

Technical Data Sheet

5mm Silicon Phototransistor T-1 3/4

Features

PT534-6B

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

Descriptions

- PT534-6B is a high speed and high sensitive NPN silicon phototransistor molded in a standard $\phi 5$ mm package. Due to its black epoxy the device is sensitive to visible and near infrared radiation..

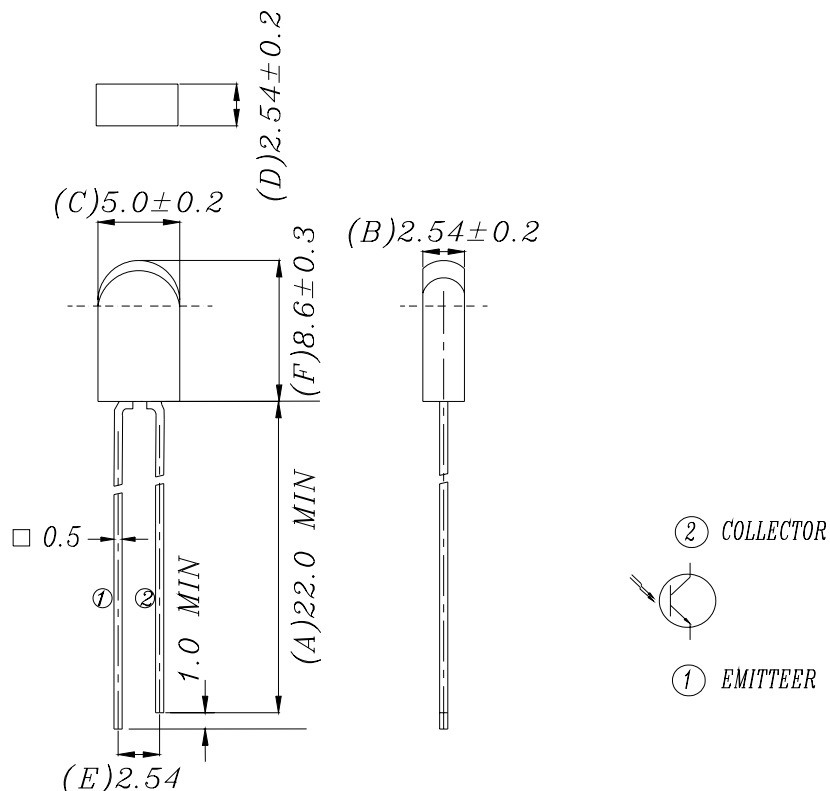
Applications

- Infrared applied system
- Camera
- Printer
- Cockroach catcher

Device Selection Guide

LED Part No.	Chip	Lens Color
	Material	
PT534-6B	Silicon	Black

Package Dimensions



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

Absolute Maximum Ratings (Ta=25°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}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +100	°C
Lead Soldering Temperature	T _{sol}	260	°C
Power Dissipation at (or below) 25°C Free Air Temperature	P _c	75	mW

Notes: *1: Soldering time ≤ 5 seconds.

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
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	$V_{CE}=5V$ $I_C=1mA$ $RL=1000\ \Omega$	---	15	---	μS
Fall Time	t_f		---	15	---	
Collector Dark Current	I_{CEO}	$E_e=0mW/cm^2$ $V_{CE}=20V$	---	---	100	nA
On State Collector Current	$I_{C(on)}$	$E_e=1mW/cm^2$ $V_{CE}=5V$	0.7	1.2	---	mA
Wavelength of Peak Sensitivity	λ_p	---	---	940	---	nm
Rang of Spectral Bandwidth	$\lambda_{0.5}$	---	---	800-1100	---	nm

Typical Electro-Optical Characteristics Curves

Fig.1 Collector Power Dissipation vs. Ambient Temperature

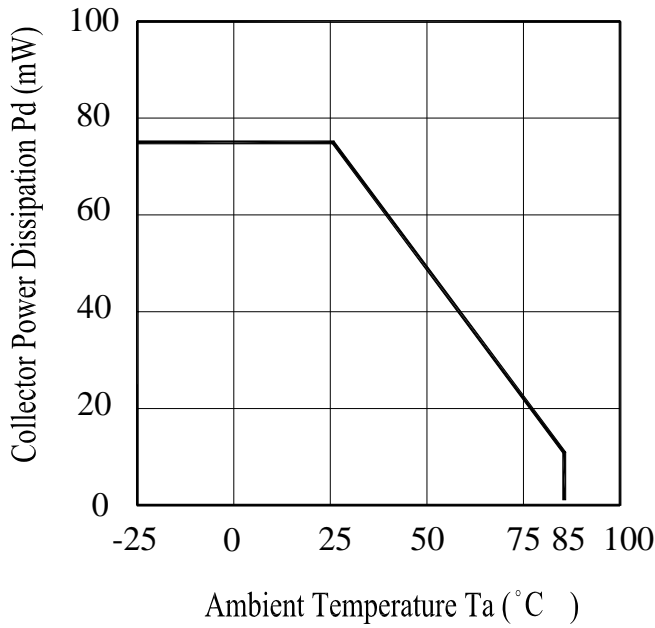


Fig.2 Spectral Sensitivity

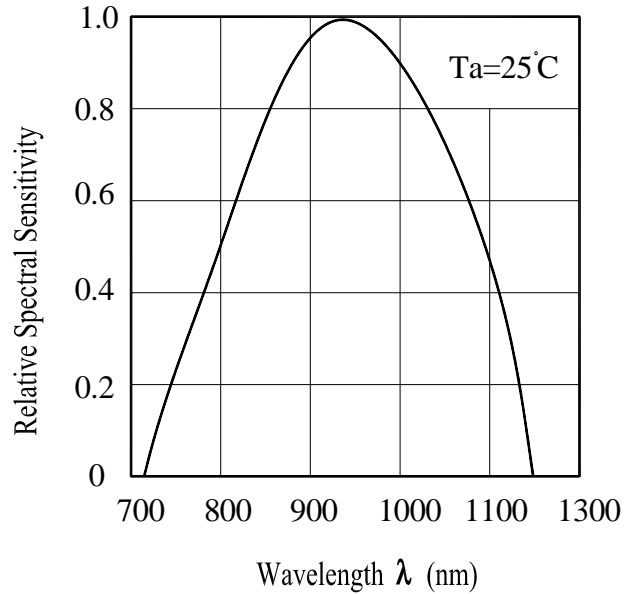


Fig.3 Relative Collector Current vs. Ambient Temperature

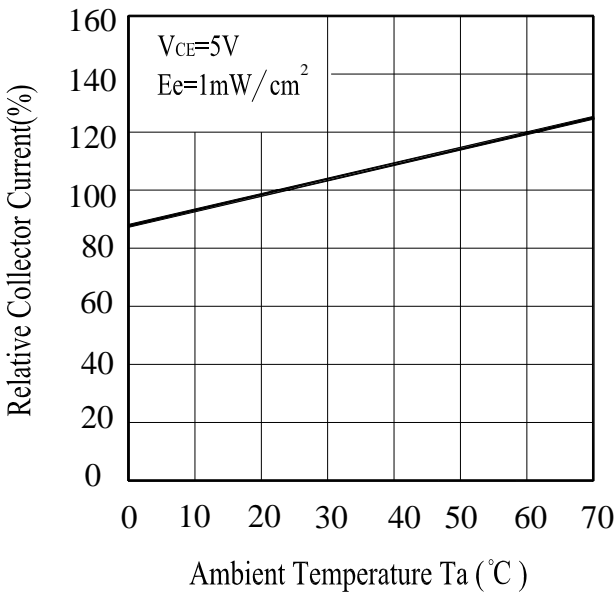
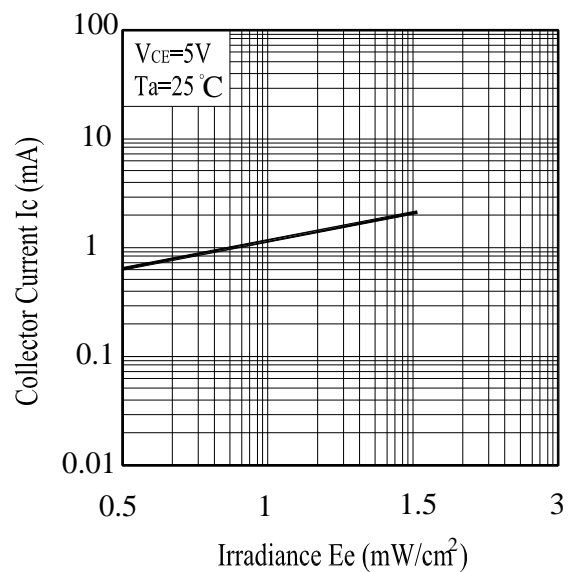


Fig.4 Collector Current vs. Irradiance



Typical Electro-Optical Characteristics Curves

Fig.5 Collector Dark Current vs.

Ambient Temperature

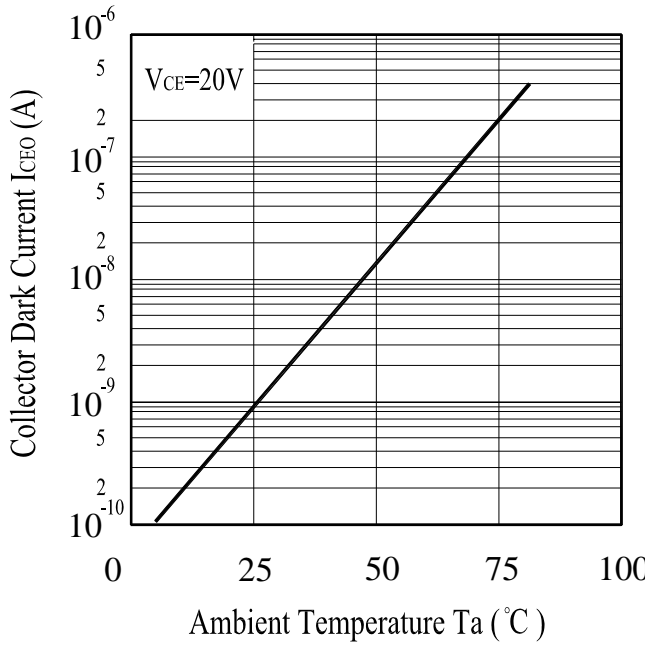
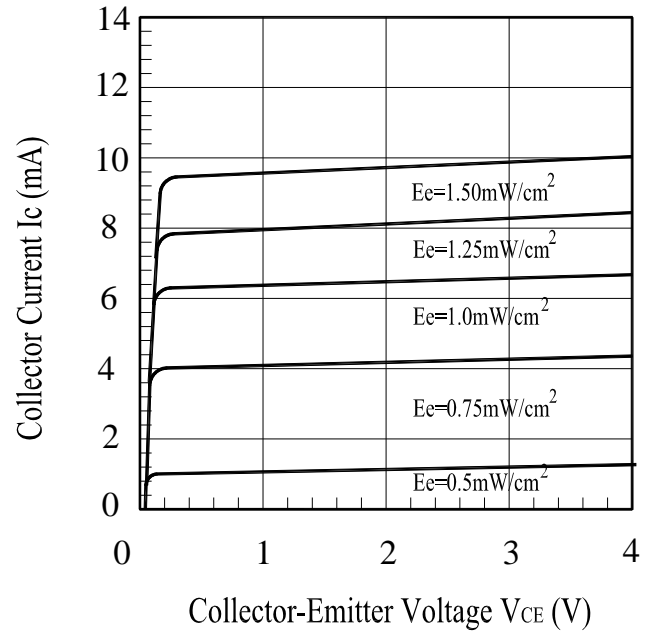


Fig.6 Collector Current vs.

Collector-Emitter Voltage



Reliability Test Item And Condition

The reliability of products shall be satisfied with items listed below.

Confidence level : 90%





LTPD : 10%

NO.	Item	Test Conditions	Test Hours/ Cycles	Sample Sizes	Failure Judgement Criteria	Ac/Re
1	Solder Heat	TEMP. : 260°C±5°C	10secs	22pcs	Attenuation of Light Current value>20%	0/1
2	Temperature Cycle	H : +100°C 15mins ↕ 5mins L : -40°C 15mins	50Cycles	22pcs		0/1
3	Thermal Shock	H :+100°C 5mins ↕ 10secs L :-10°C 5mins	50Cycles	22pcs		0/1
4	High Temperature Storage	TEMP. : +100°C	1000hrs	22pcs		0/1
5	Low Temperature Storage	TEMP. : -40°C	1000hrs	22pcs		0/1
6	DC Operating Life	V _{CE} =5V	1000hrs	22pcs		0/1
7	High Temperature/ High Humidity	85°C / 85% R.H	1000hrs	22pcs		0/1

Packing Quantity Specification

1. 500Pcs/1Bag , 6Bags/1Box
2. 10Boxes/1Carton

Label Form Specification

(Pb)	EVERLIGHT	(X)
CPN: P/N:		
	RoHS	
PT534-6B		
QTY: 	CAT:	
LOT NO: 	HUE:	
Reference 	REF:	

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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