

#### Features

- Fast response time
- High photo sensitivity
- Pb Free
- The product itself will remain within RoHS compliant version.

#### Descriptions

- PT234-6B is a high speed and high sensitive NPN silicon phototransistor molded in a standard  $\phi 3$  mm package . Due to its black epoxy the device is sensitive to infrared radiation.

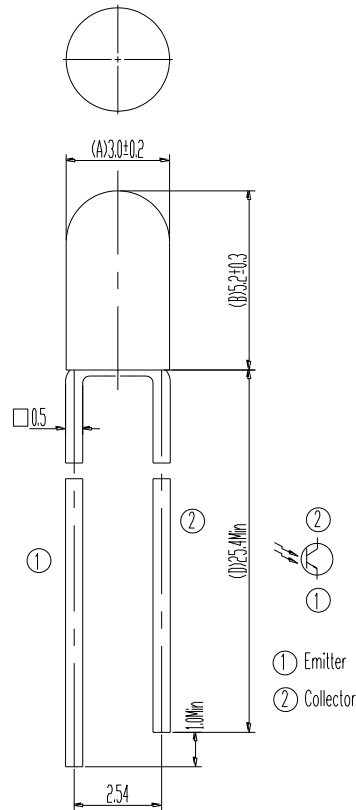
#### Applications

- Optoelectronic switch
- VCRs ,Video camera
- Floppy disk drive
- Infrared applied system

#### Device Selection Guide

LED Part No.	Chip	Lens Color
	Material	
PT	Silicon	Black

### Package Dimensions



- Notes:**
1. All dimensions are in millimeters
  2. Tolerances unless dimensions  $\pm 0.25$ mm

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

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	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 ~ +85	$^\circ\text{C}$
Soldering Temperature	$T_{sol}$	260	$^\circ\text{C}$
Power Dissipation at(or below) 25 $^\circ\text{C}$ Free Air Temperature	$P_d$	75	mW

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

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=100\mu A$ $E_e=0mW/cm^2$	30	----	----	V
Emitter-Collector Breakdown Voltage	$BV_{ECO}$	$I_E=100\mu A$ $E_e=0mW/cm^2$	5	----	----	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2mA$ $E_e=1mW/cm^2$	----	----	0.4	V
Rise Time	$t_r$	$V_{CE}=5V$ $I_C=1mA$	----	15	----	$\mu S$
Fall Time	$t_f$	$R_L=1000\Omega$	----	15	----	
Collector Dark Current	$I_{CEO}$	$V_{CE}=20V$ $E_e=0mW/cm^2$	----	----	100	nA
On State Collector Current	$I_{C(on)}$	$V_{CE}=5V$ $E_e=1mW/cm^2$	0.7	----	7.07	mA
Wavelength of Peak Sensitivity	$\lambda_p$	----	----	940	----	nm
Rang of Spectral Bandwidth	$\lambda_{0.5}$	----	840	----	1200	nm

### Rank

Parameter	Symbol	Min	Max	Unit	Test Condition
G	$I_{C(ON)}$	0.70	1.90	mA	$E_e=1mW/cm^2$ $V_{CE}=5V$
H		1.14	2.60		
J		1.77	3.61		
K		2.67	5.07		
L		4.18	7.07		

**Typical Electro-Optical Characteristics Curves**

Fig.1 Collector Power Dissipation vs. Ambient Temperature

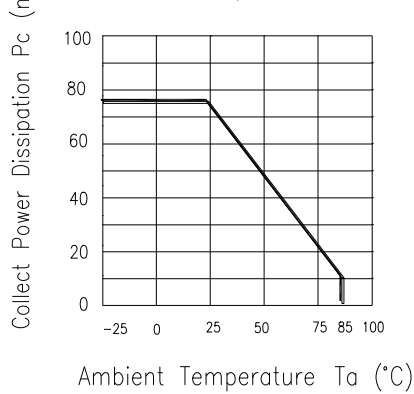


Fig.2 Collector Dark Current vs. Ambient Temperature

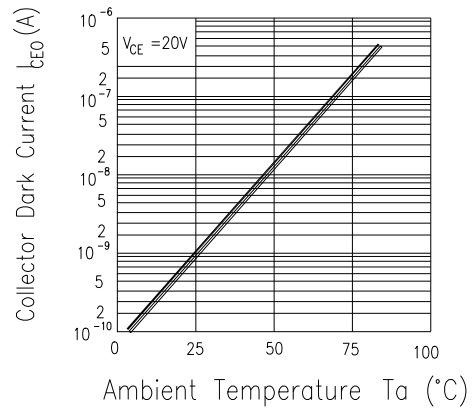


Fig. 3 Relative Collector Current vs. Ambient Temperature

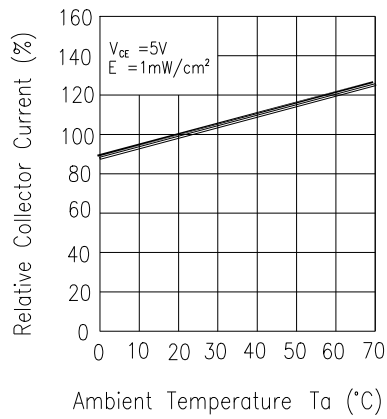


Fig.4 Collector Current vs. Irradiance

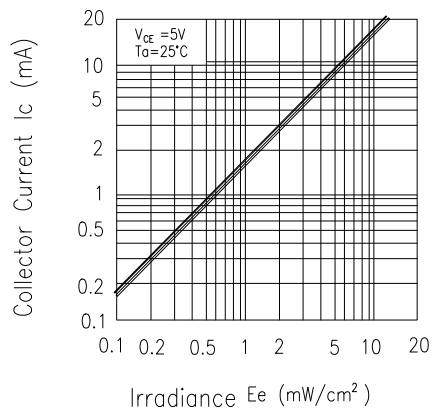


Fig.5 Spectral Sensitivity

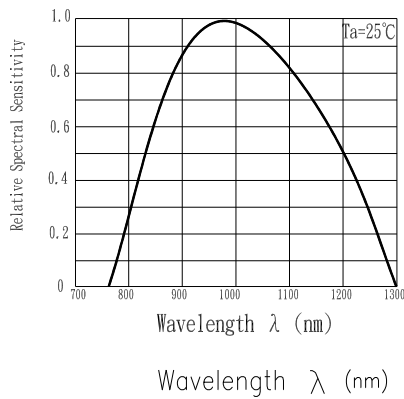
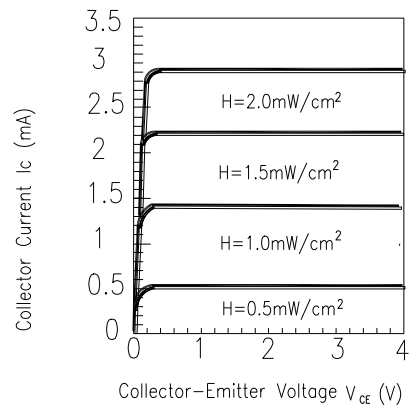


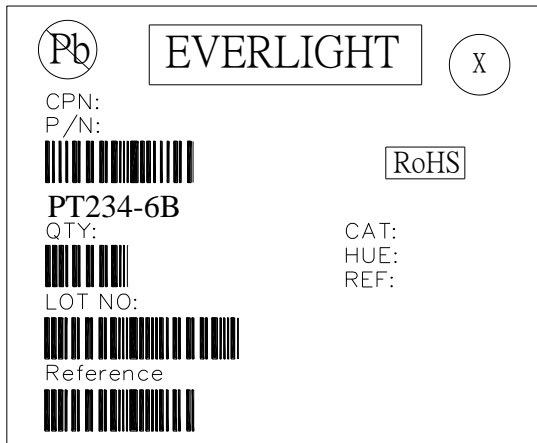
Fig.6 Collector Current vs. Collector-Emitter Voltage



### Packing Quantity Specification

1. 1000 Pcs/1Bag , 4 Bags/1Box
2. 10 Boxes/1Carton

### 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

X: Month

Reference: Identify Label 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.
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