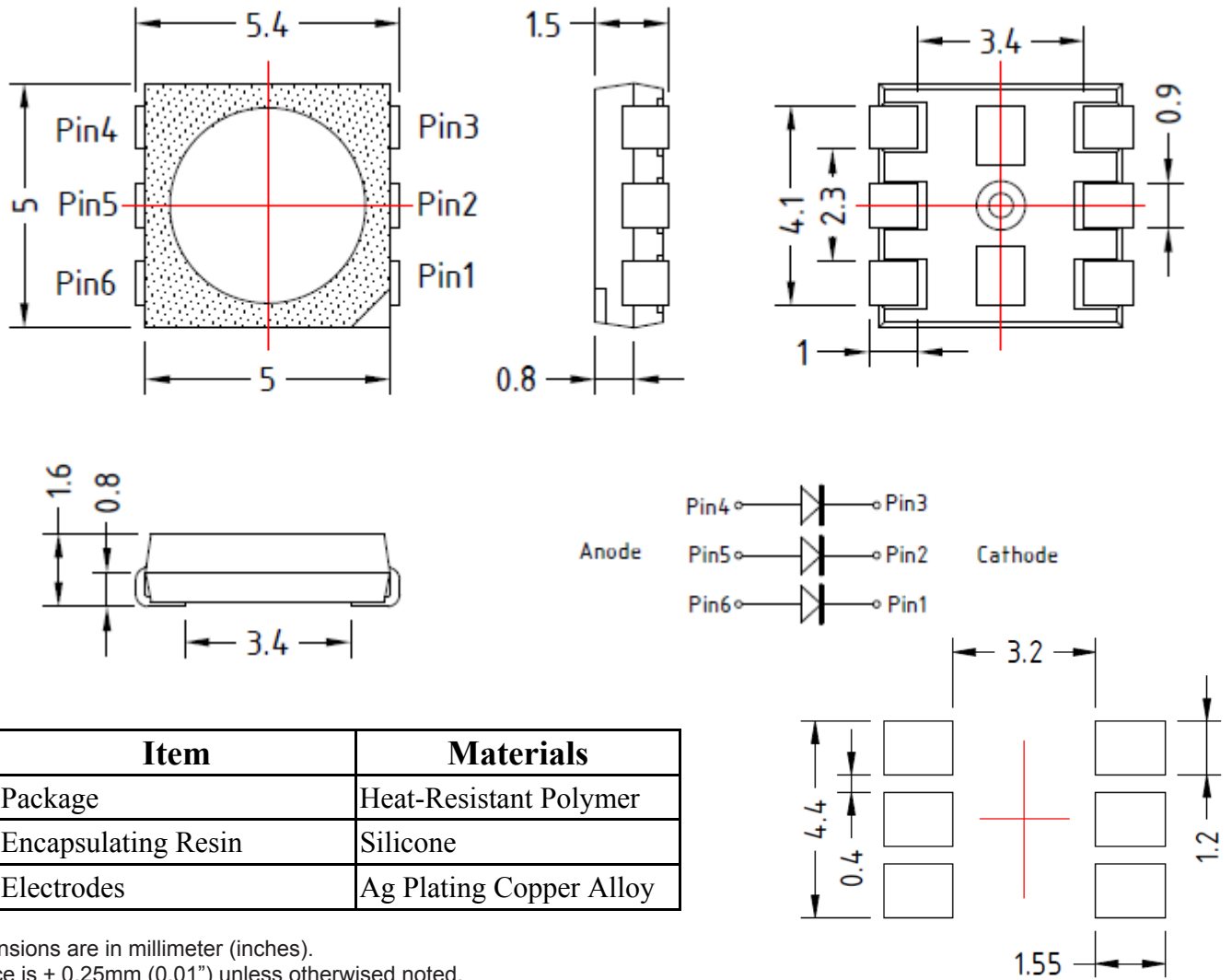


## SPECIFICATIONS CSH22R4C

### PACKAGE OUTLINES



Item	Materials
Package	Heat-Resistant Polymer
Encapsulating Resin	Silicone
Electrodes	Ag Plating Copper Alloy

- Notes:
1. All dimensions are in millimeter (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
CSH22R4C	InGaAlP	Red	Water Clear	120°



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

Parameter	Symbol	Max Rating	Unit
Forward Current	I <sub>F</sub>	210	mA
Power Dissipation	P <sub>d</sub>	630	mW
Peak Pulsing Current (1/10 duty f = 10KHz)	I <sub>FP</sub>	300	mA
Reverse Voltage	V <sub>R</sub>	5	V
Operating Temperature Range	T <sub>OP</sub>	-30~+100	°C
Storage Temperature Range	T <sub>STG</sub>	-40~+100	°C
Soldering Temperature	T <sub>SOL</sub>	Max 260°C for 5 sec Max	

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

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 5V	-	-	10	μA
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> = 60mA	-	635	-	nm
Dominant Wavelength	λ <sub>D</sub>	I <sub>F</sub> = 60mA	-	625	-	nm
Forward Voltage (per chip)	V <sub>F</sub>	I <sub>F</sub> = 60mA	-	2.5	3.0	V
Luminous Intensity (per chip)	I <sub>v</sub>	I <sub>F</sub> = 60mA	4200	6100	-	mcd
Viewing Angle at 50% I <sub>v</sub>	2θ <sub>1/2</sub>	I <sub>F</sub> = 60mA	-	120	-	Deg

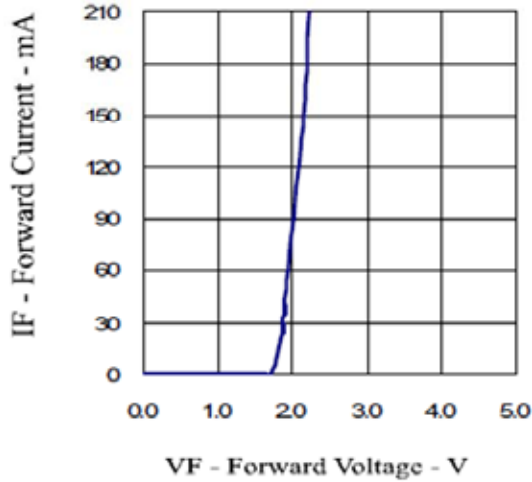
\*Tolerance of viewing angle: -10 / +5 deg.



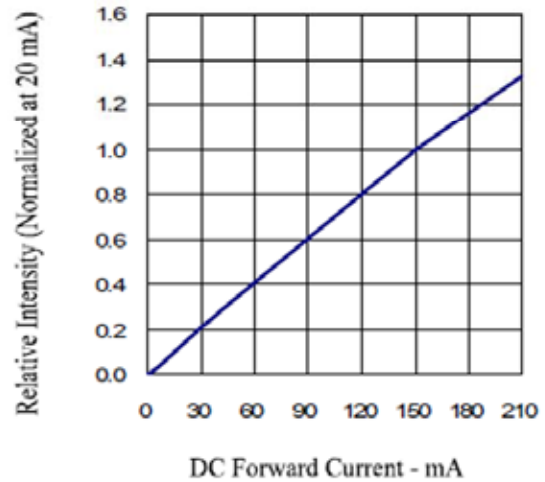
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## OPTICAL CHARACTERISTIC CURVES

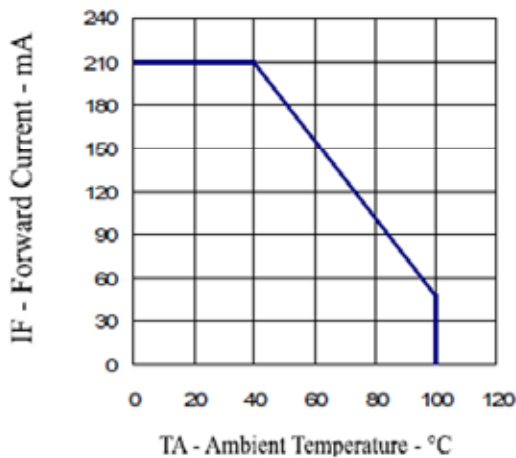
Forward Current vs. Forward Voltage



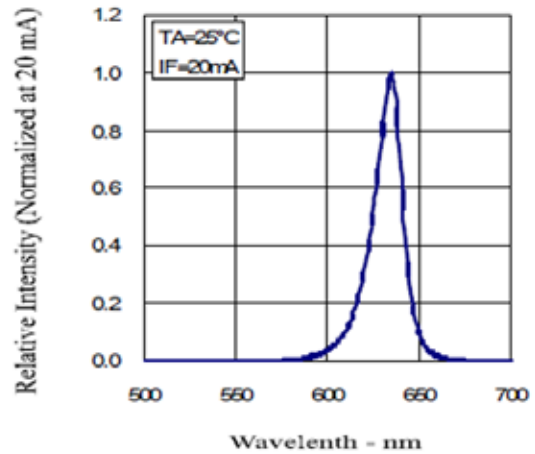
Relative Intensity vs. Forward Current



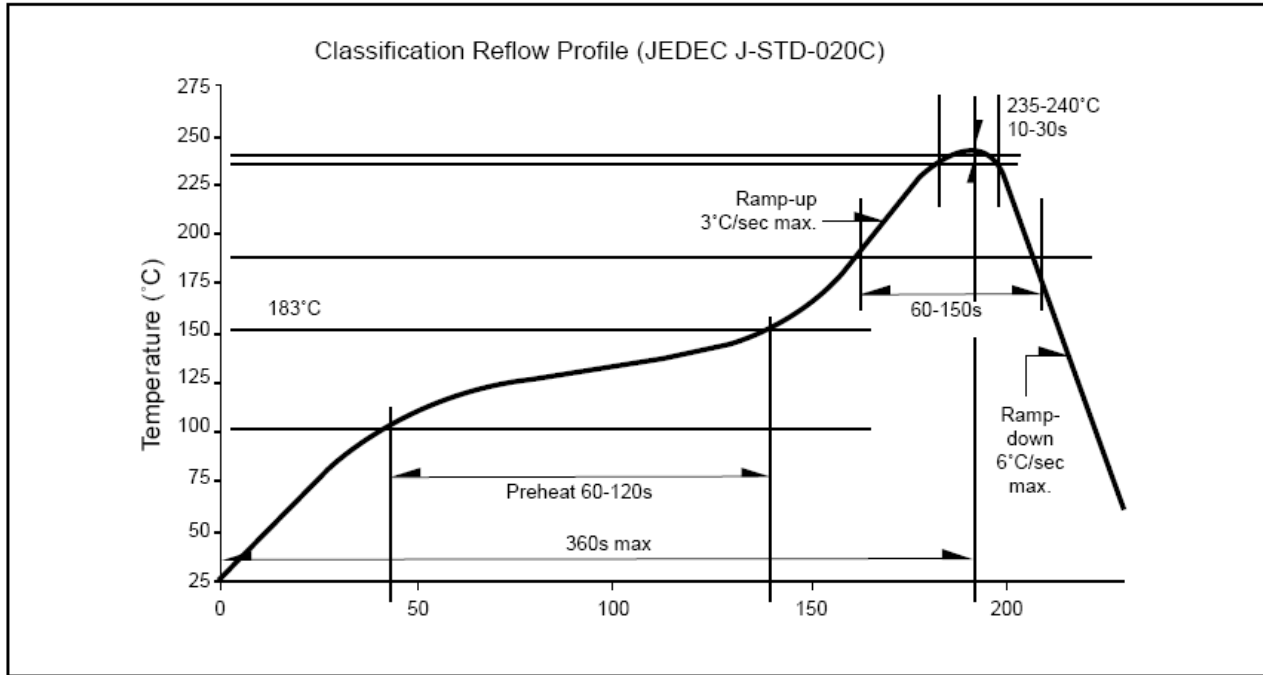
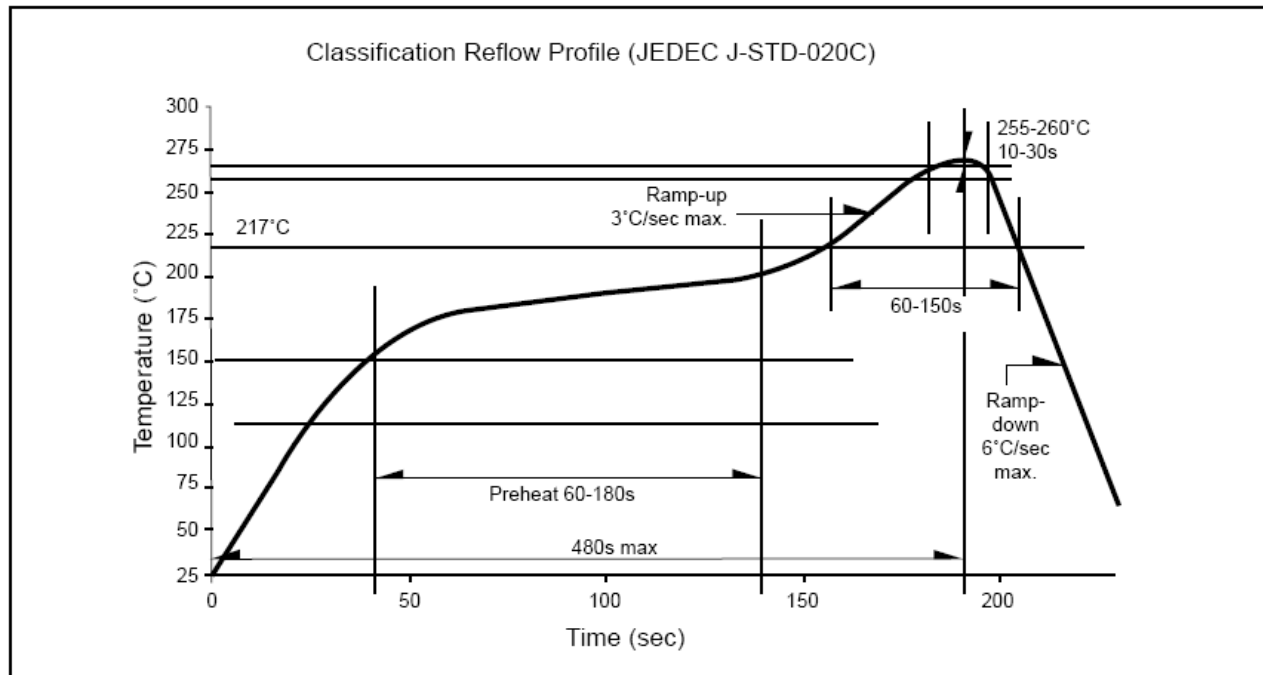
Forward Current vs. Ambient Temperature



Relative Intensity vs. Wavelength



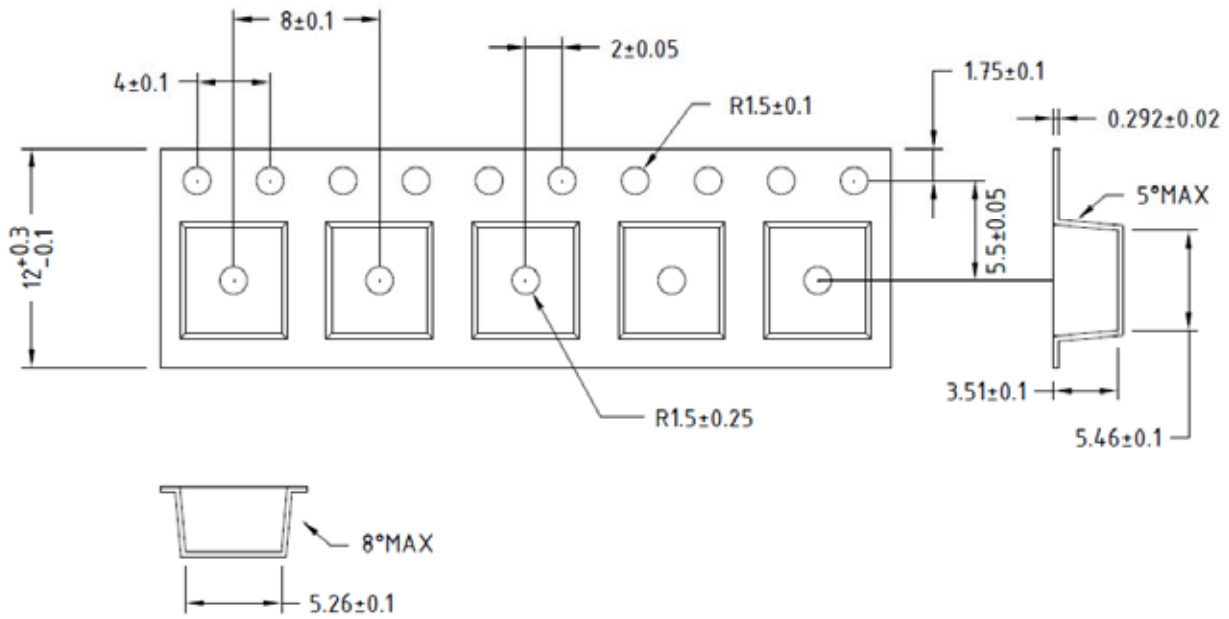
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**SOLDERING CONDITIONS**
**RECOMMENDED Sn-PB IR-Reflow Soldering Profile**

**RECOMMENDED Pb-Free Soldering Profile**


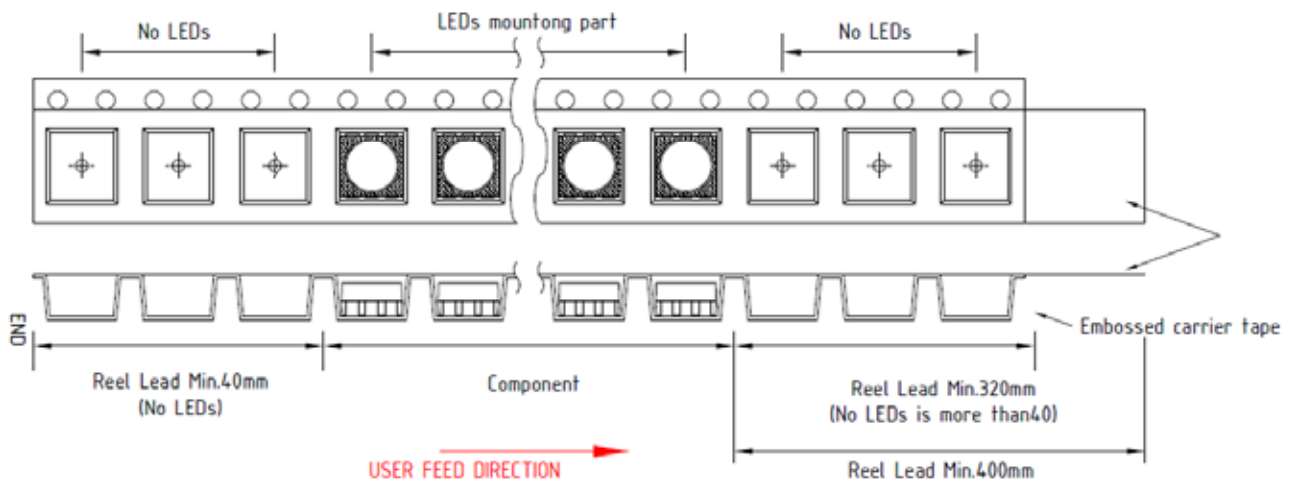
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## PACKAGING SPECIFICATION

### Tape Dimension



### Tape leader and trailer dimension



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