



## 1206 Package Chip Phototransistor

MODEL NO : PT15-21B

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### ■ Features :

- Fast response time
- High photo sensitivity
- Small junction capacitance
- High reliability

### ■ Description :

- PT15-21B is a phototransistor in miniature SMD package which is molded in a black plastic with flat top view lens. The device is spectrally matched to infrared emitting diode.

### ■ Applications :

- Miniature switch
- Counters and sorter
- Interrupter
- Position sensor

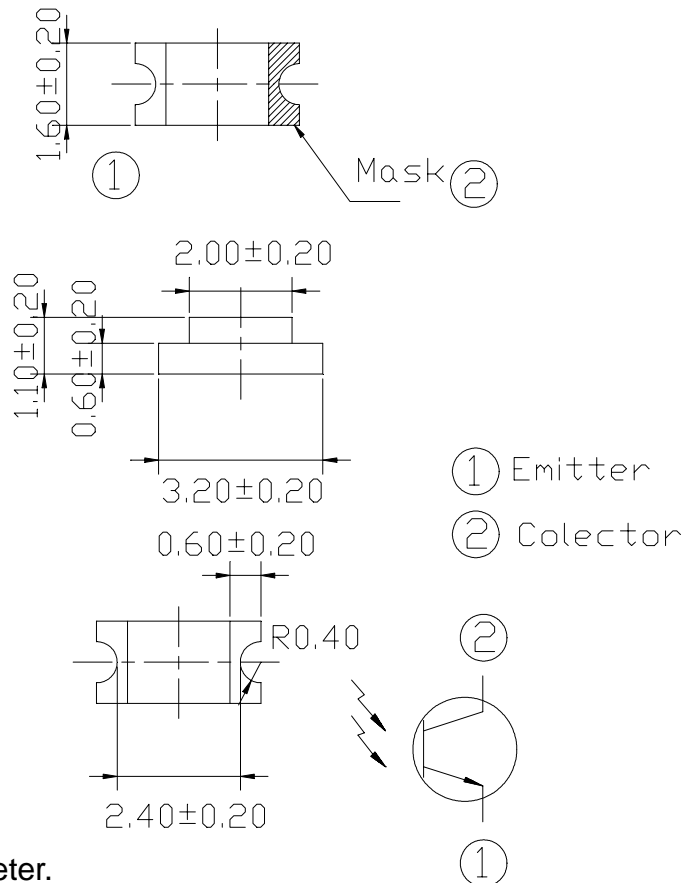
PART NO.	CHIP	LENS COLOR
	MATERIAL	
PT	Silicon	Black

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### ■ Package Dimensions :



### ■ Notes :

1. All dimensions are in millimeter.
2. General Tolerance:  $\pm 0.25$ mm
3. Lens color : Black.
4. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
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6. When using this product , please observe the absolute maximum ratings and the instructions for use 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.



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### ■ Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Rating	Unit	Notice
Collector-Emitter Voltage	$V_{CEO}$	30	V	
Emitter-Collector- Voltage	$V_{ECO}$	5	V	
Collector Current	$I_C$	20	mA	
Operating Temperature	Topr	-25 ~ +85	°C	
Storage Temperature	Tstg	-40 ~ +85	°C	
Soldering Temperature	Tsol	260	°C	
Power Dissipation at(or below) 25°C Free Air Temperature	Pc	75	mW	

### ■ Electronic Optical Characteristics :

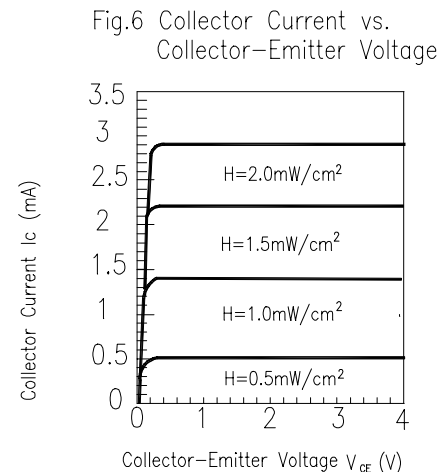
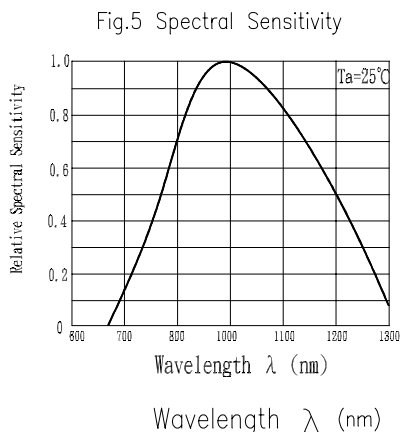
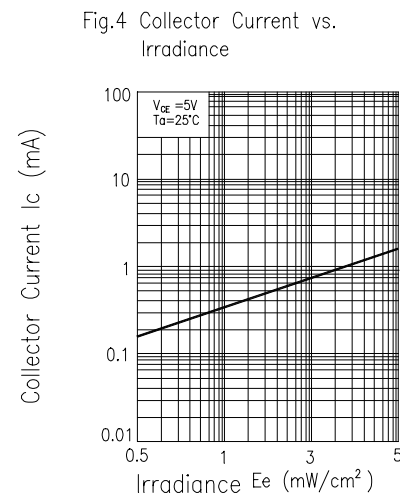
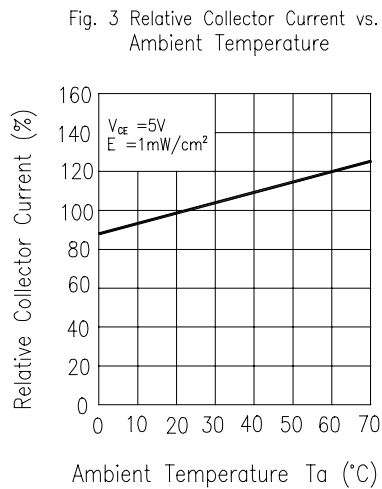
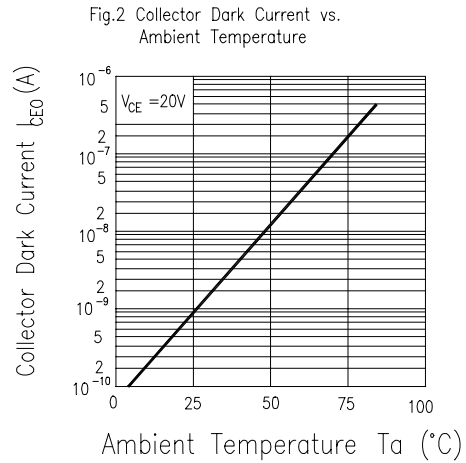
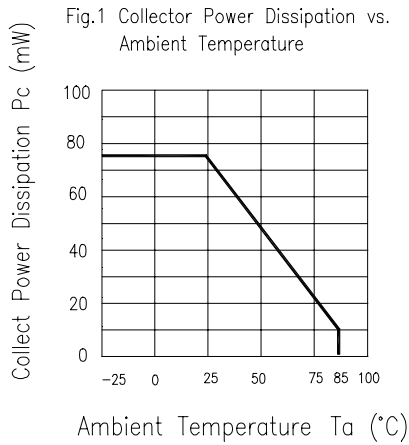
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	30	----	----	V	$I_C=100\mu A$ $E_e=0mW/cm^2$
Emitter-Collector Breakdown Voltage	$BV_{ECO}$	5	----	----	V	$I_E=100\mu A$ $E_e=0mW/cm^2$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	----	----	0.4	V	$I_C=2mA$ $E_e=1mW/cm^2$
Rise Time	$t_r$	----	15	----	$\mu S$	$V_{CE}=5V$ $I_C=1mA$ $R_L=1000\Omega$
Fall Time	$t_f$	----	15	----		
Collector Dark Current	$I_{CEO}$	----	----	100	nA	$V_{CE}=20V$ $E_e=0mW/cm^2$
On State Collector Current	$I_{C(on)}$	0.1	0.3	----	mA	$V_{CE}=5V$ $E_e=1mW/cm^2$
Wavelength of Peak Sensitivity	$\lambda_p$	----	980	----	nm	----
Rang of Spectral Bandwidth	$\lambda_{0.5}$	----	770---1200	----	nm	----



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Typical Electrical/Optical/Characteristics Curves





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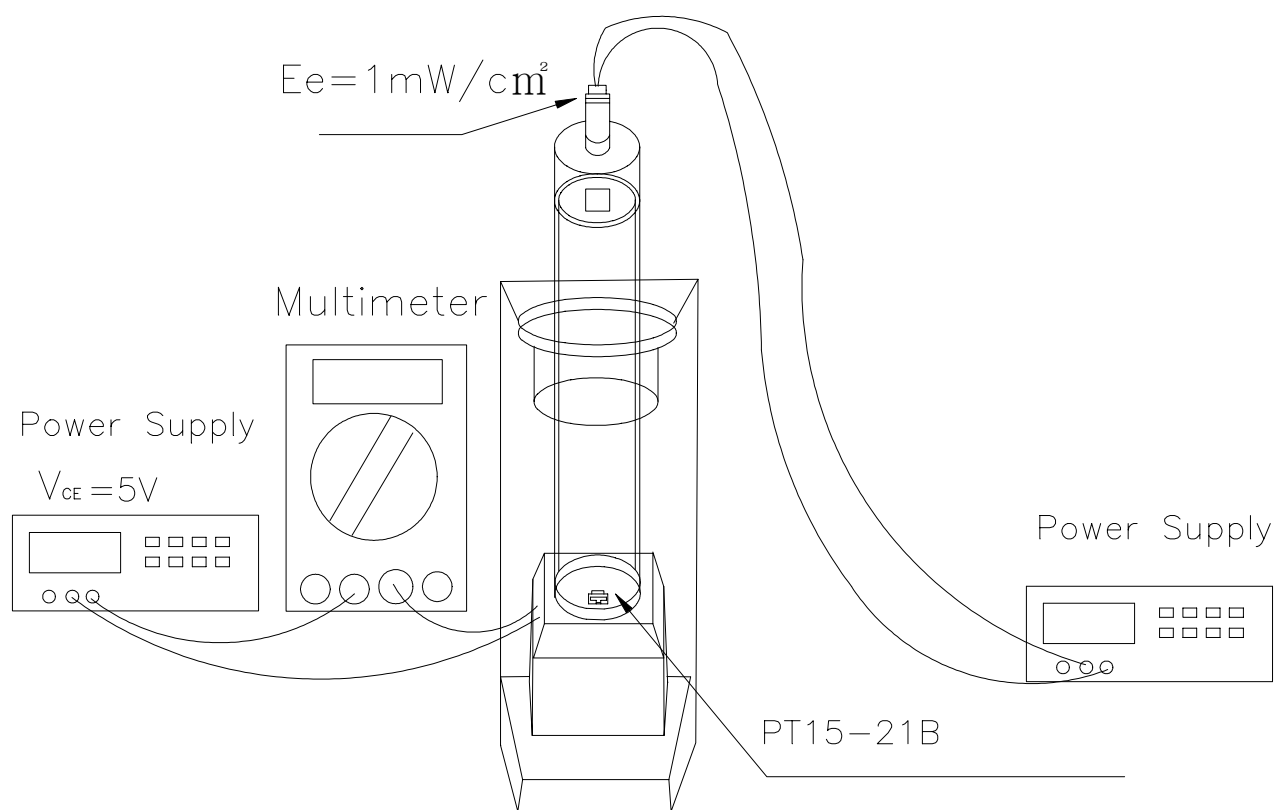
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### ■ Test Method For Reverse Light Current

Condition:  $E_e=1\text{mW}/\text{cm}^2$ ,  $V_{CE}=5\text{V}$

Test Item: Collector Current [ $I_{C(on)}$ ]

(Unit: mA)



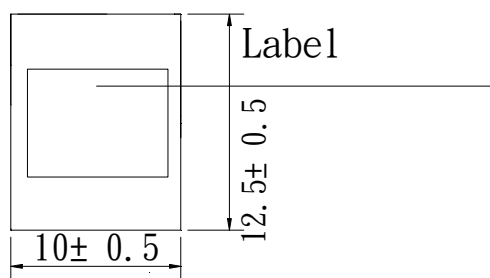


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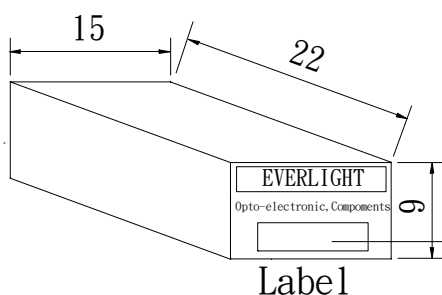
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### ■ Packing Specifications

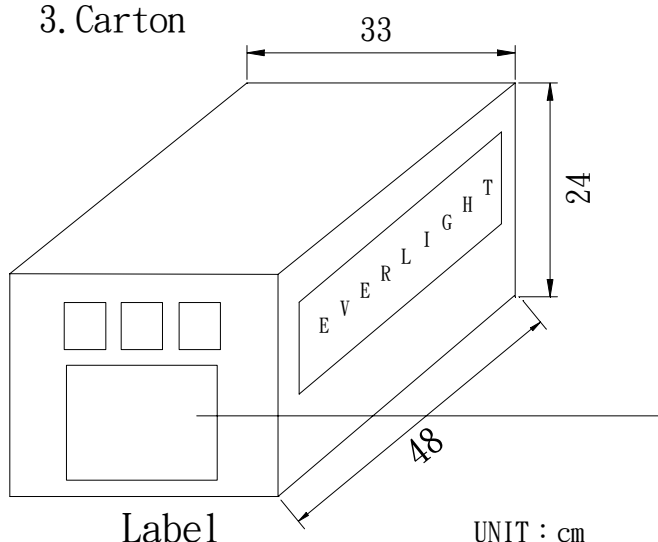
1. Bag



2. Box



3. Carton



UNIT : cm

EVERLIGHT

CPN:

P/N:



PT15-21B

QTY:



LOT NO:

CAT:

HUE:

REF:

MADE IN TAIWAN

CPN : Customer's Production Number

P/N : Production Number

QTY : Packing Quantity

CAT : Ranks

HUE : Peak Wavelength

REF : Reference

LOT NO : Lot Number

MADE IN TAIWAN : Production place

### ■ Packing Quantity Specification

1. 1000 Pcs/1Bag , 20 Bags/1Box

2. 10 Boxes/1Carton