

# 1.6mm Round Subminiature Reverse Package Phototransistor PT26-21C/CT



## 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

- PT26-21C/CT is a phototransistor in miniature SMD package which is water clear epoxy with spherical top view lens. The device is Spectrally matched to visible and infrared emitting diode.

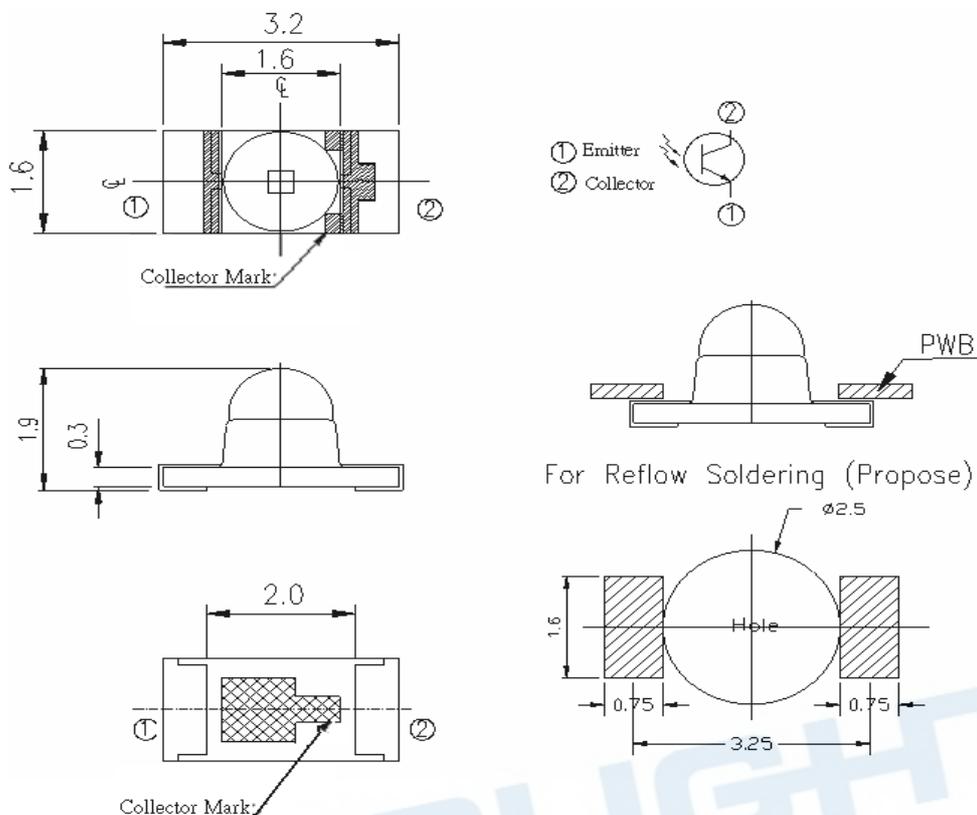
## Applications

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

## Device Selection Guide

Part Category	Chip Material	Lens Color
PT	Silicon	Water Clear

### Package Dimensions

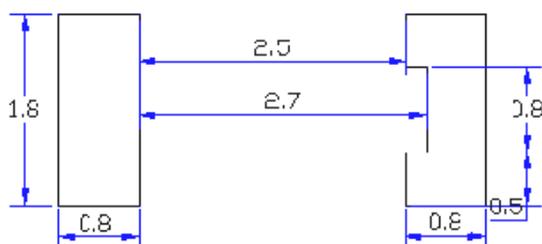


Notes: 1.All dimensions are in millimeters

Notes: 2.Tolerances unless dimensions  $\pm 0.1\text{mm}$

3.Below is stencil design suggestion (Reference):

- Solder paste : Sn/Ag3.0/Cu0.5
- Stencil thickness : 0.10mm
- Stencil design drawing :



4.Suggested pad dimension is just for reference only.

Please modify the pad dimension based on individual need.

### Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	VCEO	30	V
Emitter-Collector-Voltage	VECO	5	V
Collector Current	IC	20	mA
Operating Temperature	Topr	-25 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +85	°C
Soldering Temperature *1	Tsol	260	°C
Electrostatic Discharge	ESDHBM	2000	V
Power Dissipation at(or below) 25°C Free Air Temperature	Pd	75	mW

Notes: \*1: Soldering time ≤ 5 seconds.

### Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Rang Of Spectral Bandwidth	$\lambda_{0.5}$	---	400	---	1100	nm
Wavelength Of Peak Sensitivity	$\lambda_P$	---	---	940	---	nm
Collector-Emitter Breakdown Voltage	BVCEO	IC=100 $\mu$ A Ee=0mW/cm <sup>2</sup>	30	---	---	V
Emitter-Collector Breakdown Voltage	BVECO	IE=100 $\mu$ A Ee=0mW/cm <sup>2</sup>	5	---	---	V
Collector-Emitter Saturation Voltage	VCE(sat)	IC=2mA Ee=1mW/cm <sup>2</sup>	---	---	0.4	V
Collector Dark Current	ICEO	VCE=20V Ee=0mW/cm <sup>2</sup>	---	---	100	nA
On State Collector Current	IC(ON)	VCE=5V Ee=1mW/cm <sup>2</sup>	0.3	2.6	---	mA

### Typical Electro-Optical Characteristics Curves

Fig.1 Spectral Sensitivity

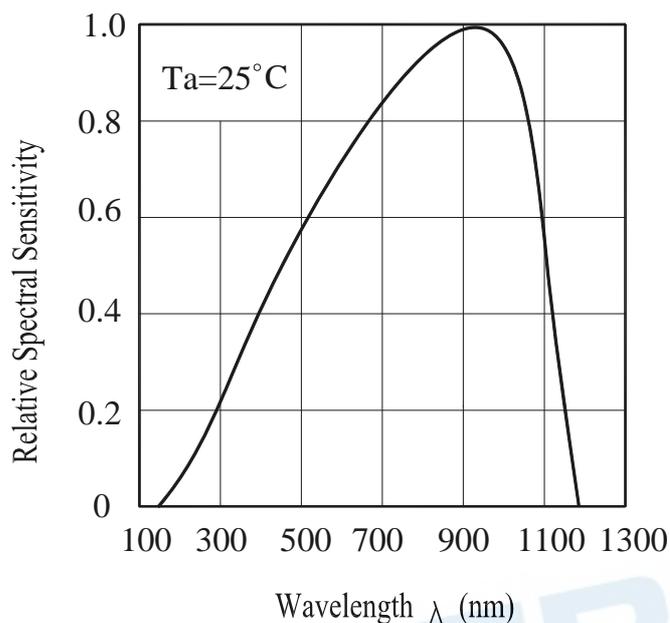


Fig.2 Collector Current vs. Irradiance

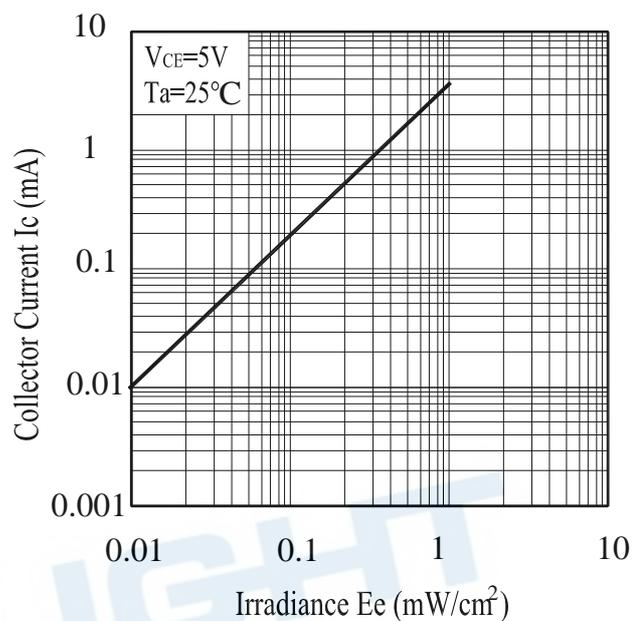
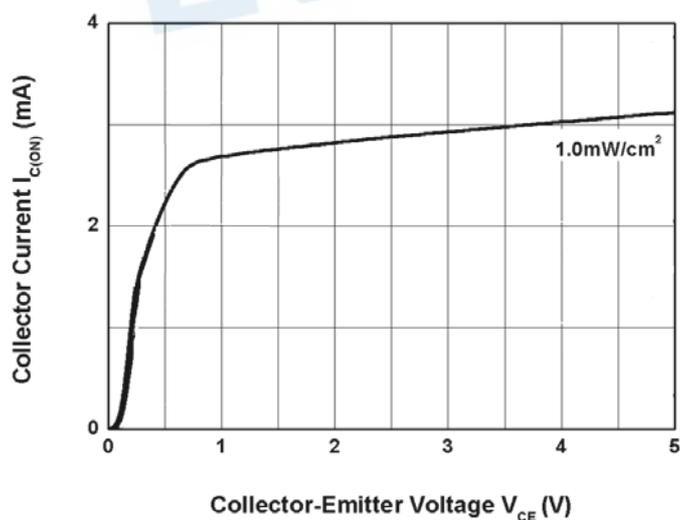


Fig.3 Collector Current vs. Collector-Emitter Voltage



Note: The graphs shown in this datasheet are representing typical data only and do not show guaranteed value.

## 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 Before opening the package, the Phototransistor should be kept at 10°C~30°C and 90%RH or less.

2.3 The Phototransistor suggested be used within one year.

2.4 After opening the package, the devices must be stored at 10°C~30°C and ≤ 60%RH, and used within 168 hours (floor life) moisture proof packages.

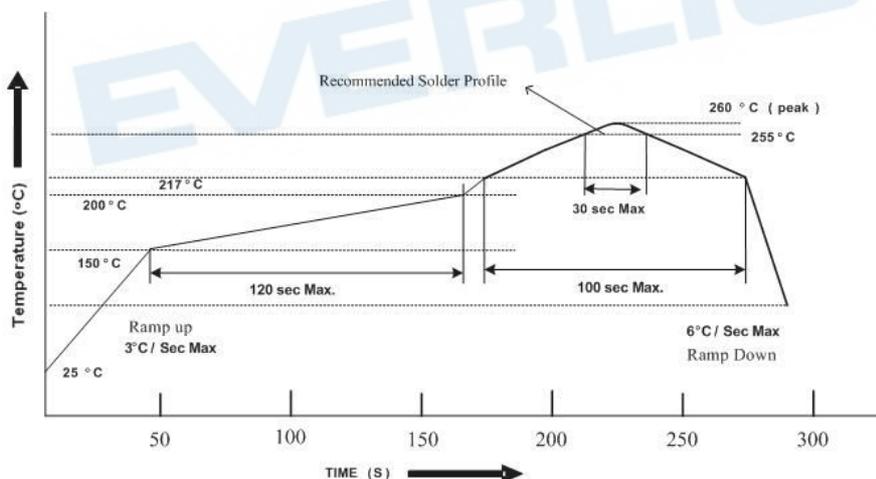
2.5 If the moisture absorbent material (desiccant material) has faded or unopened bag has exceeded the shelf life or devices ( is required.

2.6 If baking is required, refer to IPC/JEDEC J-STD-033 for bake procedure or recommend the following conditions:

24 hours at 60°C ± 5°C and < 5 % RH (reeled/tubed/loose units)

### 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.

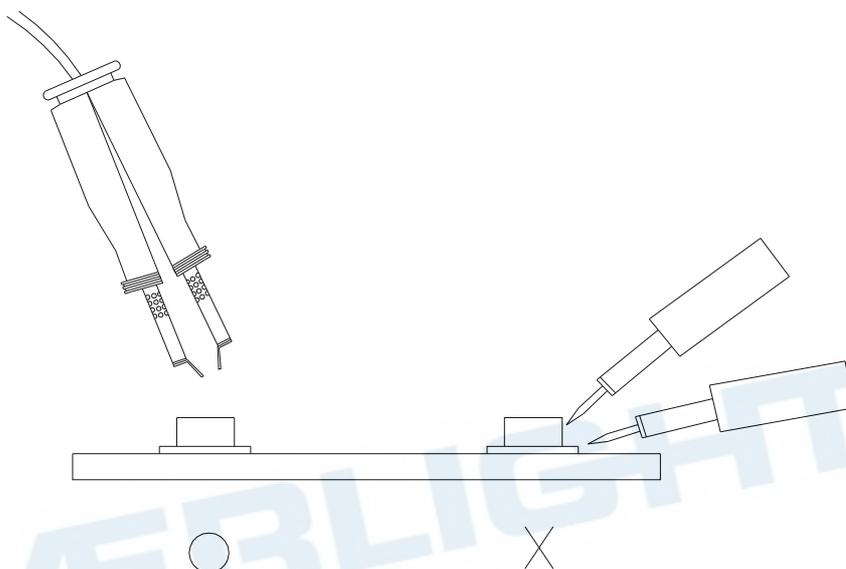
3.4 After soldering, do not warp the circuit board.

#### 4.Soldering Iron

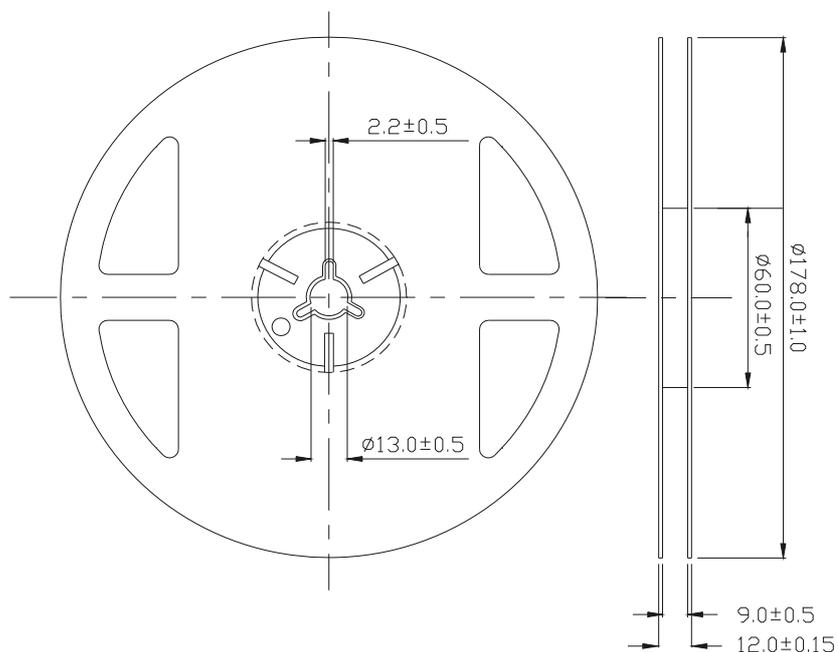
Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

#### 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.

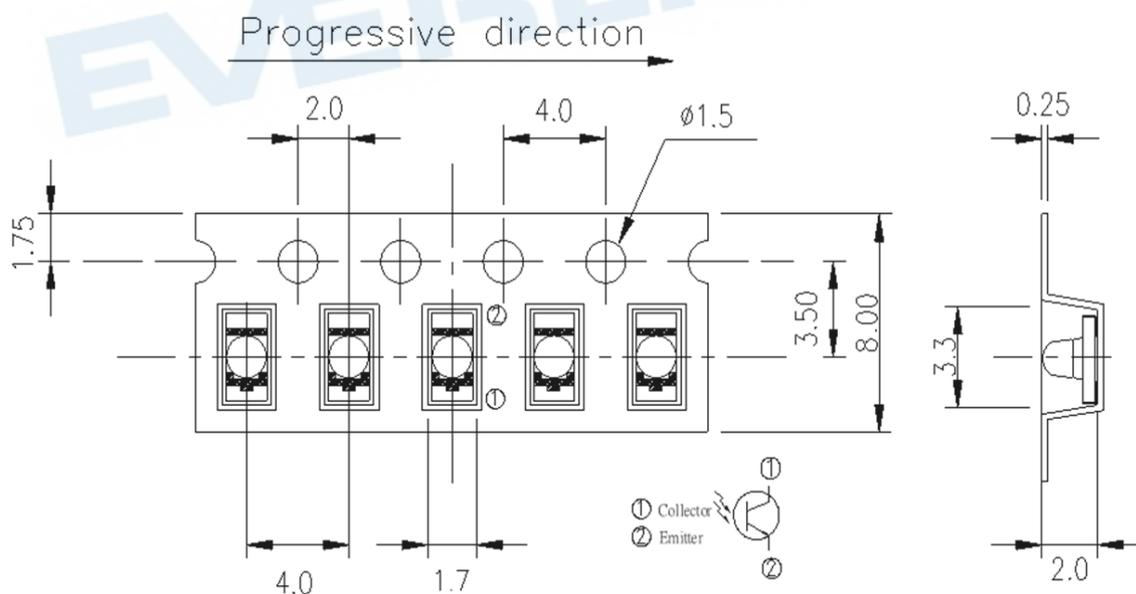


Package Dimensions



Note: The tolerances unless mentioned are  $\pm 0.1$  mm, Unit: mm

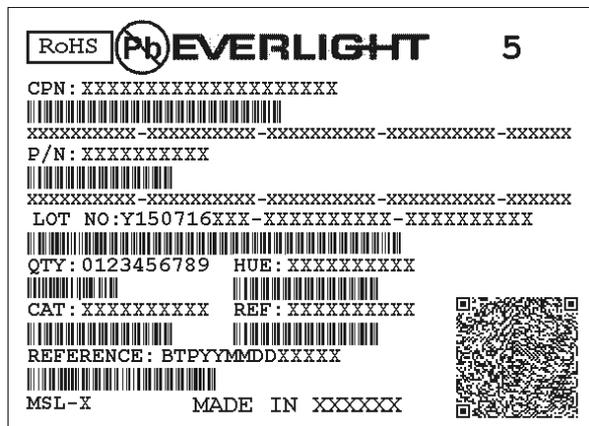
Carrier Tape Dimensions: (Loaded Quantity: 1500pcs/reel)



Note: The tolerances unless mentioned are  $\pm 0.1$ , unit=mm

### Moisture Resistant Packing Materials

### 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



## DISCLAIMER

1. EVERLIGHT reserves the right(s) on the adjustment of product material mix for the specification.
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