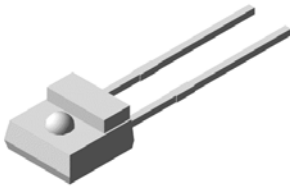
Side Look Silicon Phototransistor

OP TR38

Features

- Matched to Infrared Emitter 940nm
- High photo sensitivity
- High speed and high sensitive silicon NPN material
- Lens in water clear



Applications

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

RoHS

Pb

pb-free

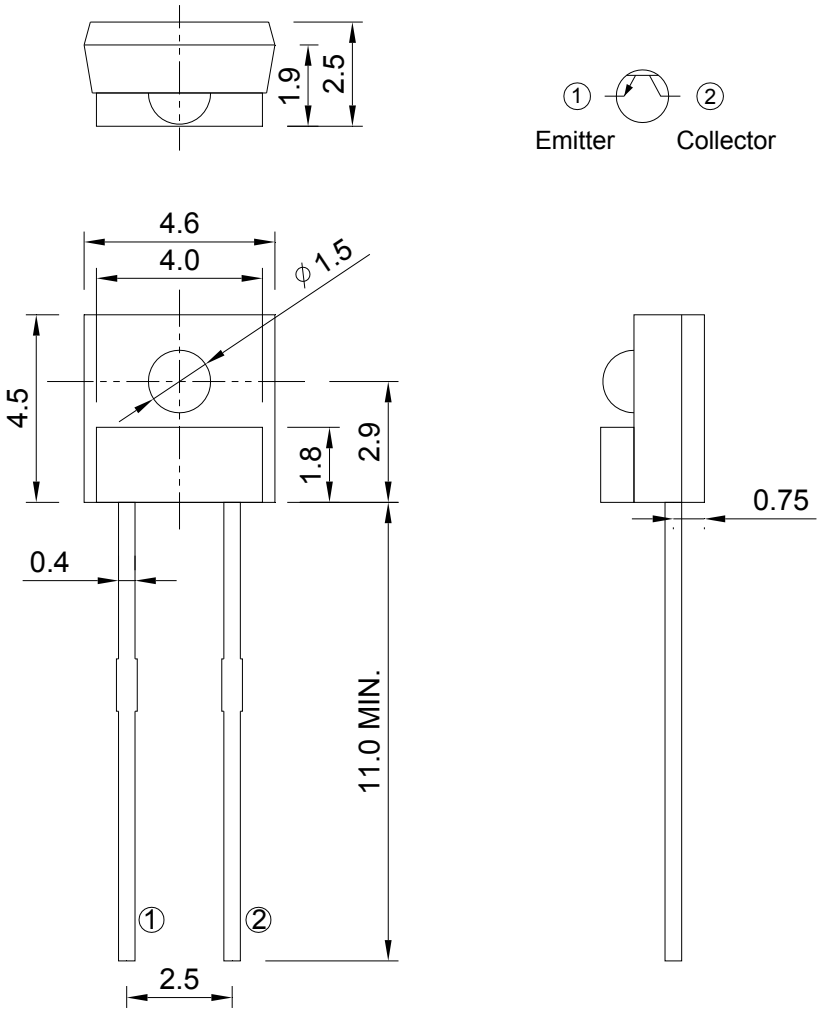
Absolute Maximum Rating at Ta =25℃,unless otherwise specified

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	Pc	80	mW
Operating Temperature Range	T_{opr}	-30 to + 85	℃
Storage Temperature	T_{stg}	-40 to + 85	℃
Soldering Temperature	T_{sol}	260	℃

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 ± 0.2mm unless otherwise specified.
3. Specifications are subject to change without notice.

Optical Characteristics at Ta=25℃,unless otherwise specified

Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Emitter-Collector Breakdown Voltage	I_C = 100uA Ee= 0mW/cm^2	BV_{ECO}	5	---	---	V
Collector- Emitter Breakdown Voltage	I_C = 100uA Ee= 0mW/cm^2	BV_{CEO}	30	---	---	V
Collector-Emitter Saturation Voltage	I_C = 2mA Ee = 1mW/cm^2	$V_{CE(SAT)}$	---	---	0.4	V
Collector Dark Current	Ee = 0mW/cm^2 V_{CE} = 20V	I_{CEO}	---	---	100	nA
On State Collector Current	Ee = 0.55mW/cm^2 V_{CE} = 5V	$I_{C(ON)}$	0.6	---	3.5	mA
Range of Spectral Bandwidth	---	$\lambda_{0.5}$	400	---	1200	nm
Wavelength of Peak Sensitivity	---	λ_p	---	940	---	nm
Rise Time	Vce=5V, Ic=1mA, R_L=1000Ω	Tr	---	15	---	μS
Fall Time		Tf		15	---	

Ranks

Parameter	Symbol	Min.	Max.	Unit	Test Condition
1	$I_{C(ON)}$	0.55	1.22	mA	Ee = 0.55mW/cm^2 V_{CE} = 5V
2		0.87	1.74		
3		1.22	2.26		
4		1.56	3.04		
5		1.74	3.48		

Typical Electro-optical Characteristics Curves