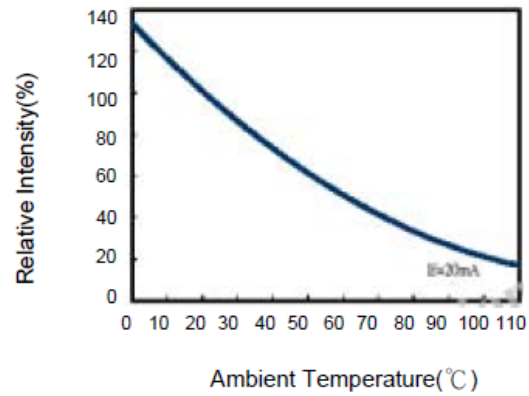


Fig.5 Relative Intensity vs. Wavelength

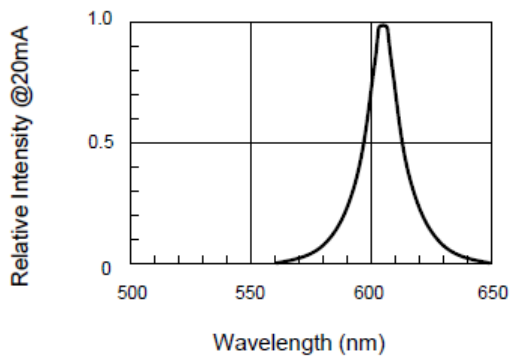
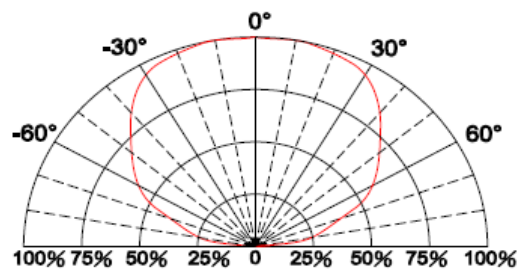


Fig.6 Directive Radiation



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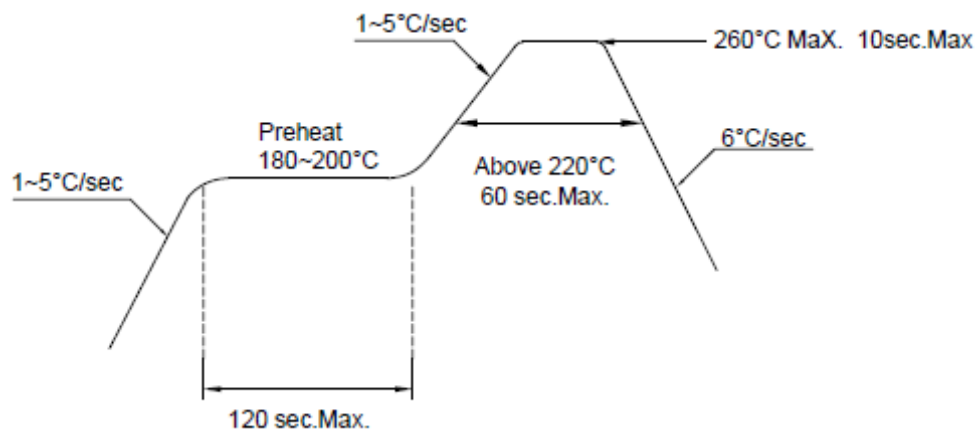
SOLDERING CONDITIONS

RECOMMENDED SOLDERING CONDITIONS

1. Hand Solder

Basic spec is $\leq 280^{\circ}\text{C}$ 3 sec one time only.

3. PB-Free Reflow Solder



Notes:

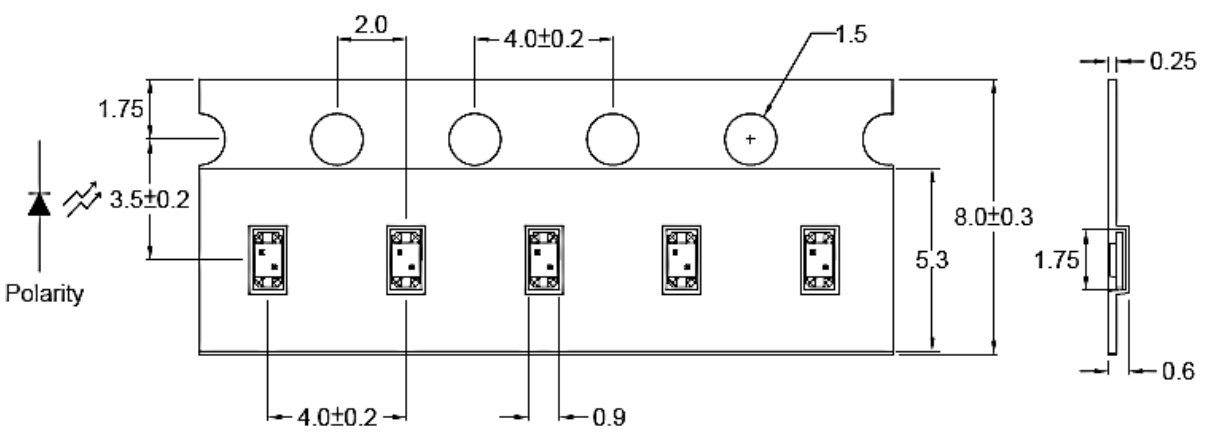
1. Reflow soldering should not be done more than two times.
2. When soldering, do not put stress on the LEDs during heating.
3. After soldering, do not warp the circuit board.



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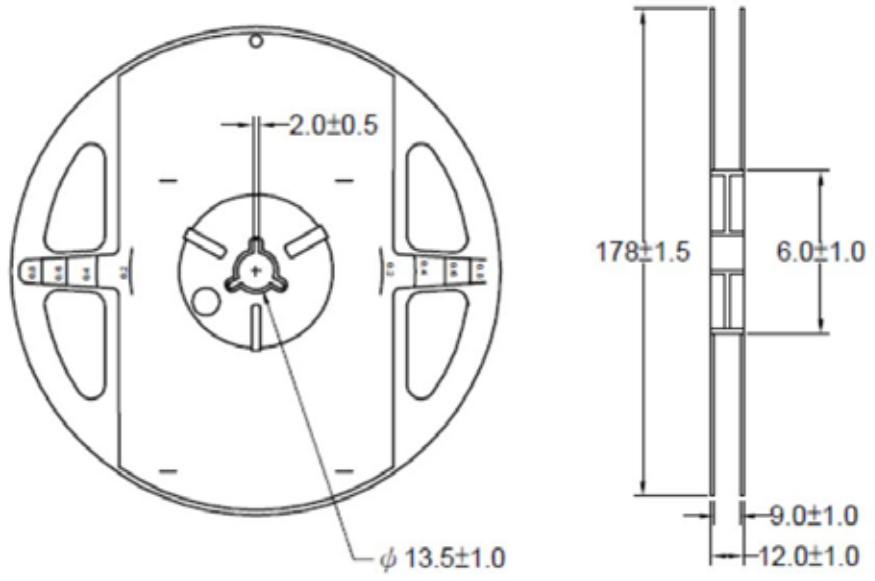
PACKAGING SPECIFICATIONS

CARRIER TAPE DIMENSION



Note: The tolerances unless mentioned are ±0.1mm, Angle ±0.5; Unit=mm

REEL DIMENSIONS



- Notes:
1. 4,000 pieces per reel.
 2. 8.0mm tape, 7" reel



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