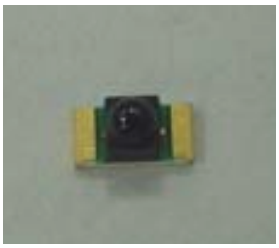
DATASHEET

1.6mm Round Subminiature Reverse Package Phototransistor

PT26-21B/CT(CPI)



Features

- Fast response time
- High photo sensitivity
- Small junction capacitance
- Pb free
- The product itself will remain within RoHS compliant version.
- Compliance with EU REACH
- Compliance Halogen Free.(Br<900 ppm,Cl<900 ppm,Br+Cl<1500 ppm)

Descriptions

- PT26-21B/CT (CPI) is a phototransistor in miniature SMD package which is molded in a black with spherical top view lens.
  The device is Spectrally matched to visible and infrared emitting diode.

Applications

- Miniature switch
- Counters and sorter
- Position sensor
- Infrared applied system
- Encoder

Device Selection Guide

Part Category	Chip Material	Lens Color
PT	Silicon	Black

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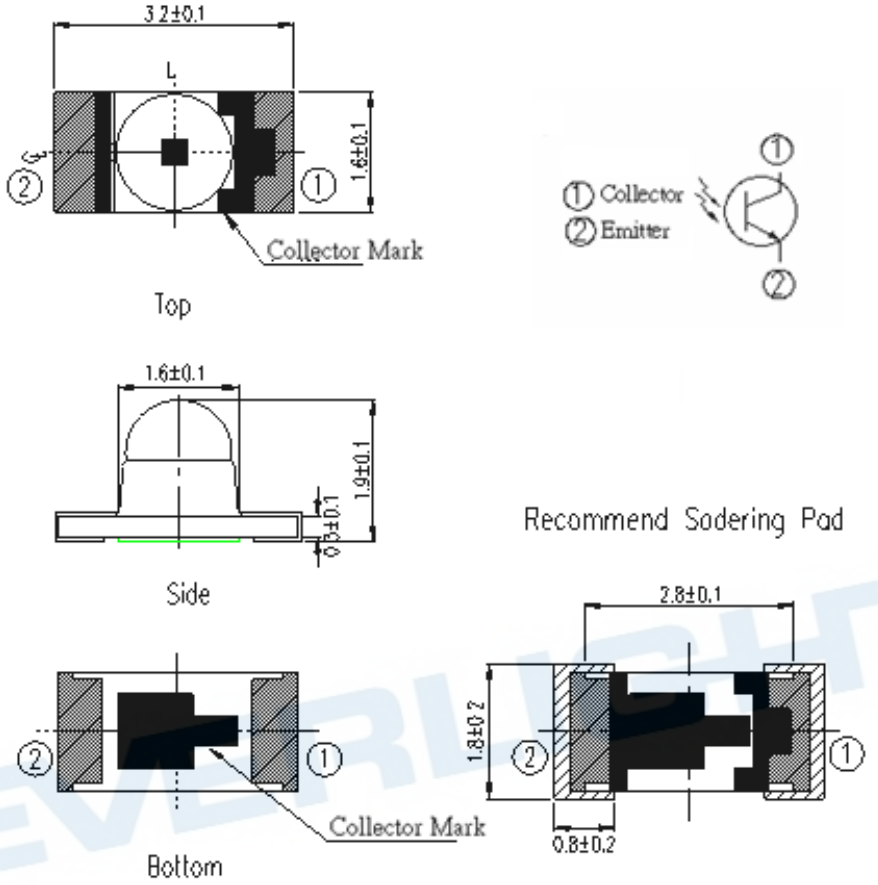
Package Dimensions



Notes: 1.All dimensions are in millimeters
2.Tolerances unless dimensions ±0.1mm

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Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Collector-Voltage	V_{ECO}	5	V
Collector Current	I_C	20	mA
Operating Temperature	T_{opr}	-25 ~ +85	℃
Storage Temperature	T_{stg}	-40 ~ +85	℃
Soldering Temperature *1	T_{sol}	260	℃
Power Dissipation at(or below) 25℃Free Air Temperature	P_d	75	mW

Notes: *1: Soldering time≦5 seconds.

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Rang Of Spectral Bandwidth	$\lambda_{0.5}$	---	820	---	1010	nm
Wavelength Of Peak Sensitivity	λ_P	---	---	940	---	nm
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=100μA Ee=0mW/cm^2	30	---	---	V
Emitter-Collector Breakdown Voltage	BV_{ECO}	I_E=100μA Ee=0mW/cm^2	5	---	---	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=2mA Ee=1mW/cm^2	---	---	0.4	V
Collector Dark Current	I_{CEO}	V_{CE}=20V Ee=0mW/cm^2	---	---	100	nA
On State Collector Current	$I_{C(ON)}$	V_{CE}=5V Ee=1mW/cm^2	1.77	---	7.07	mA

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Typical Electro-Optical Characteristics Curves

Fig.1 Spectral Sensitivity

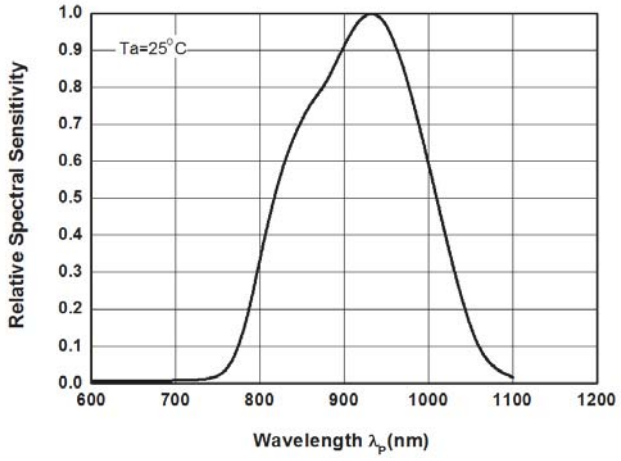


Fig.2 Collector Current vs. Irradiance

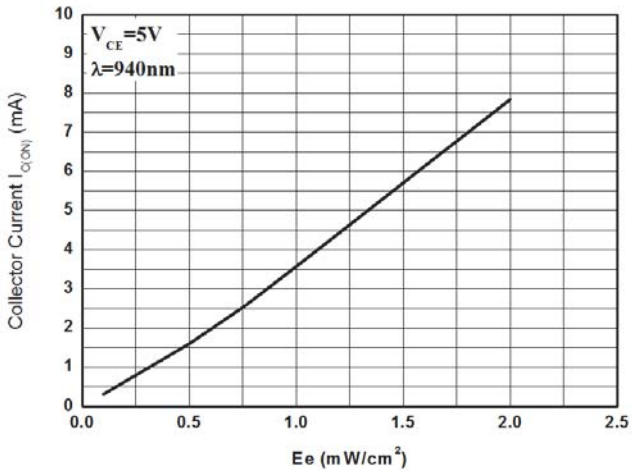


Fig.3 Collector Current vs. Collector-EmitterVoltage

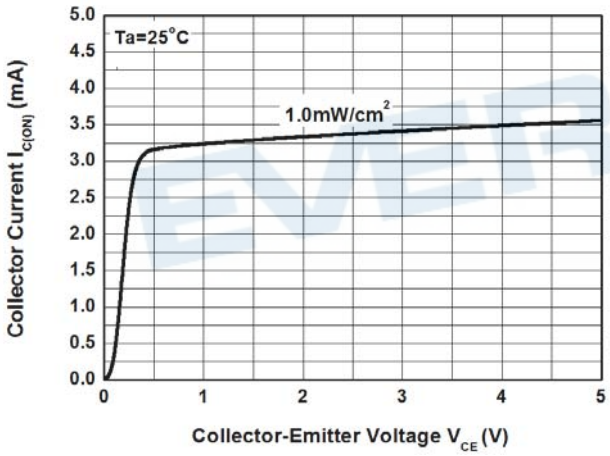
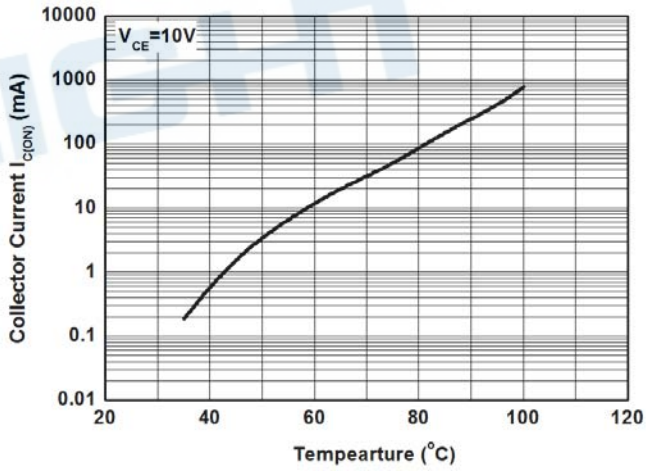


Fig.4 Collector Current vs.Tempearture



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Precautions For Use

1. Over-current-proof

   Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

   2.1 Do not open moisture proof bag before the products are ready to use.

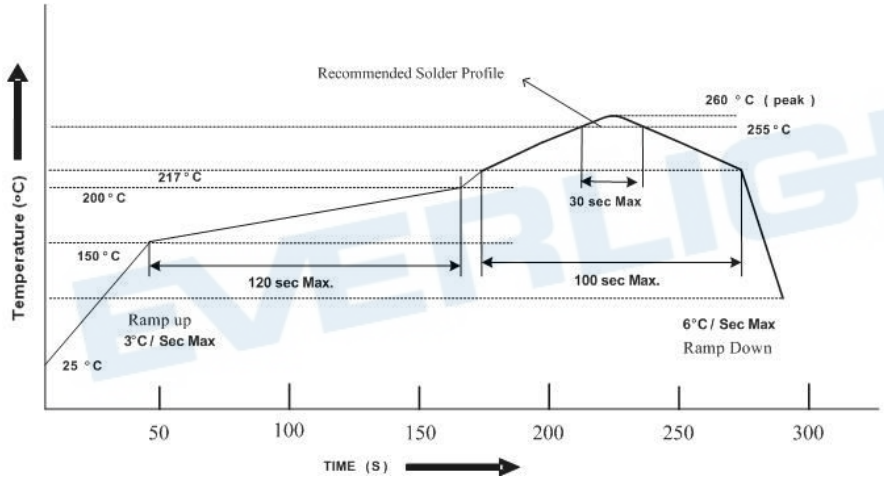
   2.2 After opening the package: The LEDs should be kept at 30℃ or less and 60%RH or less.

   2.3 The LEDs should be used within 168 hours (7days) after opening the package .

   2.4 I If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.
   Baking treatment : 60±5℃ for 24 hours

3. Soldering Condition

   3.1 Lead solder temperature profile



   3.2 Reflow soldering should not be done more than two times.

   3.3 When soldering, do not put stress on the LEDs during heating.

   3.4 After soldering, do not warp the circuit board.

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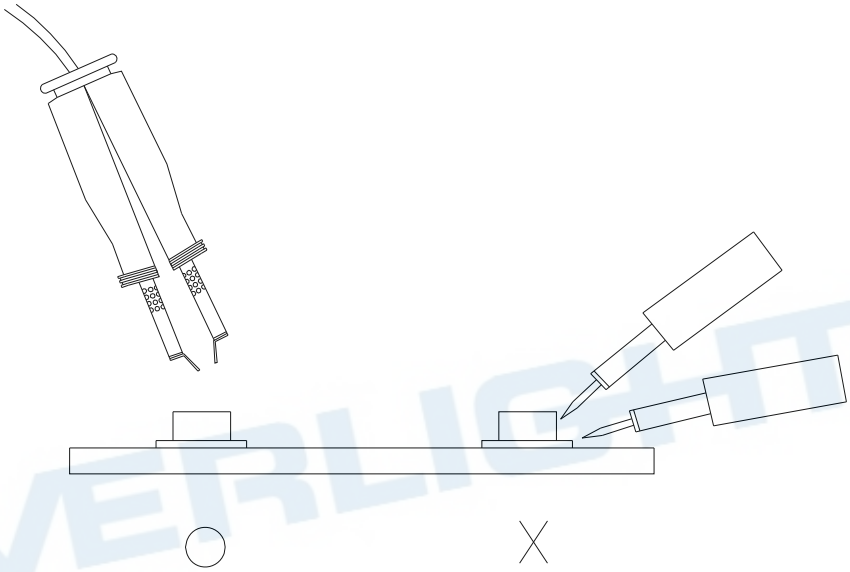
4.Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 350℃ for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

5.Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.



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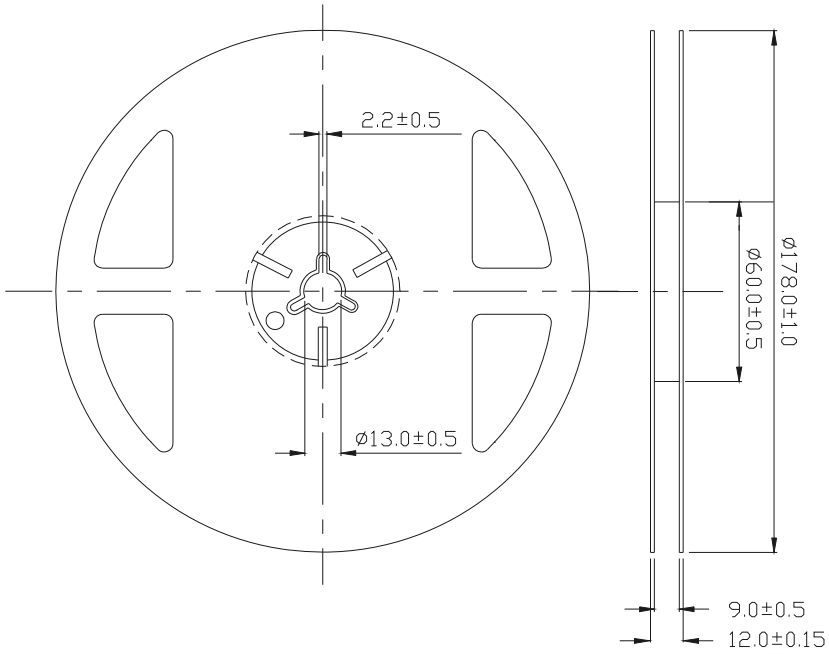
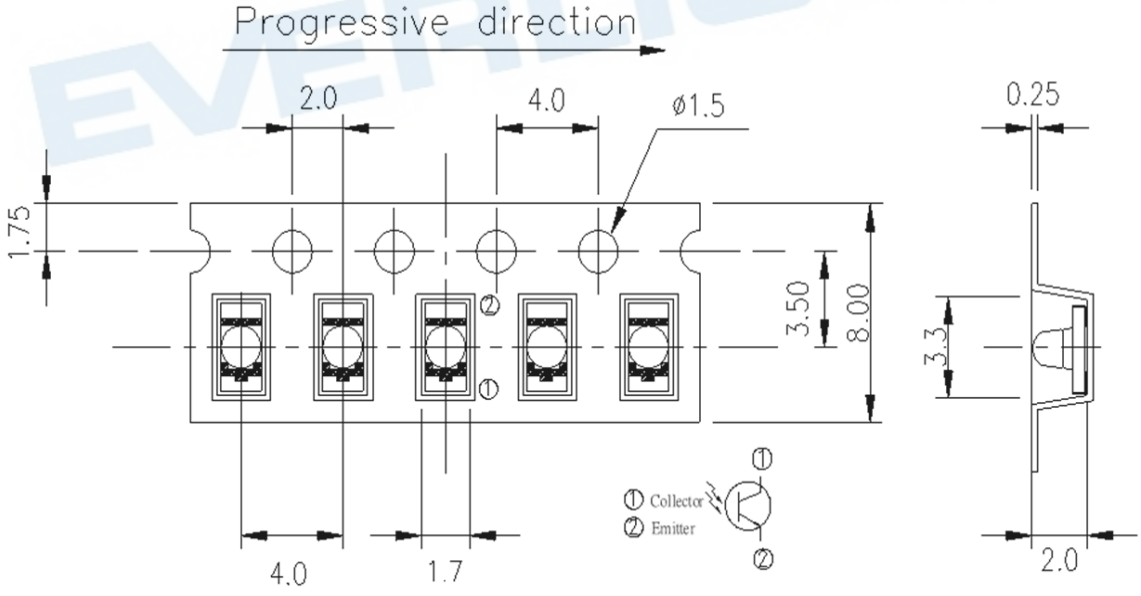


Note: The tolerances unless mentioned are ±0.1mm, Unit: mm

Carrier Tape Dimensions: (Loaded Quantity: 1500pcs/reel)



Note: The tolerances unless mentioned are ±0.1, unit=mm

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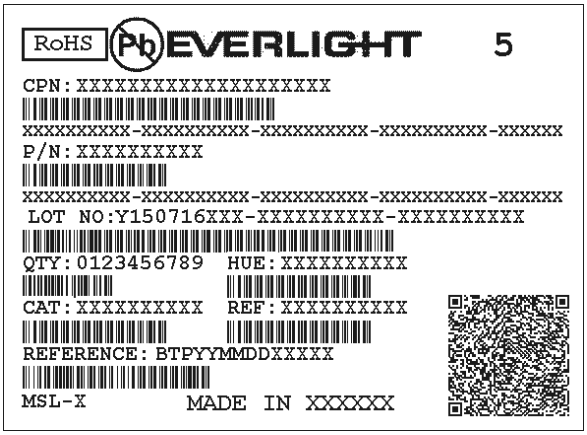
Label Form Specification



CPN: Customer's Production Number
P/N : Production Number
LOT No: Lot Number
QTY: Packing Quantity
HUE: Peak Wavelength
CAT: Ranks
REF: Reference
MSL-X: MSL Level
Made In: Manufacture place

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