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3mm Phototransistor T-1

PT204-6B-27

Features

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

Descriptions

- PT204-6B-27 is a high speed and high sensitive NPN silicon phototransistor molded in a standard 3 mm package.
Due to its black epoxy the device is sensitive to infrared radiation.

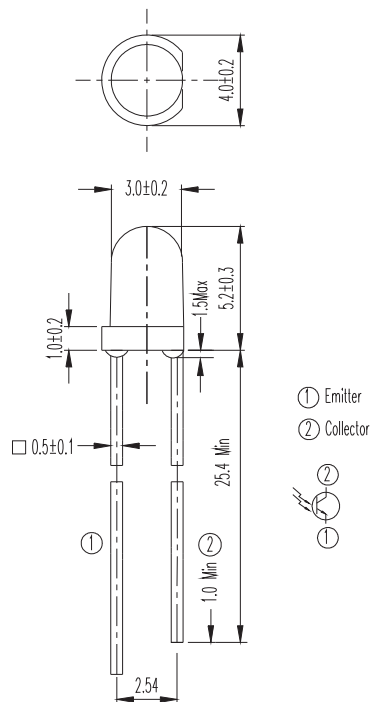
Applications

- Infrared applied system
- Camera
- Printer
- Cockroach catcher

Device Selection Guide

LED Part No.	Chip	<u>Lens Color</u>
	Material	
PT	Silicon	Black

Package Dimensions



- Notes:** 1.All dimensions are in millimeters
2.Tolerances unless dimensions ± 0.25 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}	-25 ~ +85°C	°C
Storage Temperature	T_{stg}	-40 ~ +100°C	°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.	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	---	μS
Fall Time	t_f	$RL=1000\ \Omega$	---	15	---	
Collector Dark Current	I_{CEO}	$E_e=0mW/cm^2$ $V_{CE}=20V$	---	---	100	nA
On State Collector Current	$I_{C(on)}$	$E_e=1mW/cm^2$ $V_{CE}=5V$	1.77	---	5.07	mA
Wavelength of Peak Sensitivity	λ_p	---	---	940	---	nm
Rang of Spectral Bandwidth	$\lambda_{0.5}$	---	---	760-1100	---	nm

Rankings

Parameter	Symbol	Min	Max	Unit	Test Condition
J	$I_{C(ON)}$	1.77	3.61	mA	$V_{CE}=5V$ $E_e=1mW/c\ m^2$
K		2.67	5.07		

Typical Electro-Optical Characteristics Curves

Fig.1 Collector Power Dissipation vs. Ambient Temperature

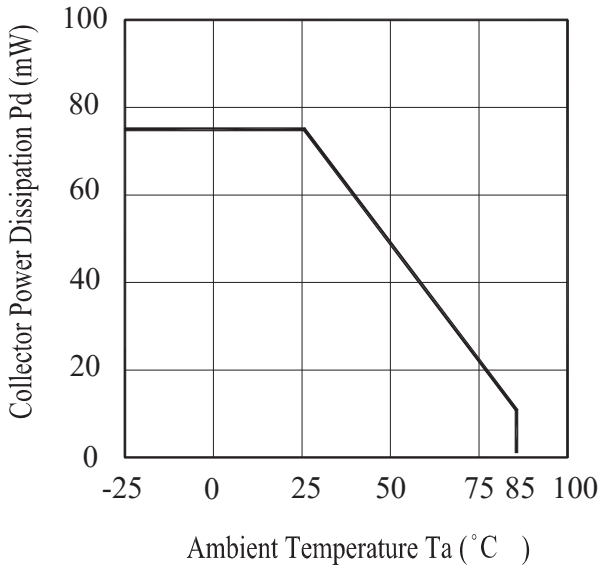


Fig.2 Spectral Sensitivity

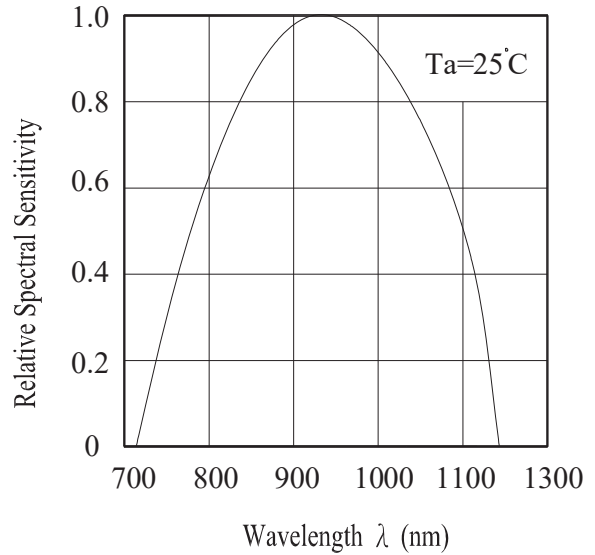


Fig.3 Relative Collector Current vs. Ambient Temperature

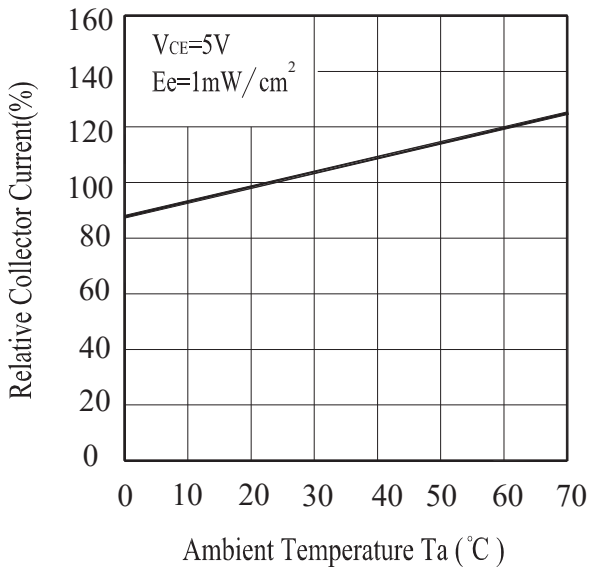
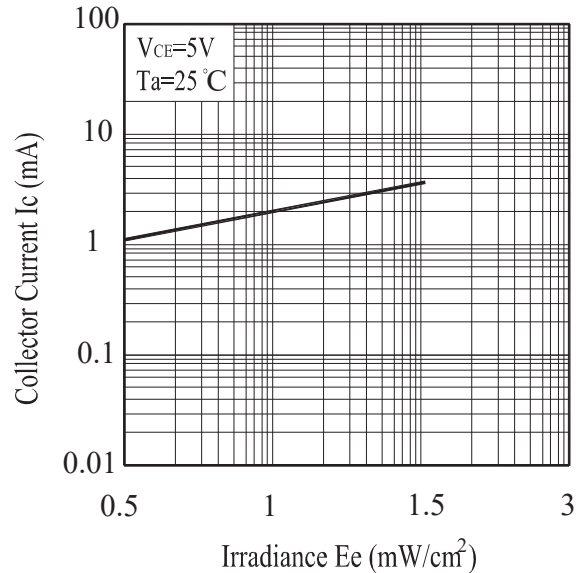


Fig.4 Collector Current vs. Irradiance



Typical Electro-Optical Characteristics Curves

Fig.5 Collector Dark Current vs. Ambient Temperature

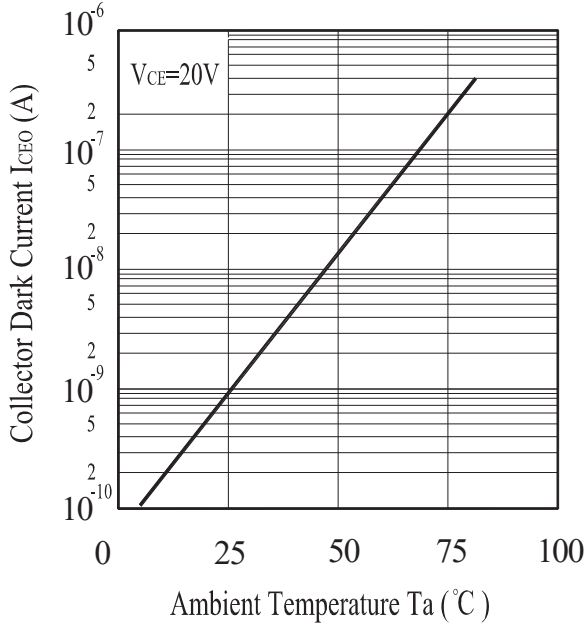
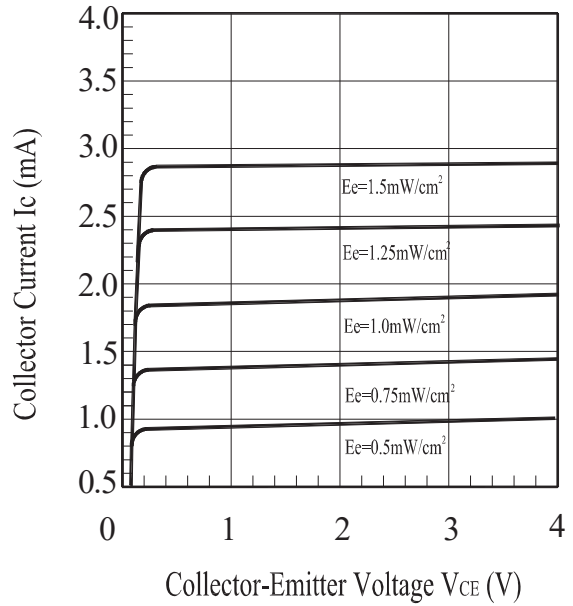


Fig.6 Collector Current vs. Collector-Emitter Voltage









Packing Quantity Specification

1.1000PCS/1Bag , 4Bags/1Box

2.10Boxes/1Carton

Label Form Specification

	EVERLIGHT	
CPN: P/N:		
PT204-6B-27		
QTY:		CAT: HUE: REF:
LOT NO:		
Reference		

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.
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