



PT333C

Phototransistor

Description

- Size: 5mm (T- 1 3/4) round package.
- Detective Wavelength: All color
- Lens color: Water clear.
- Lead type: Radial leads.

Main Features

- Normal detective angle
- High sensitivity.
- Fast response time.
- General purpose leads.
- Reliable and rugged

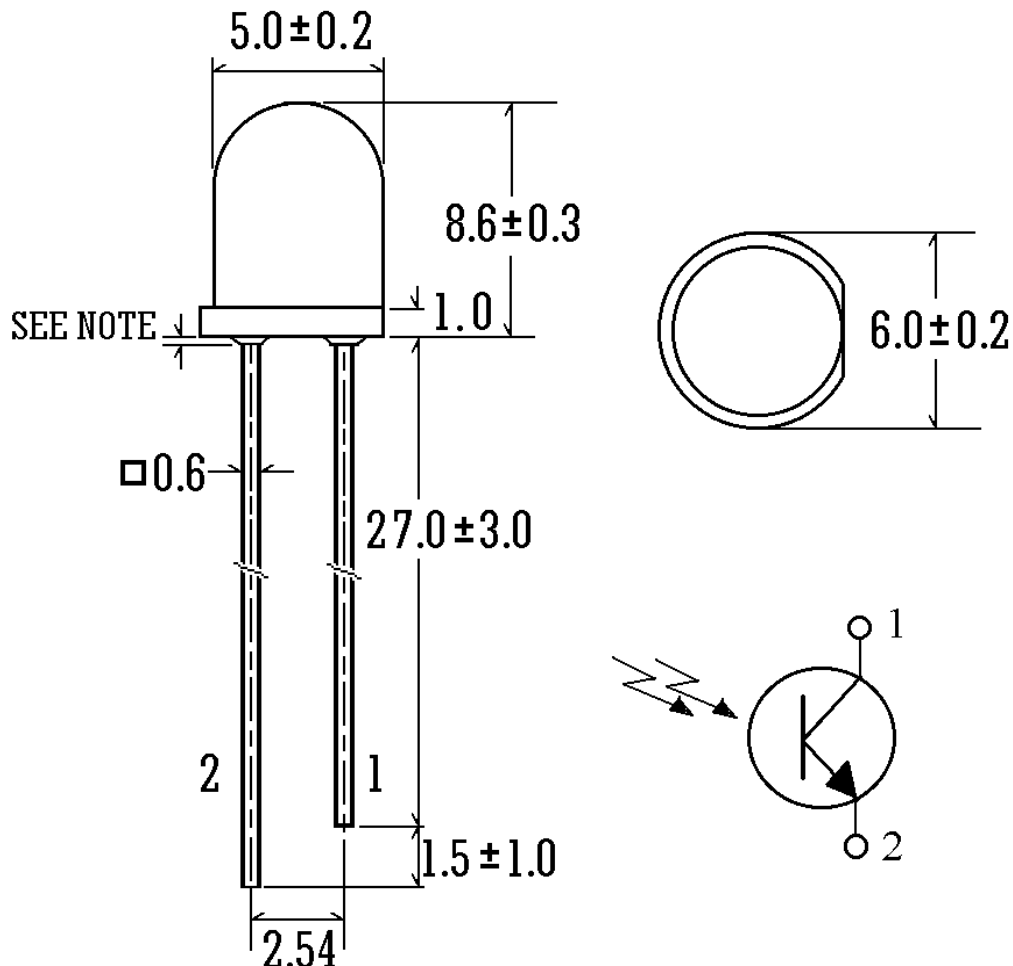
Absolute Maximum Rating TA=25°C

Parameter	Symbol	Rating	Unit	Notice
Collector Power Dissipation	P _{CD}	100	mW	-----
Collector - Emitter Voltage	V _{CEO}	30	V	----
Emitter - Collector Voltage	V _{ECO}	5	V	----
Collector Current	I _C	20	mA	---
Operating Temperature Range	T _{OPR}	-25 to +80	°C	---
Storage Temperature Range	T _{STG}	-40 to +80	°C	Humidity should be under 50%
Lead Soldering Temperature	T _{SOL}	260 +/-5	°C	4mm (0.157") from mold body Less then 5 Second

Part Selection Electrical / Optical Characteristics At TA=25°C

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit.
Collector Dark Current	I _{CEO}	V _{CE} =20V E _C =0mW/ cm ²	—	—	100	nA
C-E Saturation Voltage	V _{CE (Sat)}	I _C =0.5mA E _C =10mW/ cm ²	—	—	0.4	V
Light Current	I _{O (on)}	V _{CE} =20V E _C =1mW/ cm ²	200	---	1400	μA
Response time (Rise)	T _r	V _{CE} =5V I _C =1mA, R _L =1K	—	15	—	μS
Response time (Fall)	T _f	V _{CE} =5V I _C =1mA, R _L =1K	—	15	—	μS
Peak sensitive wavelength	λ _P	----	—	940	—	nm
Range of Spectral Bandwidth	λ _{0.5}	----	440	—	1200	nm
Half sensitivity angle	Δλ	----	—	± 20	—	Deg.
Collector-Capacitance	C _{CB}	F=1MHZ, V _{CB} =3V	5.4	6.4	7.4	pF

Package Dimensions



Chips Material	Silicon	Detecting color	All color
Lens Color	Water Clear	Detecting angle	20 Deg.

NOTES:

- All dimensions are in millimeters (inches).
- Clean only in isopropanol, ethanol, Freon TF (or equivalent).
- Tolerance is ± 0.25 mm (.010") unless otherwise noted.
- Protruded resin under flange is 1.0mm(.04") max
- Lead spacing is measured where the leads emerge from the package.
- Specifications are subject to change without notice.
- This data-sheet only valid for six months.
- When using this product, Please observe the absolute maximum rating and the instructions for use outlined from use of the product, which does not comply with the absolute maximum rating and the instructions included in these specification sheet.

Typical Electrical / Optical Characteristic Curves At 25°C Ambient Temperature

Fig.1 Collector Power Dissipation vs. Ambient Temperature

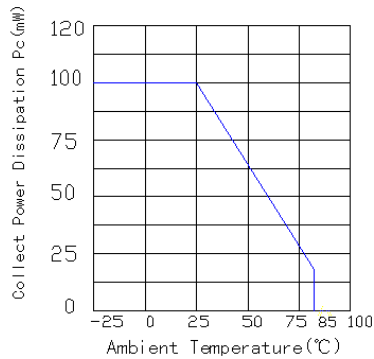


Fig.2 Collector Dark Current vs. Ambient Temperature

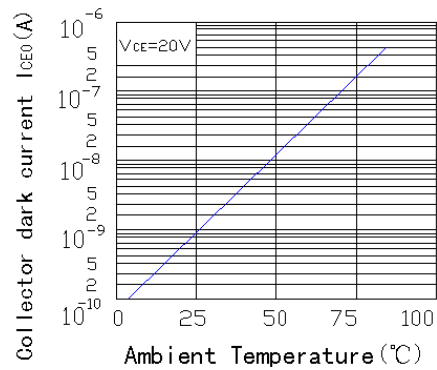


Fig.3 Relative Collector Current vs. Ambient Temperature

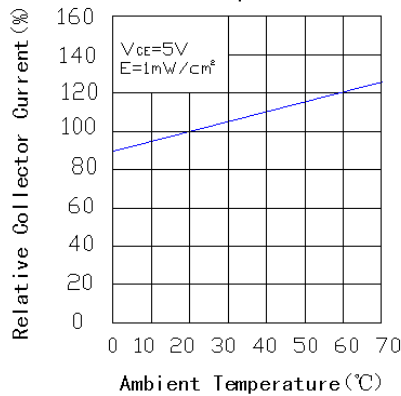


Fig.4 Collector Current vs. Irradiance

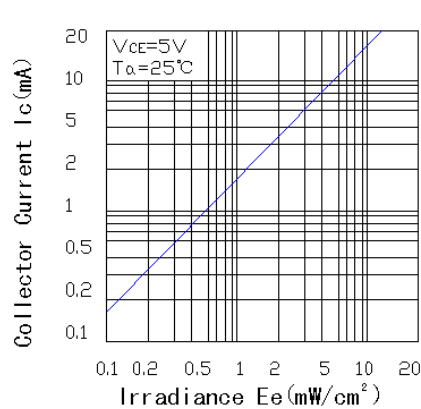


Fig.5 Spectral Seneitivity

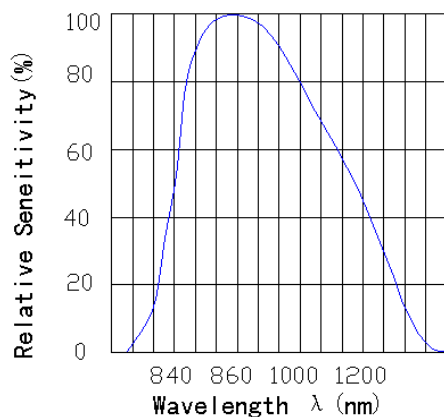
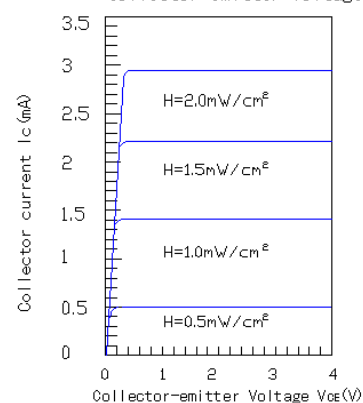


Fig.6 Collector Current vs. Collector-emitter Voltage



Note :

- If forming is required, it must be done before soldering. Form pin leads by securing under 5mm from body and bedding with radio pliers or the equivalent to avoid pressure on resin. When the LED is mounted into a P.C.board, pitch spacing should be aligned to prevent cause any stress to the resin. Any unsuitable stress applied to resin may break bonding wire in LED, which will cause failure.