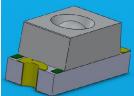
## DATASHEET

# 1206 Package Phototransistor With Inner Lens PT11-21C/L41/TR8

EVERLIGHT



#### Features

- Fast response time
- High photo sensitivity
- Small junction capacitance
- Package in 8mm tape on 7" diameter reel
- Pb free
- The product itself will remain within RoHS compliant version.

#### **Descriptions**

• PT11-21C/L41/TR8 is a phototransistor in miniature SMD package which is molded in a water clear plastic with flat top view lens. The device is Spectrally matched to visible and infrared emitting diode.

#### **Applications**

- Automatic door sensor
- Copier
- Game machine
- Infrared applied systm

#### **Device Selection Guide**

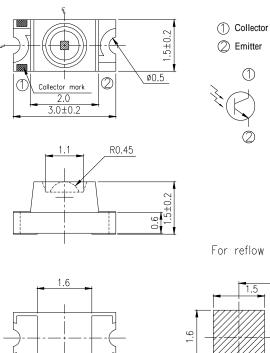
Part Category	Chip Material	Lens Color	
РТ	Silicon	Water clear	

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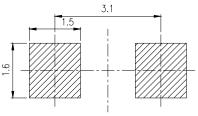
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### **Package Dimensions**









#### Notes: 1.All dimensions are in millimeters

2.Tolerances unless dimensions ±0.1mm

## Absolute Maximum Ratings (Ta=25 )

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V <sub>CEO</sub>	30	V
Emitter-Collector-Voltage	V <sub>ECO</sub>	5	V
Collector Current	I <sub>C</sub>	20	mA
Operating Temperature	T <sub>opr</sub>	$-25 \sim +85$	
Storage Temperature	T <sub>stg</sub>	$-40 \sim +85$	
Soldering Temperature *1	T <sub>sol</sub>	260	
Power Dissipation at(or below) 25 Free Air Temperature	P <sub>d</sub>	75	mW

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

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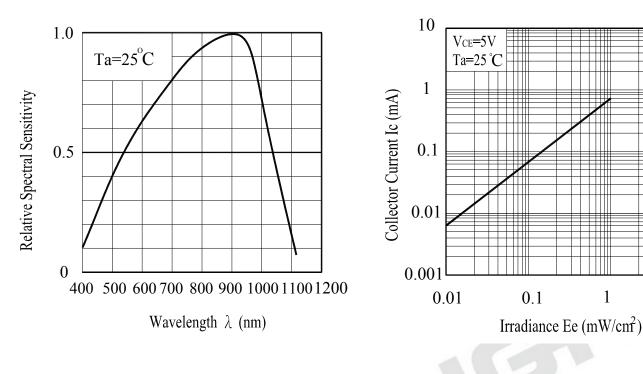
### **Electro-Optical Characteristics (Ta=25**)

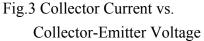
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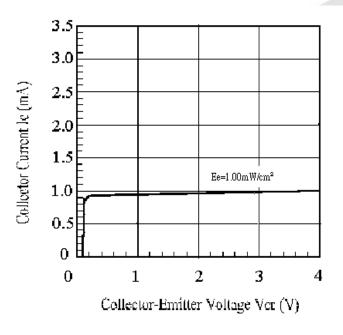
## **Typical Electro-Optical Characteristics Curves**

Fig.1 Spectral Sensitivity

Fig.2 Collector Current vs Irradiance







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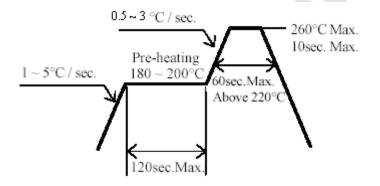
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### **Precautions For Use**

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 Before opening the package, the LEDs should be kept at 30 or less and 90%RH or less.
  - 2.3 The LEDs should be used within a year.
  - 2.4 After opening the package, the LEDs should be kept at 30 or less and 60%RH or less.
  - 2.5 The LEDs should be used within 168 hours (7 days) after opening the package.
  - 2.6 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 Pb-free 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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### Data Sheet **1206 Package Phototransistor With Inner Lens** PT11-21C/L41/TR8

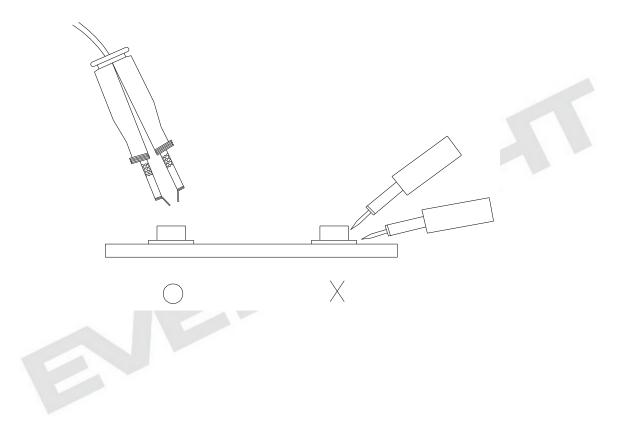
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#### 4.Soldering Iron

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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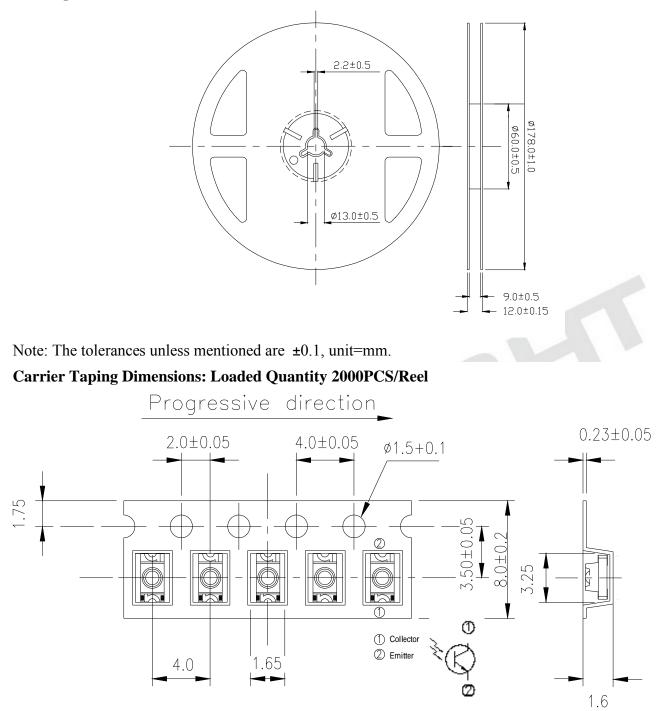
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## **EVERLIGHT**

### **Package Dimensions**



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

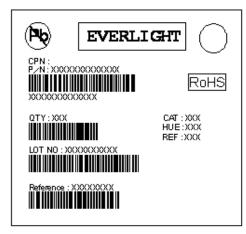
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## Label Form Specification



CPN: Customer's Production Number P/N : Production Number QTY: Packing Quantity CAT: Ranks HUE: Peak Wavelength REF: Reference LOT No: Lot Number

### Notes

- 1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
- 2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
- 3. These specification sheets include materials protected under copyright of EVERLIGHT corporation. Please don't reproduce or cause anyone to reproduce them without EVERLIGHT's consent.

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