

## 5mm Round Package Silicon Phototransistor

### OP T547

#### Features

- Daylight filter matched to Infrared Emitters
- High photo sensitivity
- High speed and high sensitive silicon NPN material
- Lens in black color

#### Applications

- Detector for industrial electronic circuitry
- Encoder
- Interrupter
- Infrared detector



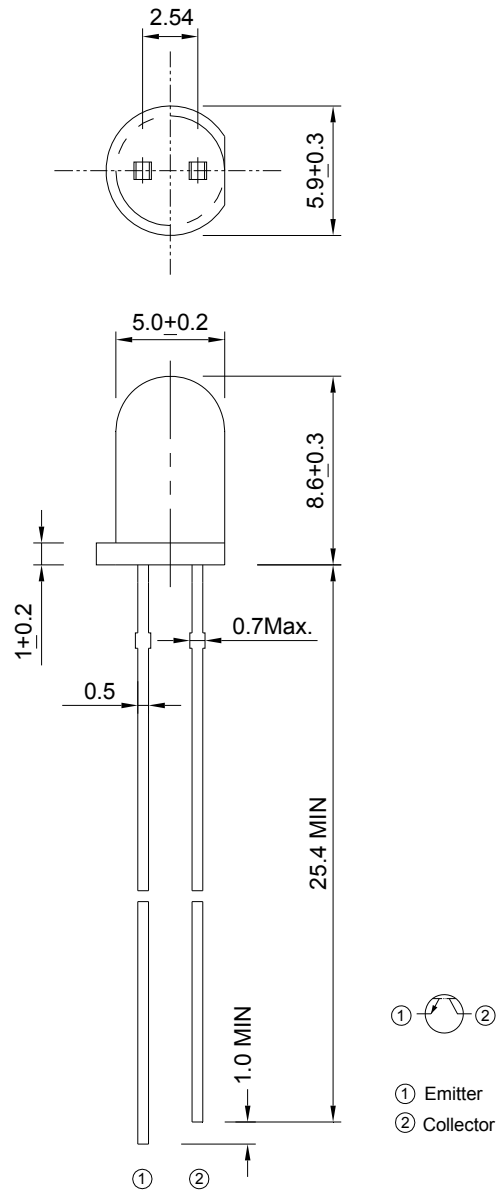
#### Absolute Maximum Rating $T_a = 25^\circ\text{C}$ , unless otherwise specified

Parameter	Symbol	Value	Unit
Emitter-Collector Voltage	$V_{ECO}$	5	V
Collector-Emitter Voltage	$V_{CEO}$	30	V
Collector Current	$I_C$	20	mA
Power Dissipation	$P_C$	80	mW
Operating Temperature Range	$T_{opr}$	-30 to + 85	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 to + 85	$^\circ\text{C}$
Soldering Temperature	$T_{sol}$	260	$^\circ\text{C}$

Note: Please take note the Absolute Maximum Rating values. Any operation beyond the specified ratings in this table will result degradation of product life-span and may cause to fail.

**Package Dimension:**

unit: mm



**Notes:**

1. All dimensions are millimeters.
2. Tolerance is  $\pm 0.2$ mm unless otherwise specified.
3. Specifications are subject to change without notice.

**Optical Characteristics Ta=25°C, unless otherwise specified**

Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Emitter-Collector Breakdown Voltage	$I_C = 100\mu A$ $E_e = 0mW/cm^2$	$BV_{ECO}$	5	---	---	V
Collector- Emitter Breakdown Voltage	$I_C = 100\mu A$ $E_e = 0mW/cm^2$	$BV_{CEO}$	30	---	---	V
Collector-Emitter Saturation Voltage	$I_C = 2mA$ $E_e = 1mW/cm^2$	$V_{CE(SAT)}$	---	---	0.4	V
Collector Dark Current	$E_e = 0mW/cm^2$ $V_{CE} = 20V$	$I_{CEO}$	---	---	100	nA
On State Collector Current	$E_e = 1mW/cm^2$ $V_{CE} = 5V$	$I_{C(ON)}$	0.7	2.0		mA
Range of Spectral Bandwidth	---	$\lambda_{0.5}$	840	---	1200	nm
Wavelength of Peak Sensitivity	---	$\lambda_p$	---	940	---	nm
Rise Time	$V_{ce}=5V, I_c=1mA,$	$T_r$	---	15	---	$\mu S$
Fall Time	$R_L=1000\Omega$	$T_f$		15	---	

### Typical Electro-optical Characteristics Curves

