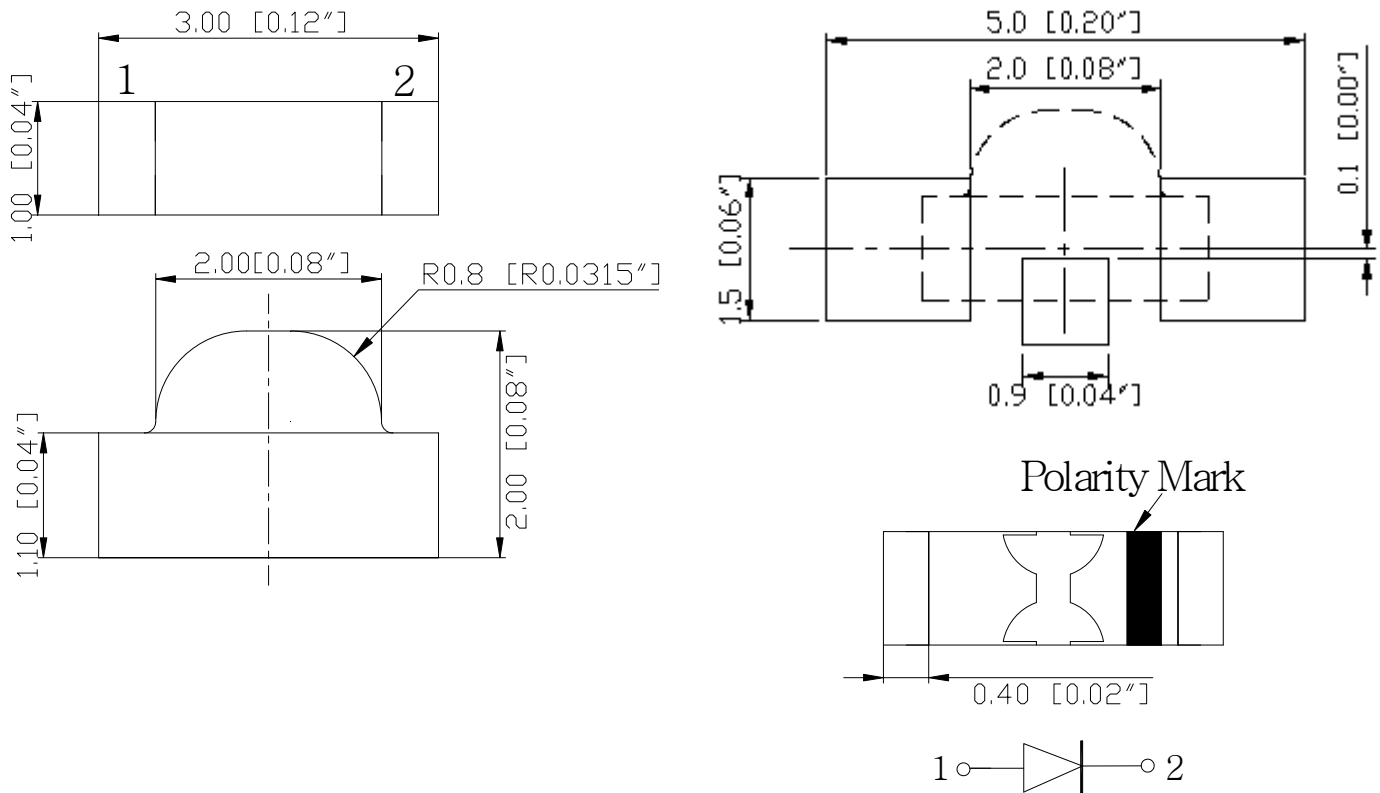


**SPECIFICATION** **CSR123R2C**
**PACKAGE OUTLINES**


- 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
CSR123R2C	InGaAlP	Red	Water Clear	150°



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

Parameter	Symbol	Max Rating	Unit
Forward Current	IF	30	mA
Reverse Current @ 5V	IR	10	μA
Power Dissipation	Pd	75	mW
Operating Temperature Range	TOP	-40~+80	°C
Storage Temperature Range	TSTG	-40~+85	°C
Peak Pulsing Current (1/10 duty f = 10KHz)	IFP	125	mA
Soldering Temperature	TSOL	Max 260°C for 5 sec Max	

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

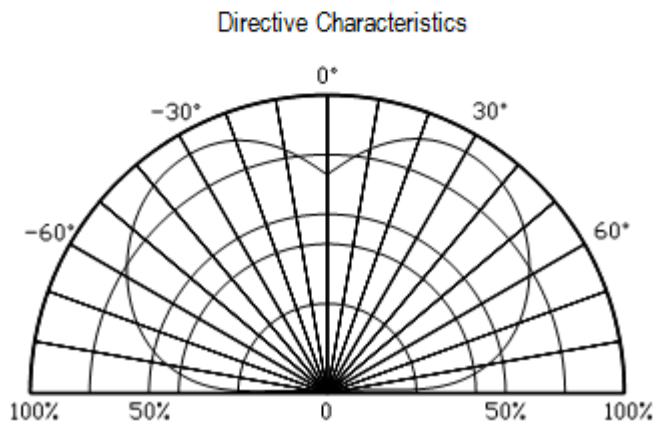
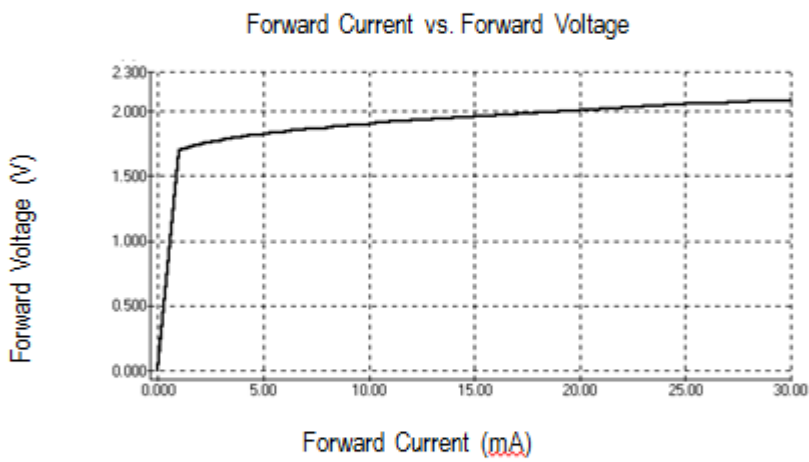
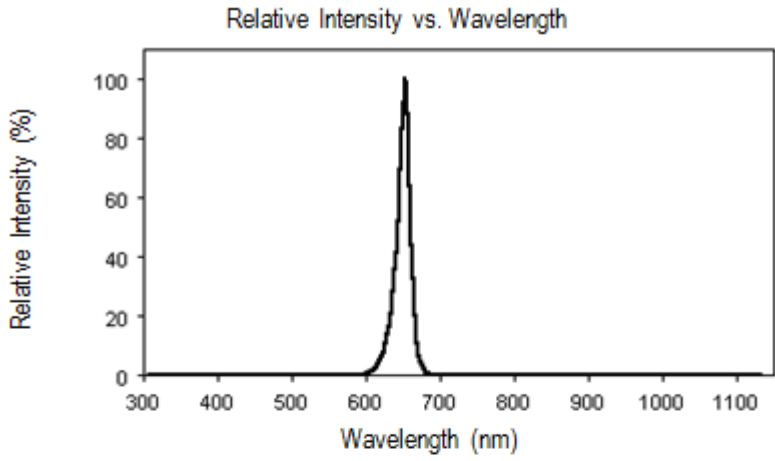
Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	Iv	IF = 20mA	40	60	-	mcd
Forward Voltage	VF	IF = 20mA	-	2.0	2.5	V
Reverse Leakage Current	IR	VR = 5V	-	-	10	μA
Viewing Angle at 50% Iv	2θ1/2	IF = 20mA	-	150	-	Deg
Peak Wavelength	λP	IF = 20mA	-	650	-	nm
Dominant Wavelength	λD	IF = 20mA	-	640	-	nm

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



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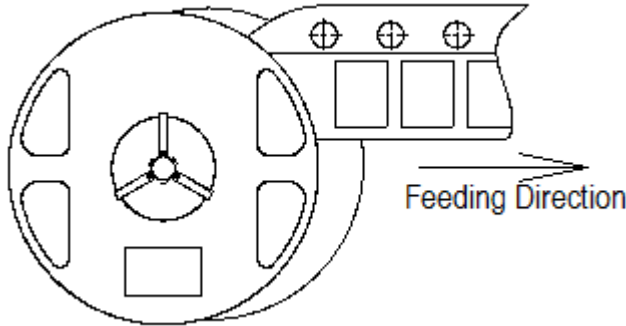
**OPTICAL CHARACTERISTIC CURVES**



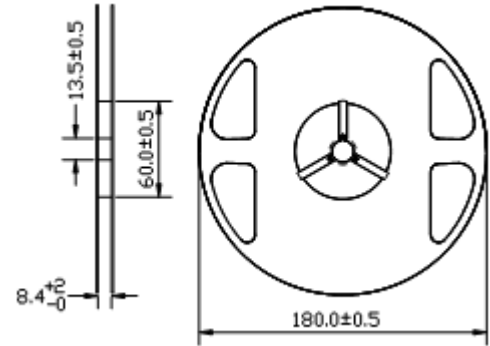
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## PACKAGING SPECIFICATION

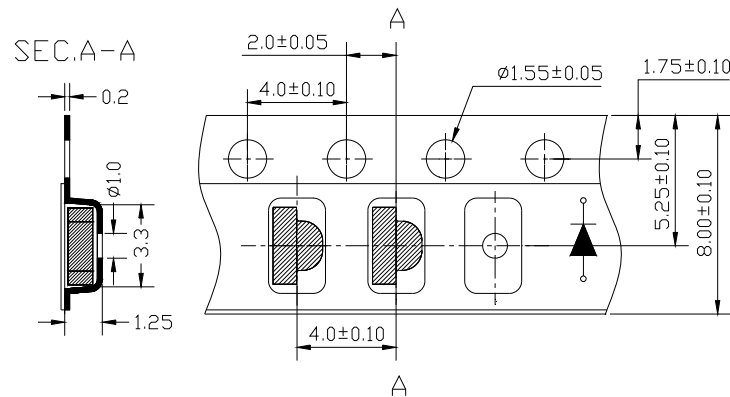
- Feeding Direction



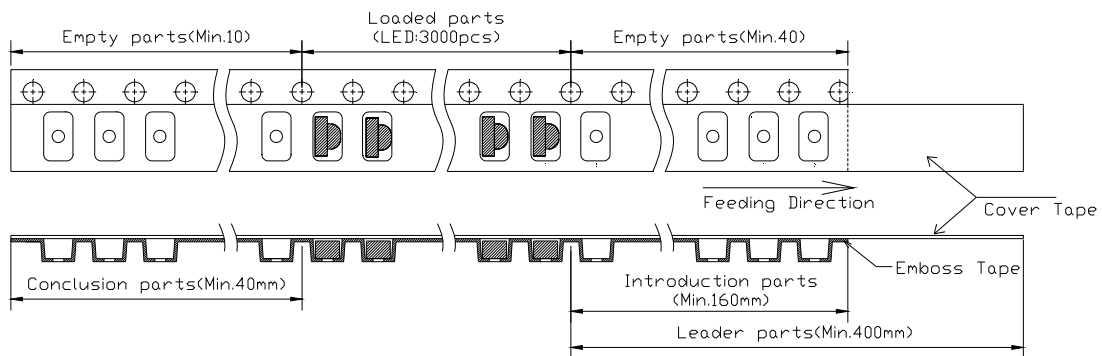
- Dimensions of Reel (unit: mm)



- Dimensions of Tape (unit: mm)



- Arrangement of Tape



Notes:

1. Empty component pockets are sealed with top cover tape
2. Maximum number of missing lamps is two
3. Cathode is oriented towards the tape sprocket hole
4. 3,000 pcs/Reel

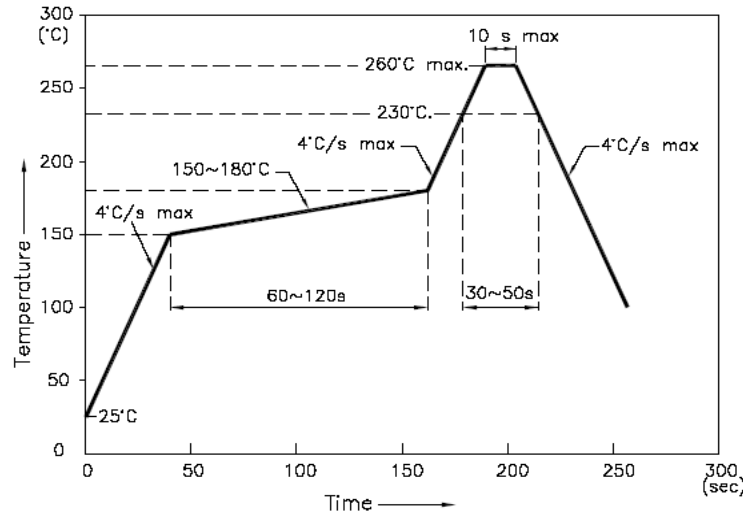


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## SOLDERING CONDITIONS

### REFLOW PROFILE

- Reflow Temp/Time



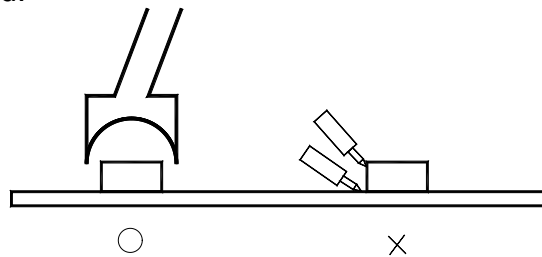
- We Recommend the reflow temperature 245 °C ( $\pm 5$  °C). The maximum soldering temperature should be limited to 260 °C.
- Don't cause stress to epoxy resin while it is exposed to high temperature.
- Number of reflow process shall be 2 times or less.

- Soldering Iron

Basic spec is  $\leq 5$  sec when 260 °C. If temperature is higher, time should be shorter (+10 °C  $\rightarrow$  1sec). Power dissipation of iron should be smaller than 20W and temperature should be controllable. Surface temperature of the device should be under 230 °C.

- Rework

- Customer must finish rework within 5 sec under 260 °C.
- The head of iron cannot touch copper foil.
- Twin-head type is preferred.



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