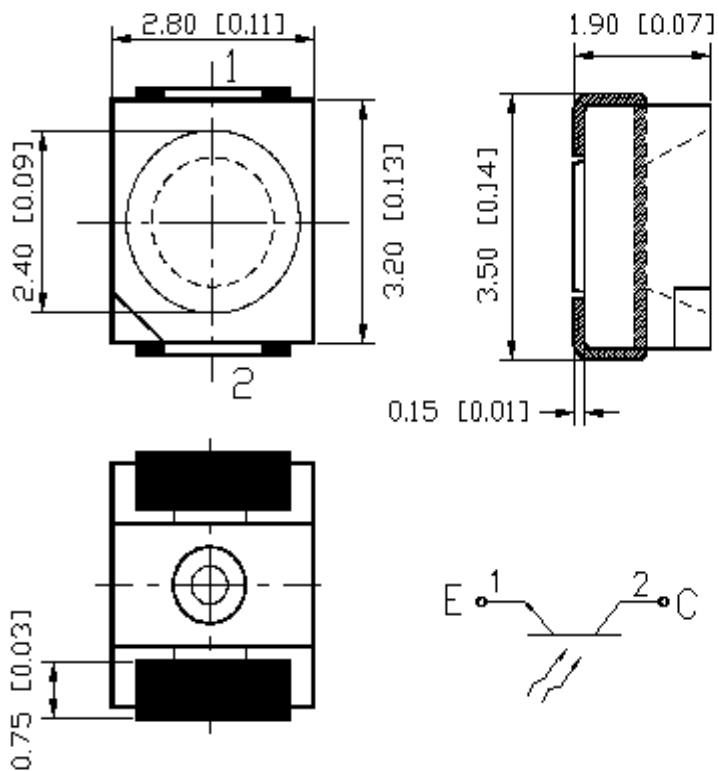
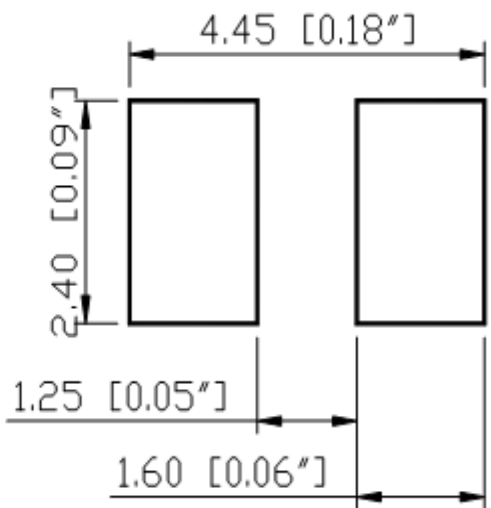


**SPECIFICATION** **CSP1311PT2C**
**PACKAGE OUTLINES**

**RECOMMEND PAD LAYOUT**


- 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
CSP1311PT2C	Silicon	Phototransistor	Water Clear	120°



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

Parameter	Symbol	Max Rating	Unit
Power Dissipation	P <sub>D</sub>	100	mW
Emitter-Collector Breakdown Voltage	BV <sub>ECO</sub>	5	V
Collector-Emitter Sustaining Voltage	V <sub>CE</sub>	30	V
Operating Temperature Range	T <sub>OPR</sub>	-40~+80	°C
Storage Temperature Range	T <sub>STG</sub>	-40~+85	°C
IFP = Pulse Width ≤ 10 ms, Duty Ratio ≤ 1/10. Soldering Condition: 260 °C/ 5sec			

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

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Collector-Emitter Breakdown Voltage	V <sub>CE</sub>	I <sub>C</sub> = 100 uA I <sub>B</sub> =0	30	-	-	V
Collector-Emitter Saturation Voltage	V <sub>CE(SAT)</sub>	I <sub>C</sub> =2mA I <sub>B</sub> =100uA	-	0.2	0.4	V
Collector Based Breakdown Voltage	BV <sub>CBO</sub>	I <sub>CBO</sub> =100 uA	5	7	-	uS
Dark Current	I <sub>D</sub>	V <sub>CE</sub> =20V	-	-	0.4	uA
Wavelength of Peak Sensitivity	λ <sub>P</sub>	-	-	940	-	nm

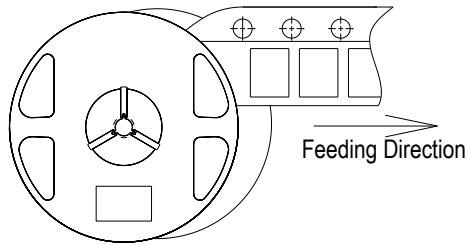
\*Tolerance of viewing angle: -10 / +5 deg.



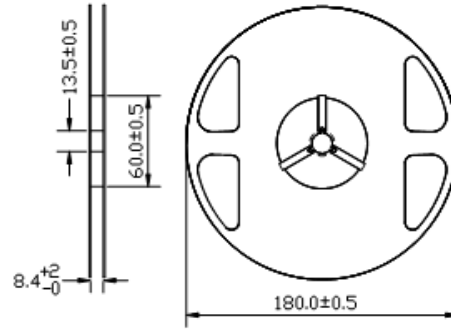
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## PACKAGING SPECIFICATION

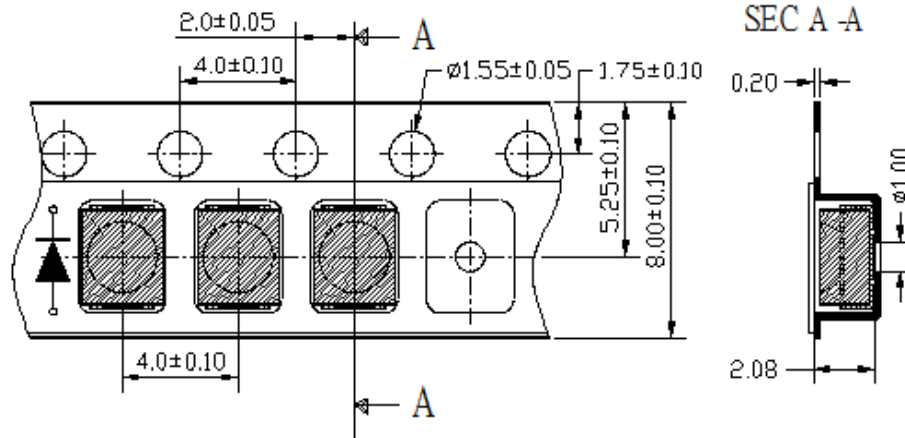
- Feeding Direction



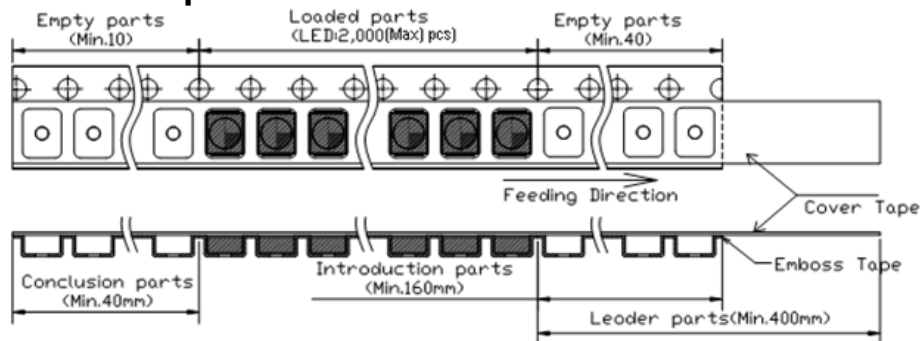
- Dimensions of Reel



- Dimensions of Tape



- Arrangement of Tape



Notes:

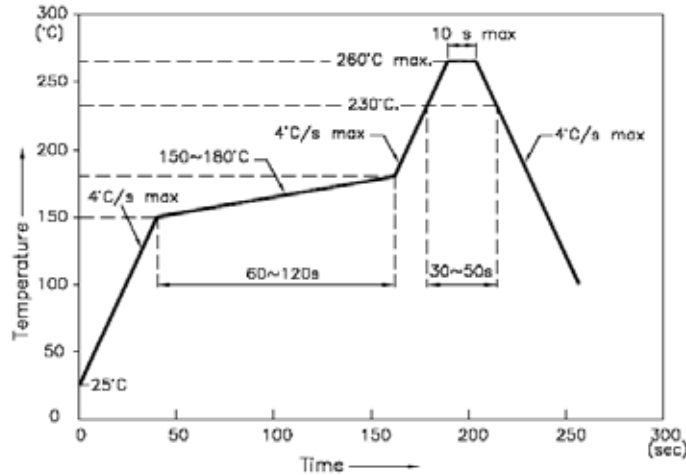
1. Empty component pockets are sealed with top cover tape
2. The maximum number of missing lamps is two
3. The cathode is oriented towards the tape sprocket hole
4. 2,000(max)pcs/Reel



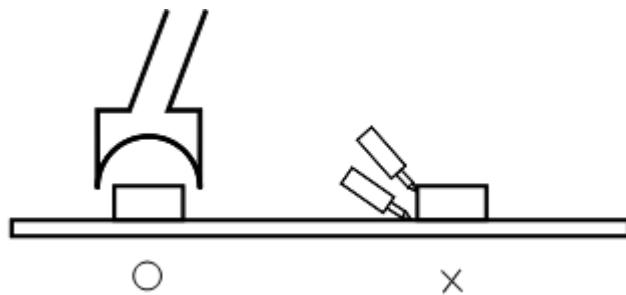
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## SOLDERING CONDITIONS

### REFLOW PROFILE



1. We recommend the reflow temperature 245°C (± 5 °C). The maximum soldering temperature should be limited to 260 °C.
  2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
  3. Number of reflow process shall be 2 times or less.
- Soldering Iron:  
Basic spec is ≤ 5 sec when 260 °C. If the temperature is higher, time should be shorter (+10 °C → -1 sec). 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:
    1. Customer must finish rework within 5 sec under 260 °C
    2. The head of iron cannot touch copper foil
    3. Twin-head type is preferred.



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