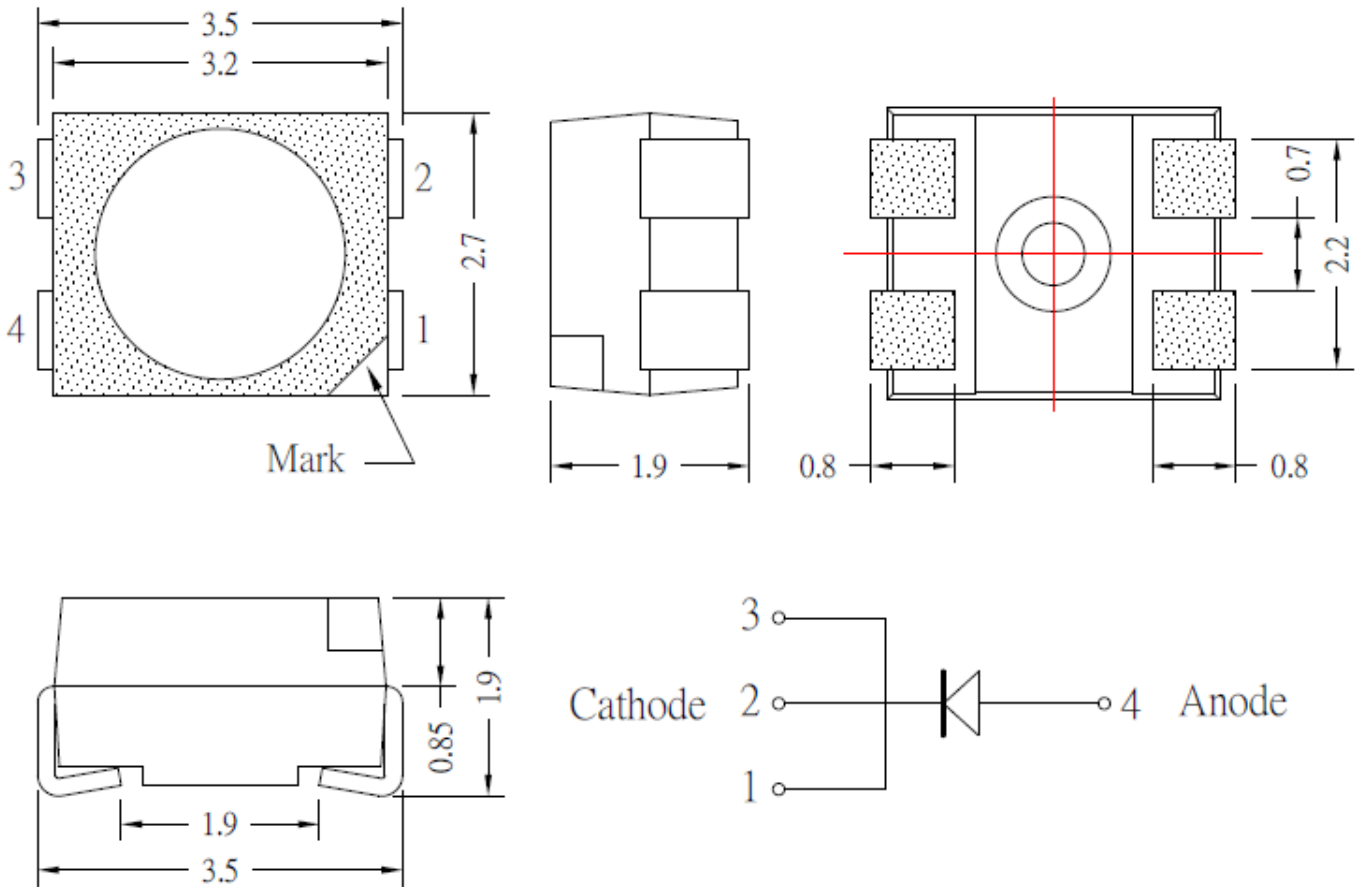


**SPECIFICATION**
**CSP1311A2C-4**
**PACKAGE OUTLINES**

**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
CSP1311A2C-4	InGaAlP	Amber	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	IF	70	mA
Reverse Current @ 5V	IR	10	μA
Power Dissipation	Pd	150	mW
Operating Temperature Range	TOP	-30~+100	°C
Storage Temperature Range	TSTG	-40~+100	°C
Peak Pulsing Current (1/10 duty f = 10KHz)	IFP	100	mA
Soldering Temperature	TSOL	Max 265°C for 10 sec Max	

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

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	Iv	IF = 50mA	1500	2200	-	mcd
Forward Voltage	VF	IF = 50mA	-	2.4	3.0	V
Reverse Leakage Current	IR	VR = 5V	-	-	10	μA
Viewing Angle at 50% Iv	2θ1/2	IF = 50mA	-	120	-	Deg
Peak Wavelength	λP	IF = 50mA	-	620	-	nm
Dominant Wavelength	λD	IF = 50mA	610	615	620	nm

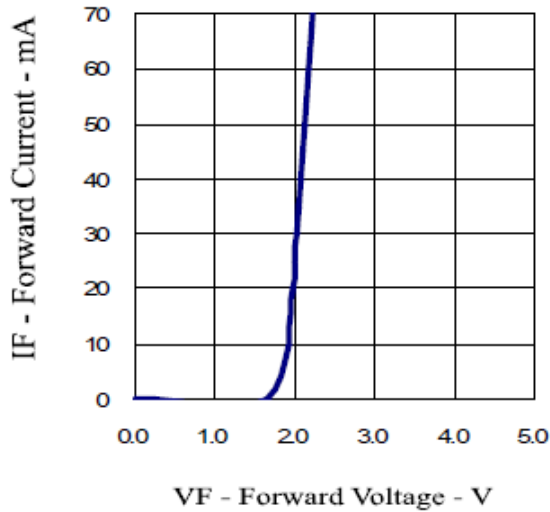
\*Tolerance of viewing angle: -10 / +5 deg.



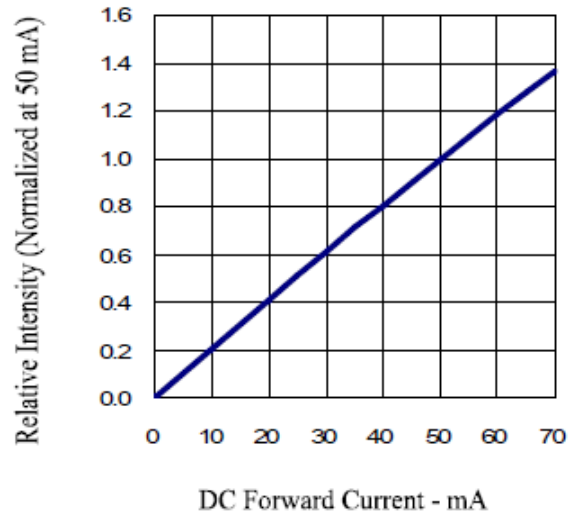
ChromeLED Corp. reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: [www.chromeled.com](http://www.chromeled.com)

## OPTICAL CHARACTERISTIC CURVES

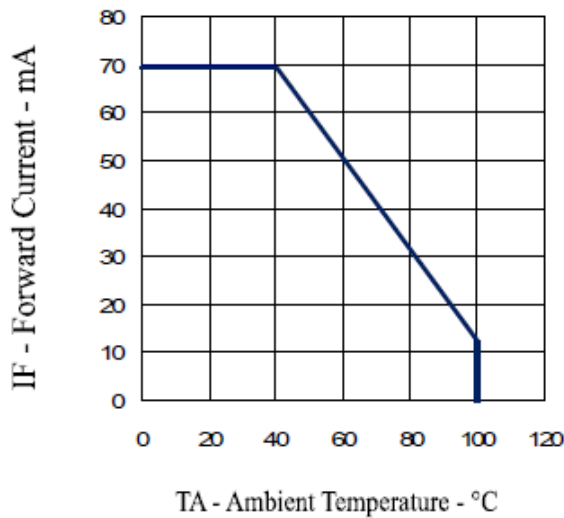
Forward Current vs. Forward Voltage



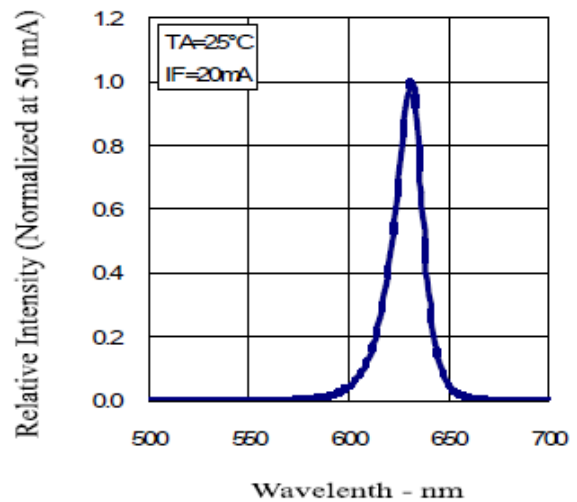
Relative Intensity vs. Forward Current



Forward Current vs. Ambient Temperature



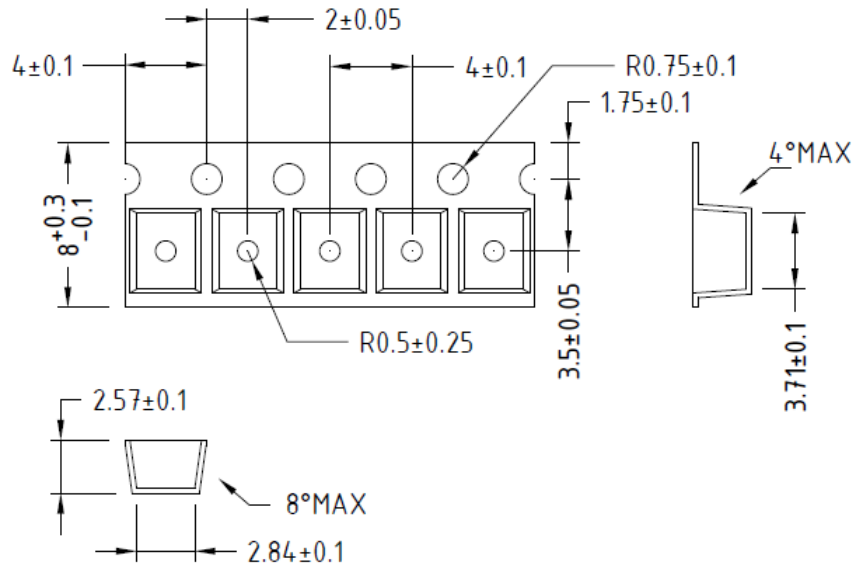
Relative Intensity vs. Wavelength



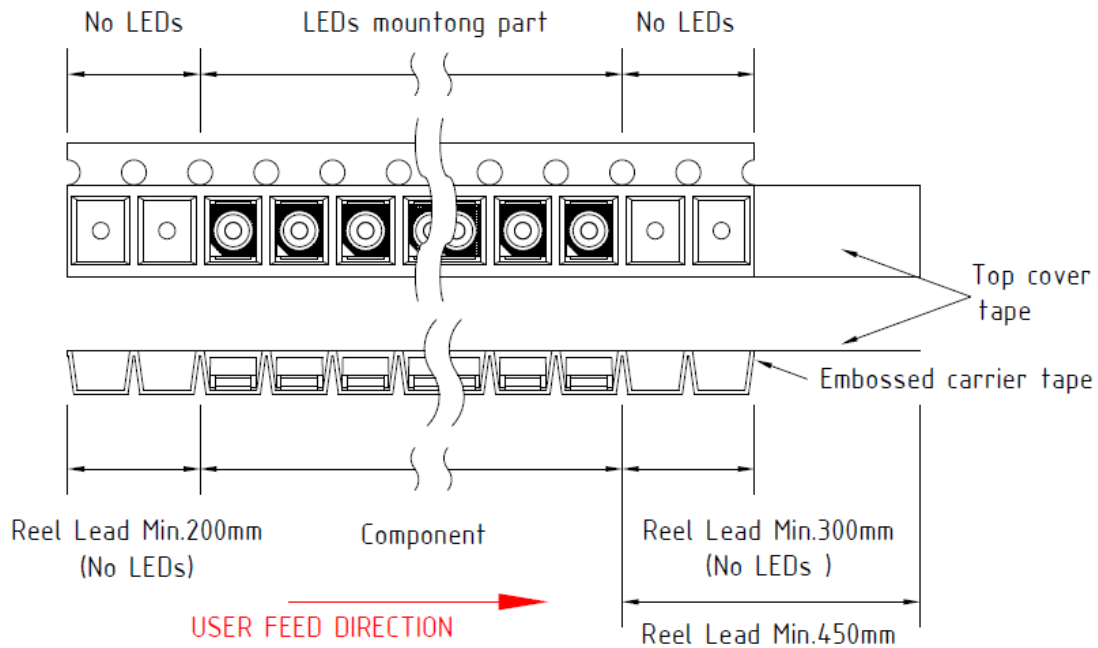
ChromeLED Corp. reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: [www.chromeled.com](http://www.chromeled.com)

## PACKAGING SPECIFICATION

### TAPE DIMENSION



### TAPE LEADER AND TRAILER DIMENSION

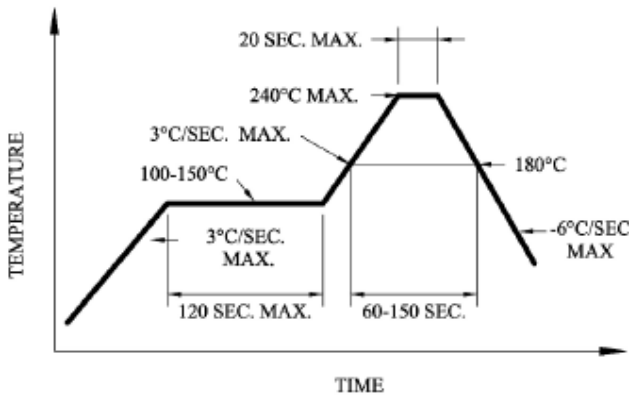
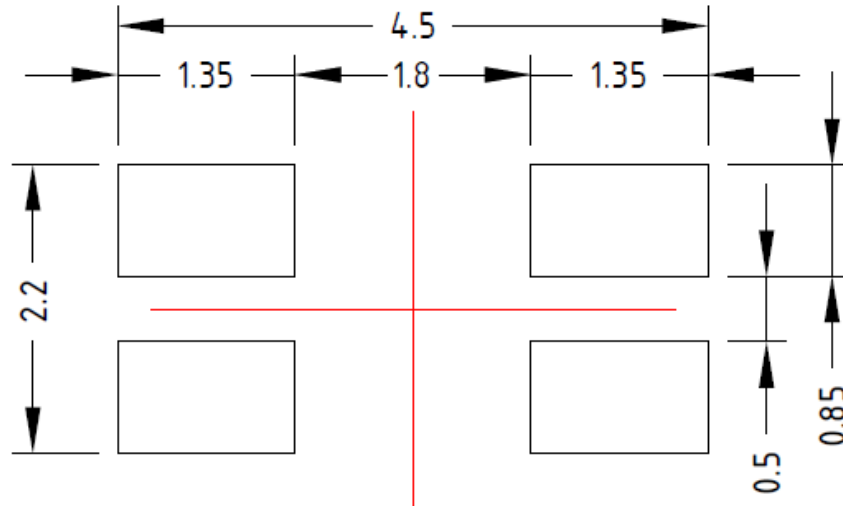
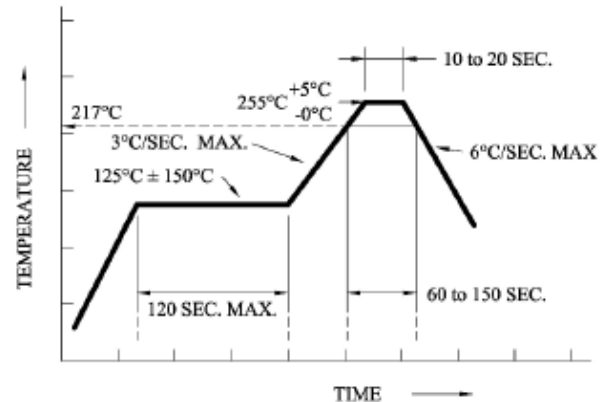


#### Notes:

1. Empty component pockets are sealed with top cover tape
2. The maximum number of missing lamps is two.
3. 2000 pcs/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)

**SOLDERING CONDITIONS**
**RECOMMENDED SOLDERING PAD PATTERN**

**Recommended reflow soldering profile**

**Recommended Pb-free reflow soldering profile.**

- Repairing should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used. It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.
- Reflow soldering should not be done more than two times.
- When soldering, do not put stress on the LEDs during heating.
- After soldering, do not warp the circuit board



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)