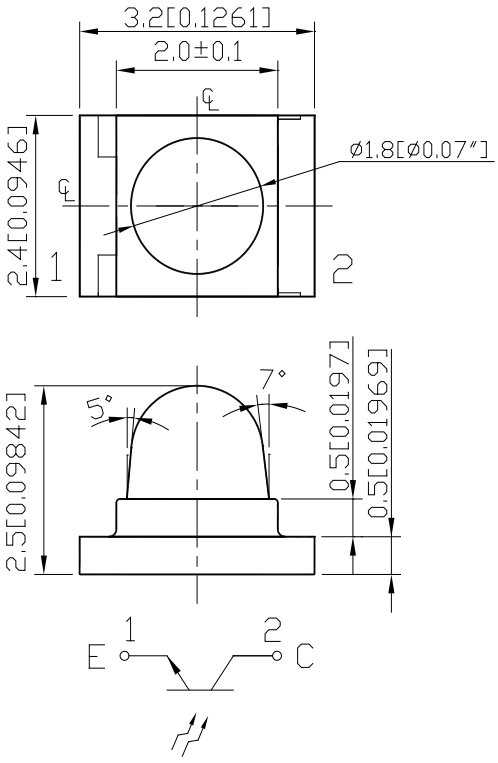
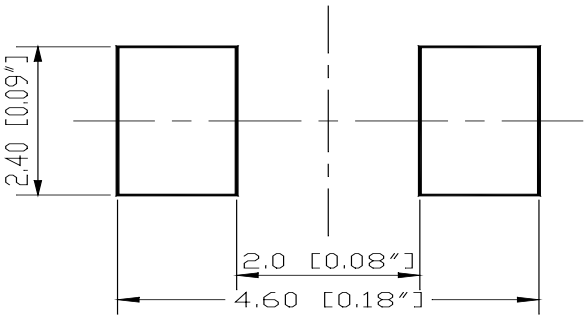
SPECIFICATIONS CSD131PTC

OUTLINES DIMENSIONS





RECOMMEND PAD LAYOUT

ITEM	MATERIALS
Resin (mold)	Epoxy
Lens color	Water transparent
Dice	Silicon

Notes:
1. All Dimensions are in millimeters (inches).
2. Tolerance is ± 0.25mm (0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CSD131PTC	Silicon	Phototransistor	Water Clear	15°

ABSOLUTE MAXIMUM RATINGS (TA=25°C)

Parameter	Symbol	Max Rating	Unit
Power Dissipation	P_D	100	mW
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Collector Voltage	V_{ECO}	5	V
Operating Temperature Range	T_{OPR}	-40~+80	°C
Storage Temperature Range	T_{STG}	-40~+85	°C
I_{FP} = Pulse Width ≤ 10 ms, Duty Ratio ≤1/10. Soldering Condition: 260 °C/ 5sec			

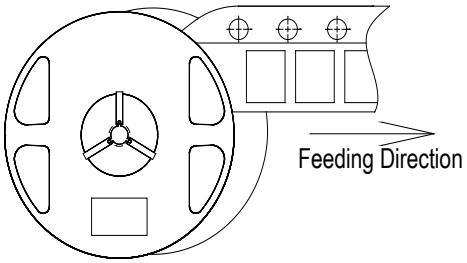
OPTICAL-ELECTRICAL CHARACTERISTICS (TA=25°C)

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Collector-Emitter Voltage	$V_{(BR)\ CEO}$	I_C = 100μA I_B = 0	30	-	-	V
Emitter-Collector Voltage	$V_{(BR)\ ECO}$	I_E = 100μA I_B = 0	5	-	-	V
Collector-Emitter Saturation Voltage	$V_{CE\ (SAT)}$	I_C = 2mA I_B = 100μA	-	-	0.3	V
Rise Time	T_R	V_{CE} = 5V I_C = 1mA R_L = 1000Ω F = 100Hz	-	15	-	μS
Fall Time	T_F		-	15	-	μS
Collector Dark Current	I_{CEO}	V_{CE} = 20V Ee = 0mW/cm²	-	-	100	nA
On State Collector Current	$I_{(ON)}$	V_{CE} = 5V, D=6mm P_D = 0.5mW λ = 940nm I_{LED} = 20mA	1.0	2.0	-	mA

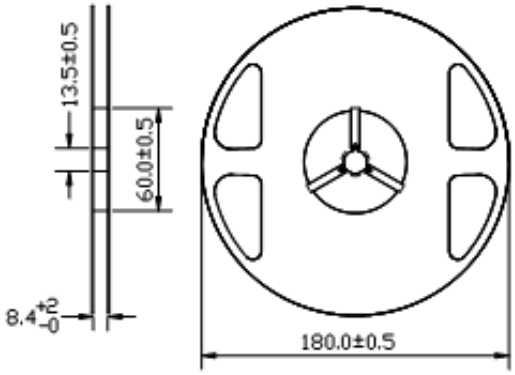
RoHS Compliant Lead Free

PACKAGING SPECIFICATION

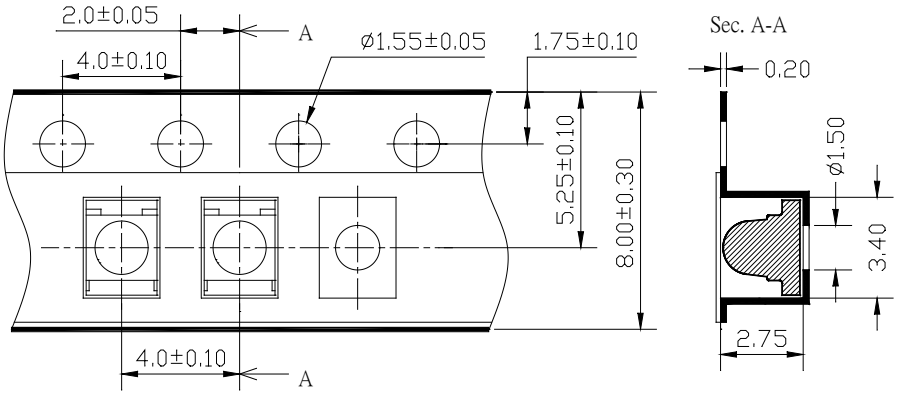
- **Feeding Direction**



- **Dimensions of Reel (Unit: mm)**



- **Dimensions of Tape (Unit: mm)**



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. 1,500pcs/Reel

SOLDERING CONDITIONS – LAMP TYPE LED

* Solder the LED no closer than 3mm from the base of the epoxy bulb. Soldering beyond the base of the tie bar is recommended.

* Recommended soldering conditions

Dip Soldering	
Pre-Heat	100 ˚C Max
Pre-Heat Time	60 Second Max
Solder Bath Temperature	260 ˚C Max
Dippng Time	5 Second Max
Dipping Position	No lower than 3mm from the base of the epoxy

Hand Soldering		
	3mm Series	Others
Temperature Soldering Time Position	300 ˚C Max 3 Second Max No closer than 3mm from the base of the epoxy	350 ˚C Max 3 Second Max No closer than 3mm from the base of the epoxy

* Do not apply any stress to the lead. Particularly when heated.

* The LED must not be repositioned after soldering.

* After soldering the LEDs, the epoxy bulb should be protected from mechanical shock or vibration until the LEDs return to room temperature.

* Direct soldering onto a PC board should be avoided. Mechanical stress to the resin may be caused by the PC board warping or from the clinching and cutting of the leadframes. When it is absolutely necessary, the LEDs may be mounted in this fashion, but, the user will assume responsibility for any problems. Direct soldering should only be done after testing has confirmed that no damage, such as wire bond failure or resin deterioration, will occur. LEDs should not be soldered directly to double sided PC boards because the heat will deteriorate the epoxy resin.

* When it is necessary to clamp the LEDs to prevent soldering failure, it is important to minimize the mechanical stress on the LEDs.

* Cut the LED leadframes at room temperature. Cutting the leadframes at high temperature may cause LED failure.