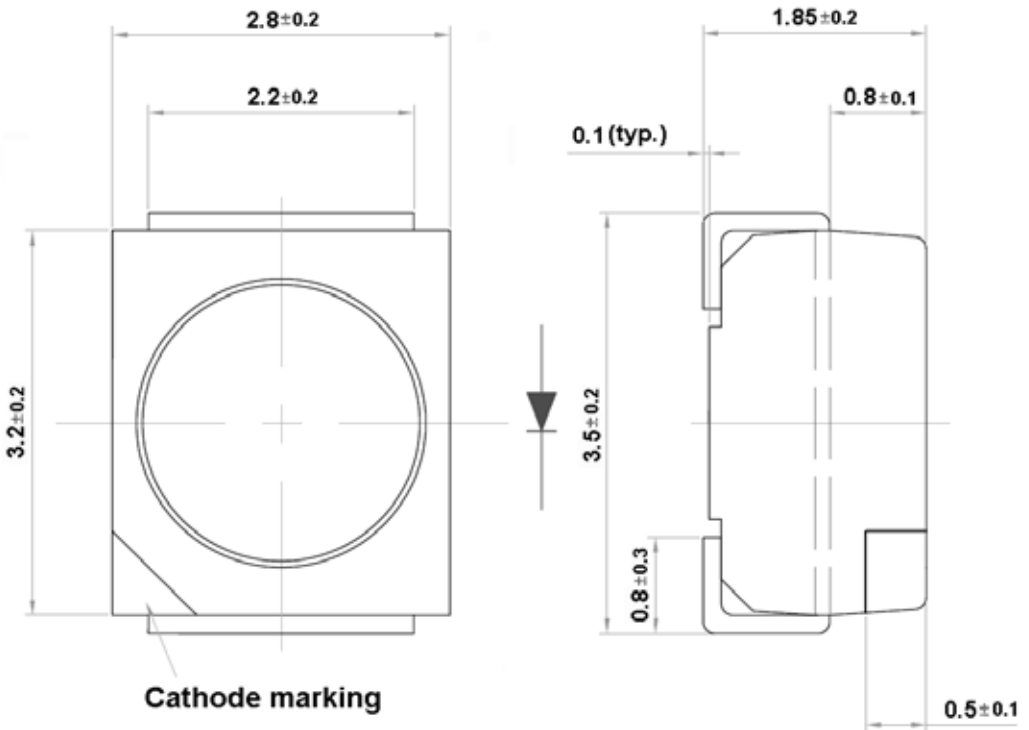


**SPECIFICATION** **CSP1311R3C**
**PACKAGE OUTLINES**


- Notes:
1. All dimensions are in millimeters (inches).
  2. Tolerance is  $\pm 0.25$ 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
CSP1311R3C	InGaAlP	Red	Water Clear	120°



ChromeLED Corp. reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: [www.chromeled.com](http://www.chromeled.com)

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

Parameter	Symbol	Max Rating	Unit
Forward Current	I <sub>F</sub>	30	mA
Reverse Current @ 5V	I <sub>R</sub>	10	μA
Power Dissipation	P <sub>d</sub>	75	mW
Operating Temperature Range	T <sub>OP</sub>	-40~+100	°C
Storage Temperature Range	T <sub>STG</sub>	-40~+100	°C
Peak Pulsing Current (1/10 duty f = 10KHz)	I <sub>FP</sub>	100	mA
Soldering Temperature	T <sub>SOL</sub>	Max 260°C for 5 sec Max	

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

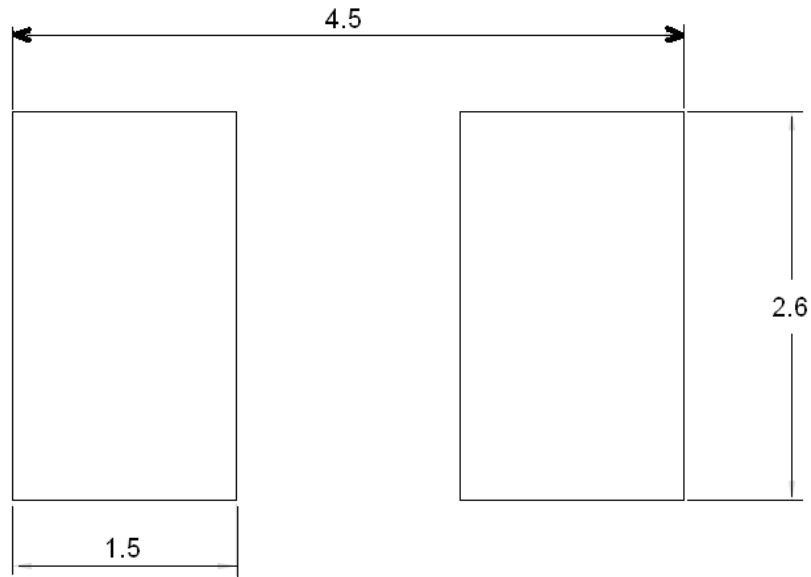
Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	I <sub>v</sub>	I <sub>F</sub> = 20mA	71.5	180	-	mcd
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 20mA	-	1.9	2.3	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> = 5V	-	-	10	μA
Viewing Angle at 50% I <sub>v</sub>	2θ <sub>1/2</sub>	I <sub>F</sub> = 20mA	-	120	-	Deg
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> = 20mA	-	640	-	nm
Dominant Wavelength	λ <sub>D</sub>	I <sub>F</sub> = 20mA	-	632	-	nm

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



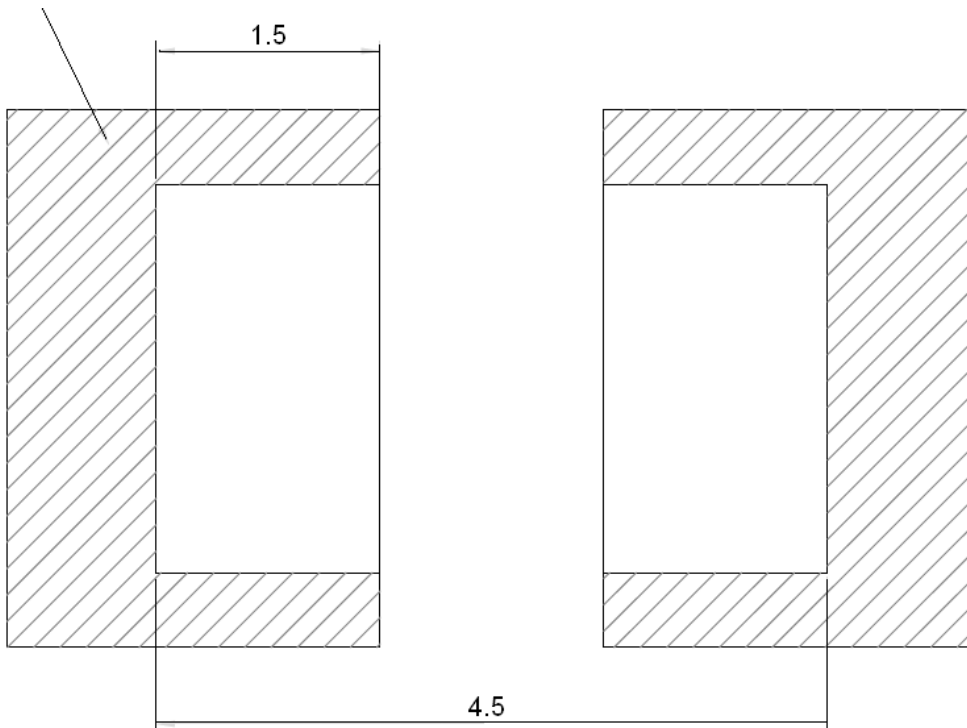
ChromeLED Corp. reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: [www.chromeled.com](http://www.chromeled.com)

RECOMMENDED SOLDER PAD



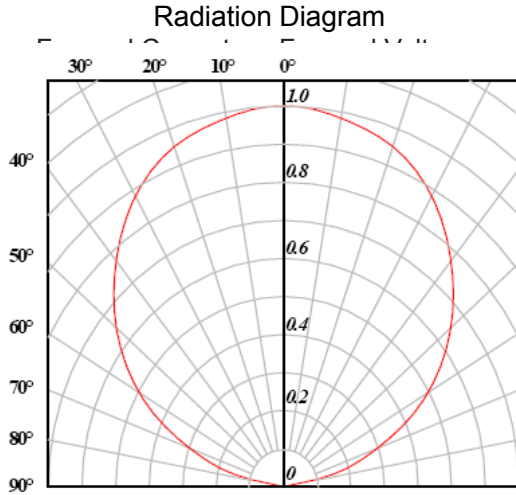
Additional Cu area for improved heat dissipation > 16mm sq.

 Solder resist

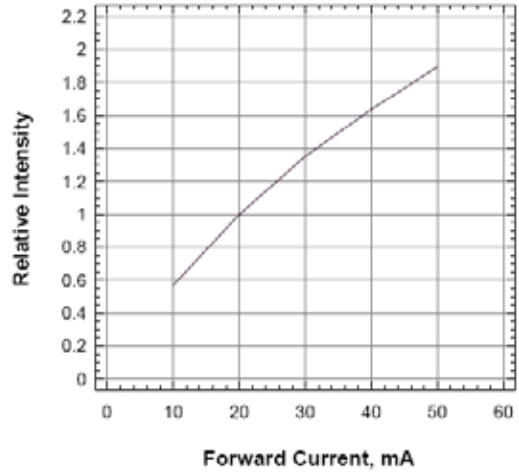


ChromeLED Corp. reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: [www.chromeled.com](http://www.chromeled.com)

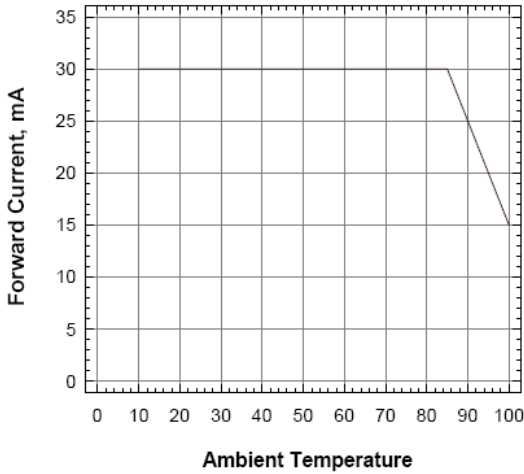
## OPTICAL CHARACTERISTIC CURVES



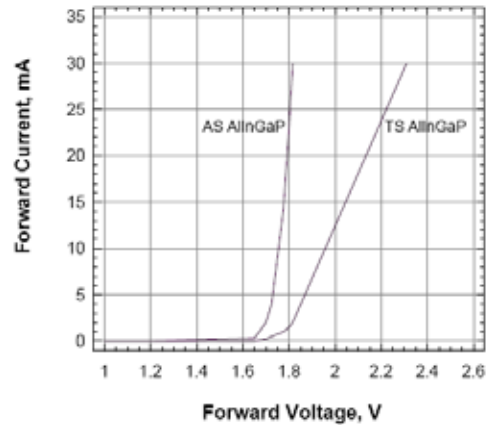
### Relative Intensity vs. Forward Current



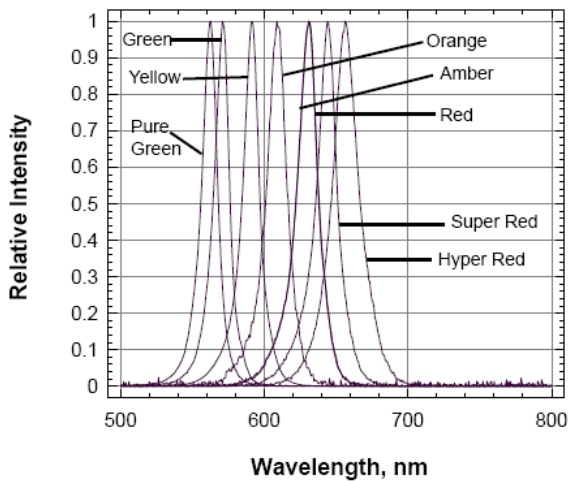
### Max Forward Current vs. Temp



### Forward Current vs. Forward Voltage



### Relative Intensity vs. Wavelength



ChromeLED Corp. reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: [www.chromeled.com](http://www.chromeled.com)

# SOLDERING CONDITIONS

## RECOMMENDED Sn-PB IR-Reflow Soldering Profile



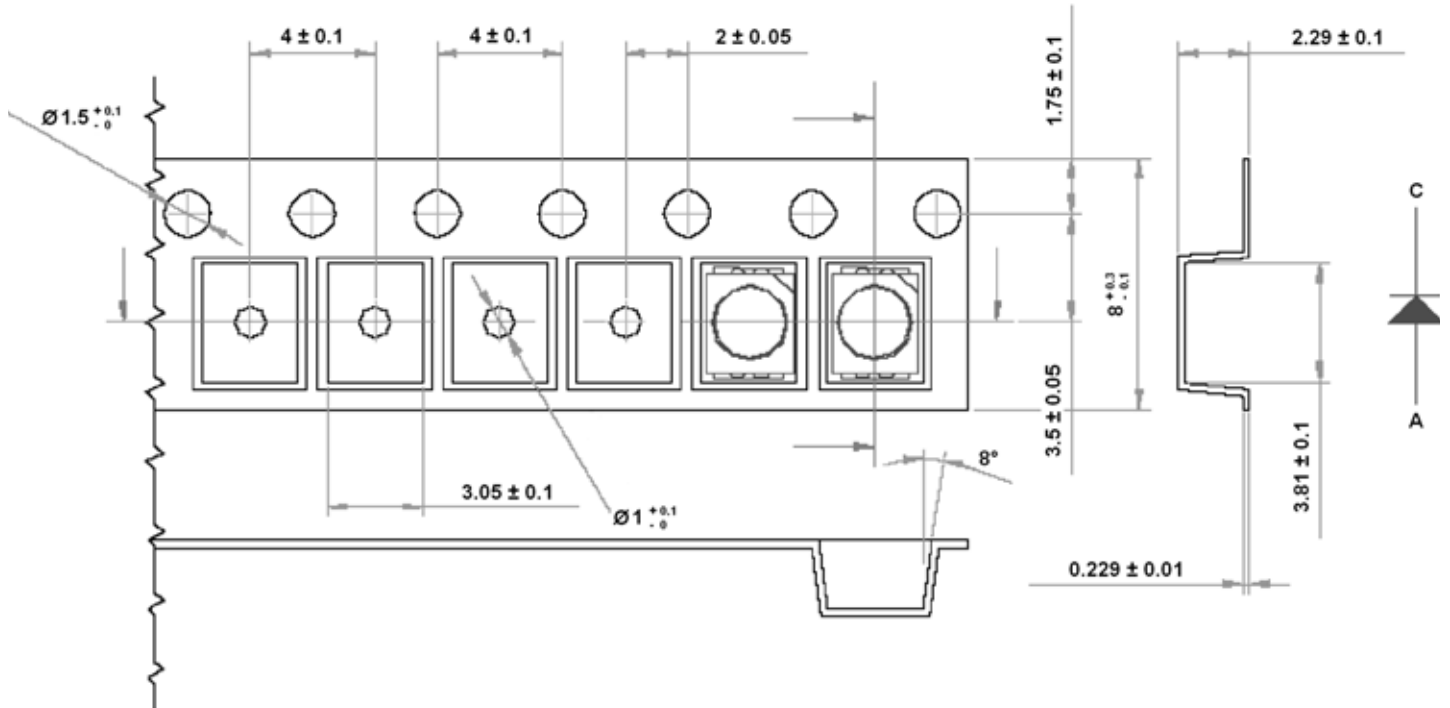
## RECOMMENDED Pb-Free Soldering Profile



ChromeLED Corp. reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: [www.chromeled.com](http://www.chromeled.com)

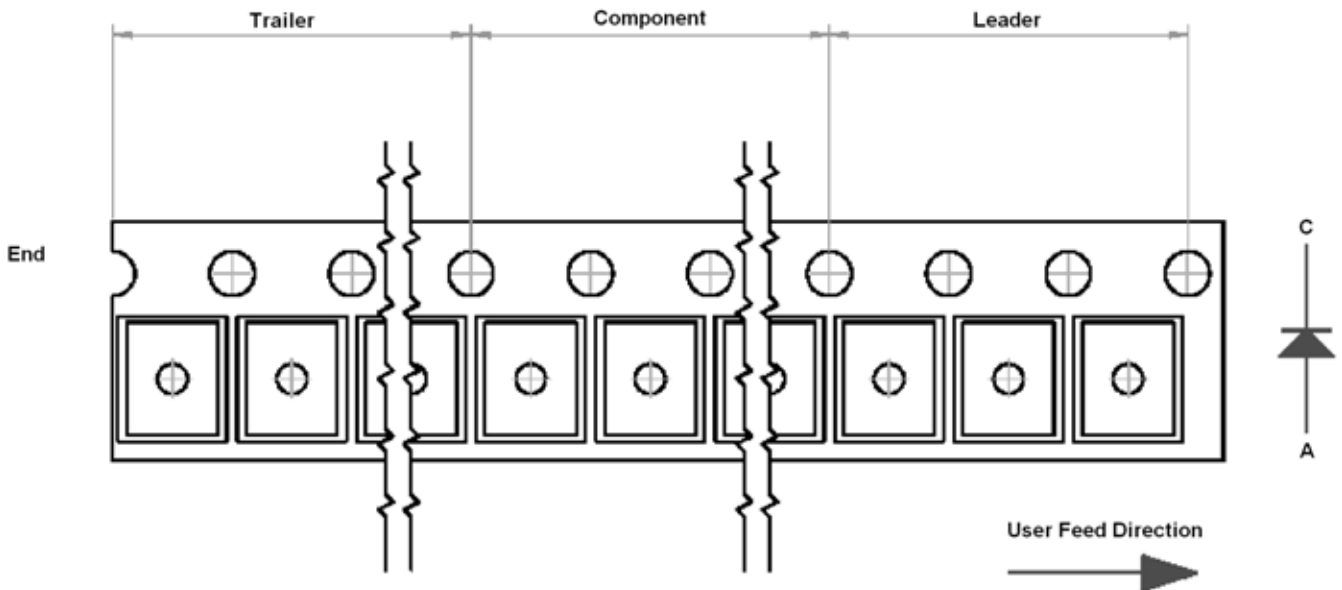
# PACKAGING SPECIFICATION

## TAPING SPECIFICATIONS



Notes: Reel packaging is 2000pcs/reel or 8000pcs/reel. Reel diameters are 180mm and 330mm respectively.

## TAPING ORIENTATION



Notes: 1) 200mm min for  $\varnothing 180$  and  $\varnothing 330$  reel  
 2) 480mm min for  $\varnothing 180$  reel  
 3) 960mm min for  $\varnothing 330$  reel



ChromeLED Corp. reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: [www.chromeled.com](http://www.chromeled.com)