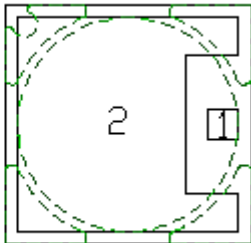
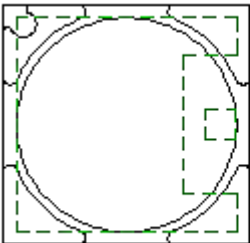
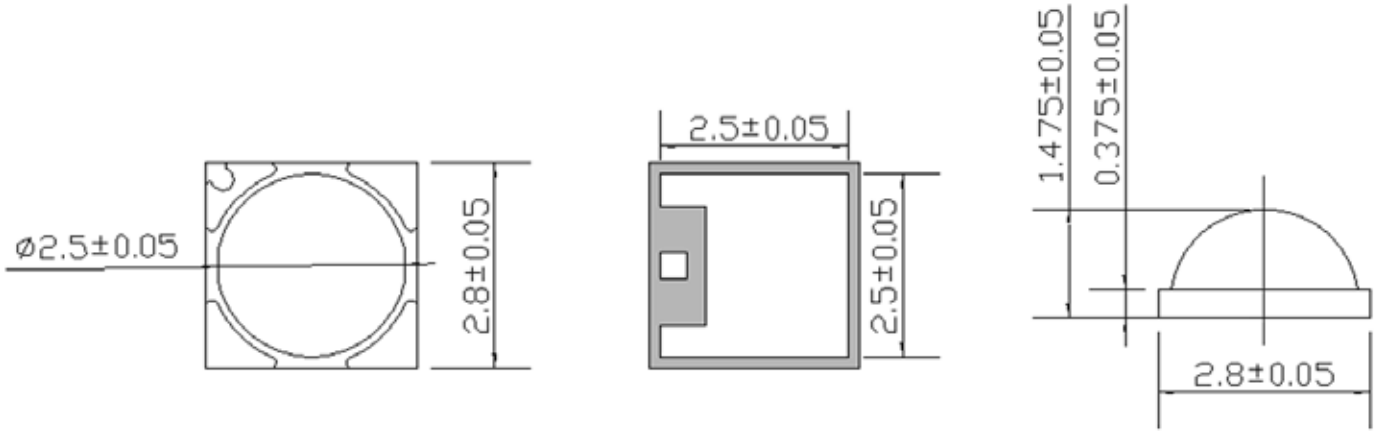


**SPECIFICATION** **CSHD111R2C**
**PACKAGE OUTLINES**


PAD	Function
1	Cathode
2	Anode, Thermal

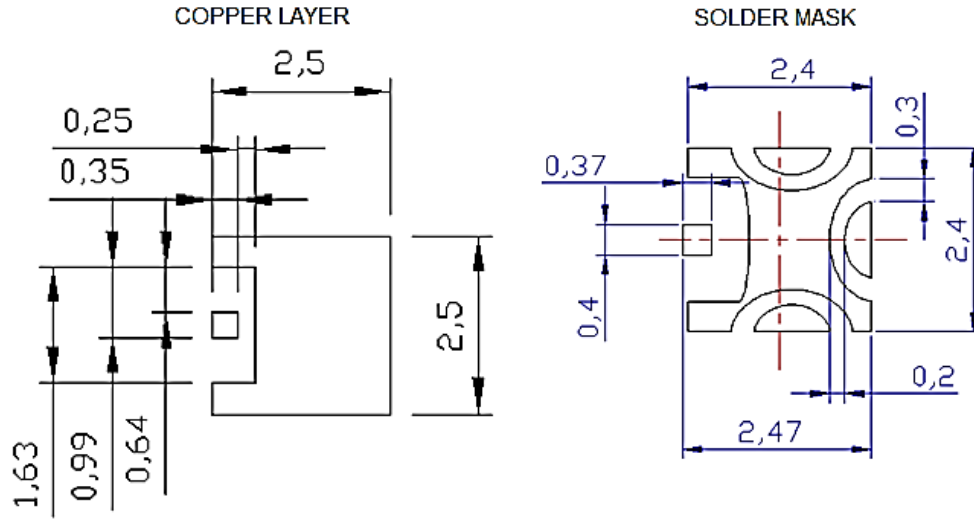
- Notes:
1. All dimensions are in millimeters (inches).
  2. Tolerance is  $\pm 0.25\text{mm}$  (0.01") unless otherwise noted.
  3. Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CSHD111R2C	InGaAlP	Red	Water Clear	130°



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RECOMMENDED SOLDER PADS



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**ABSOLUTE MAXIMUM RATINGS (TA=25°C)**

Parameter	Symbol	Max Rating	Unit
Power Dissipation	PD	1.05	W
Reverse Voltage	VR	5	V
Operating Temperature Range	TOP	-40~+80	°C
Storage Temperature Range	TSTG	-40~+120	°C
Peak Pulsing Current (1/10 duty f = 10KHz)	IFP	500	mA
Soldering Temperature	TSOL	Max 240°C for 5 sec Max	

**OPTICAL-ELECTRICAL CHARACTERISTICS (TA=25°C)**

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Flux	ΦV	IF = 350mA	-	55	-	lm
Forward Voltage	VF	IF = 350mA	-	2.3	3.0	V
Reverse Leakage Current	IR	VR = 5V	-	-	10	μA
Viewing Angle at 50% Iv	2θ1/2	IF = 350mA	-	130	-	Deg
Dominant Wavelength	λD	IF = 350mA	620	-	630	nm

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



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OPTICAL CHARACTERISTIC CURVES

Fig. Forward Current vs. Forward Voltage

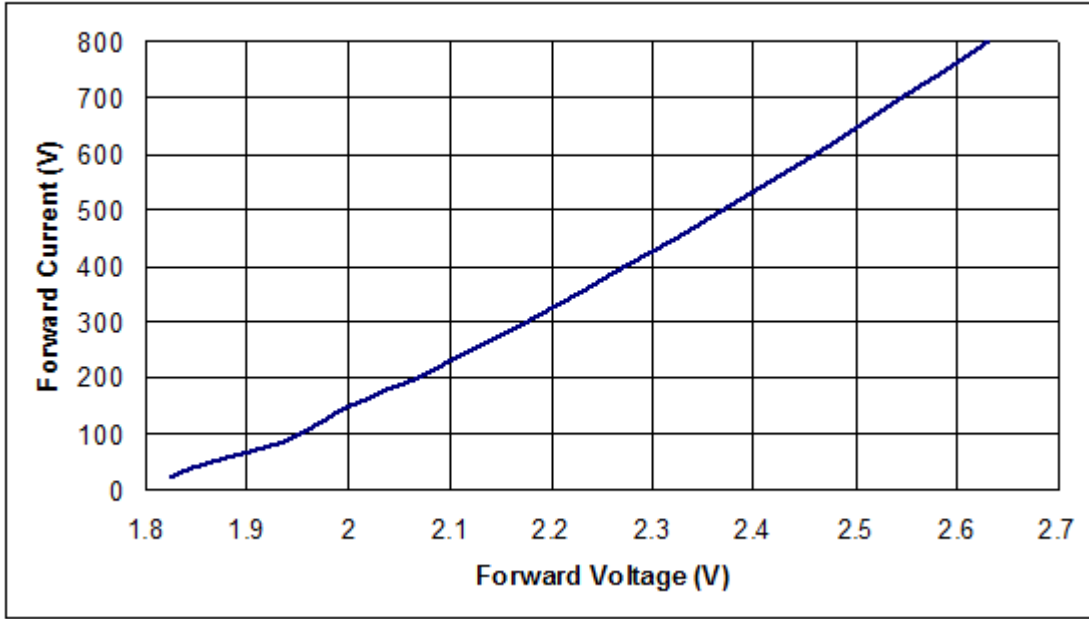
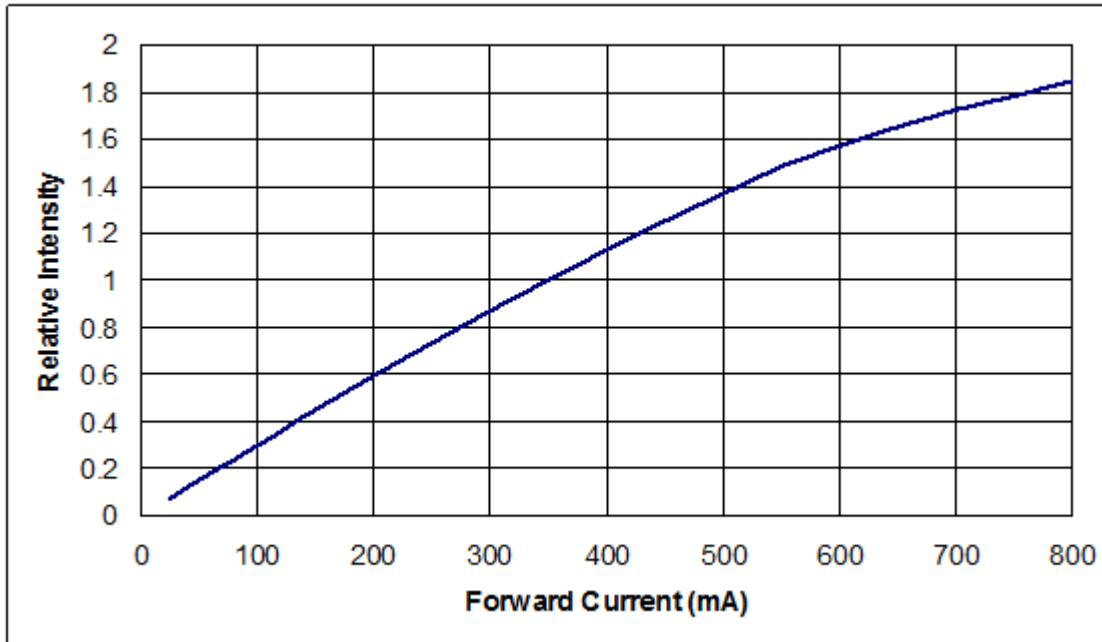


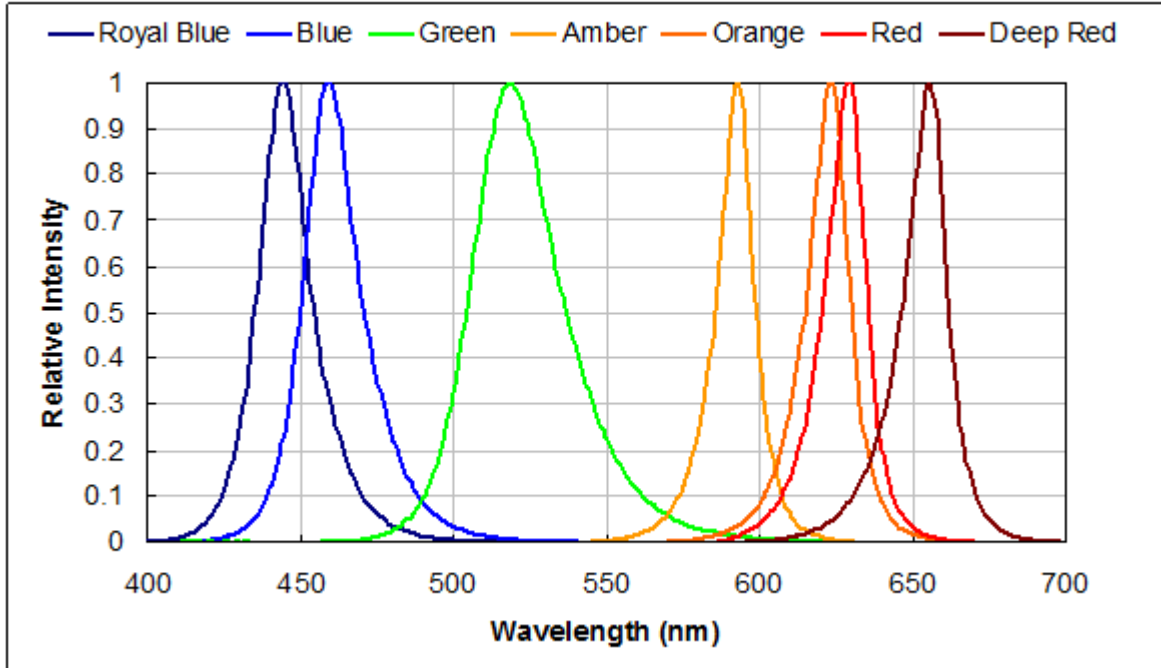
Fig. Relative Intensity vs. Forward Current



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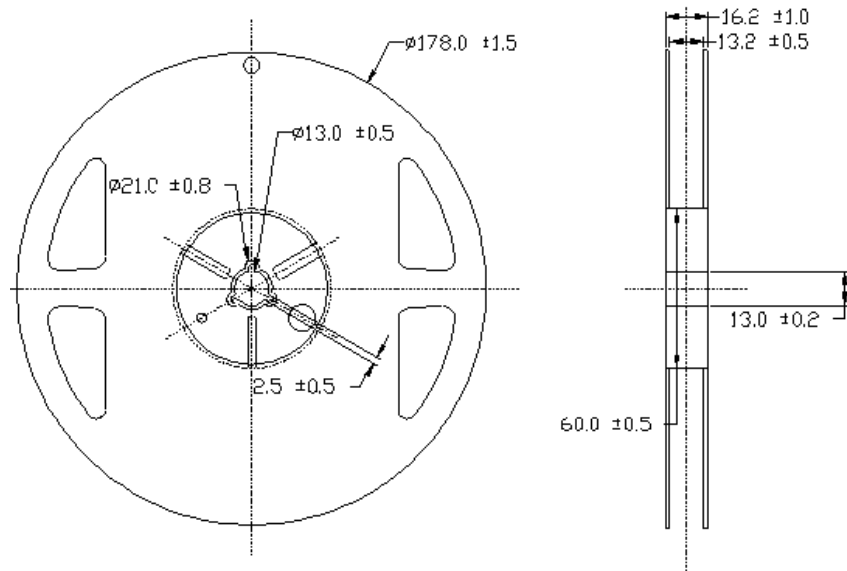
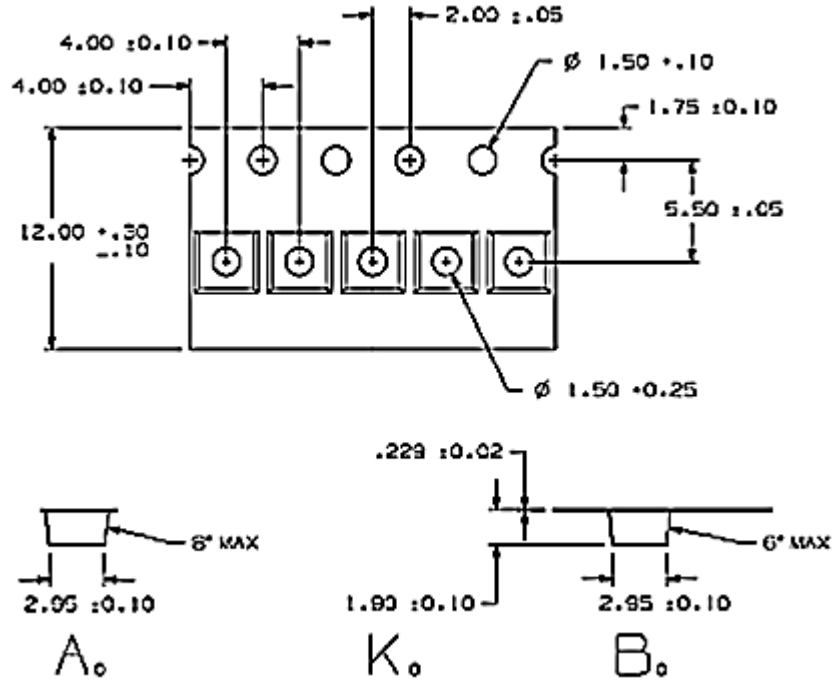
OPTICAL CHARACTERISTIC CURVES

Fig. Relative Intensity vs. Wavelength.



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## PACKAGING SPECIFICATION

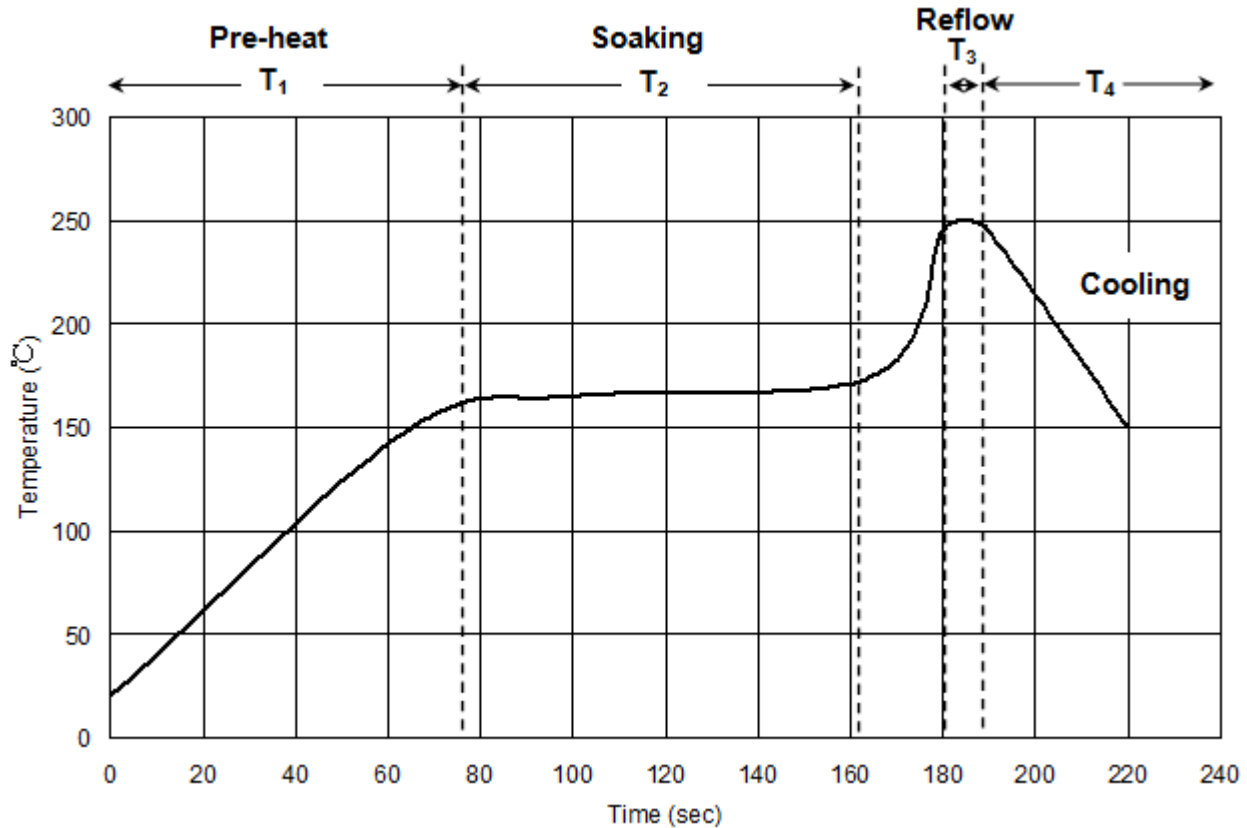


- Moisture proof bag
- 1 Reel/Bag
- 2000 (Max)/Reel



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## SOLDERING CONDITIONS



T1	Ramp up rate	1.0~3.0 °C/sec
	Pre-heat time	50~80 sec
T2	Soaking temperature	155~185 °C
	Dwell time during soaking	60~120 sec
T3	Reflow temperature	240~250 °C
	Reflow time	Max 10 sec
T4	Ramp up rate during reflow	1.2~2.3 °C/sec
	Cooling	1.0~6.0 °C.sec

Note: suggest using Sn96Ag3Cu0.5 lead free solder



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