Technical Data sheet
opto Interrupter

ITR-9608

Features

. Fast response time
. High analytic
. cut-offvisible wavelength入p=940nm
. High sensitivity
• pb free
. The product itselfwill remain within ROHS Compliant version.

Descriptions

The 9608 consist ofan infrared emitting diode and an NPN Silicon phototransistor, encased side-by-side on converging optical axis in a black Thermoplastic Housing The phototransistor receives radiation from the IRLED only .This is the normal situation. But when an object is in between , phototransistor could not receives the radiation. For additional component information , please refer to IR928-6c and pT928-6c

Applications

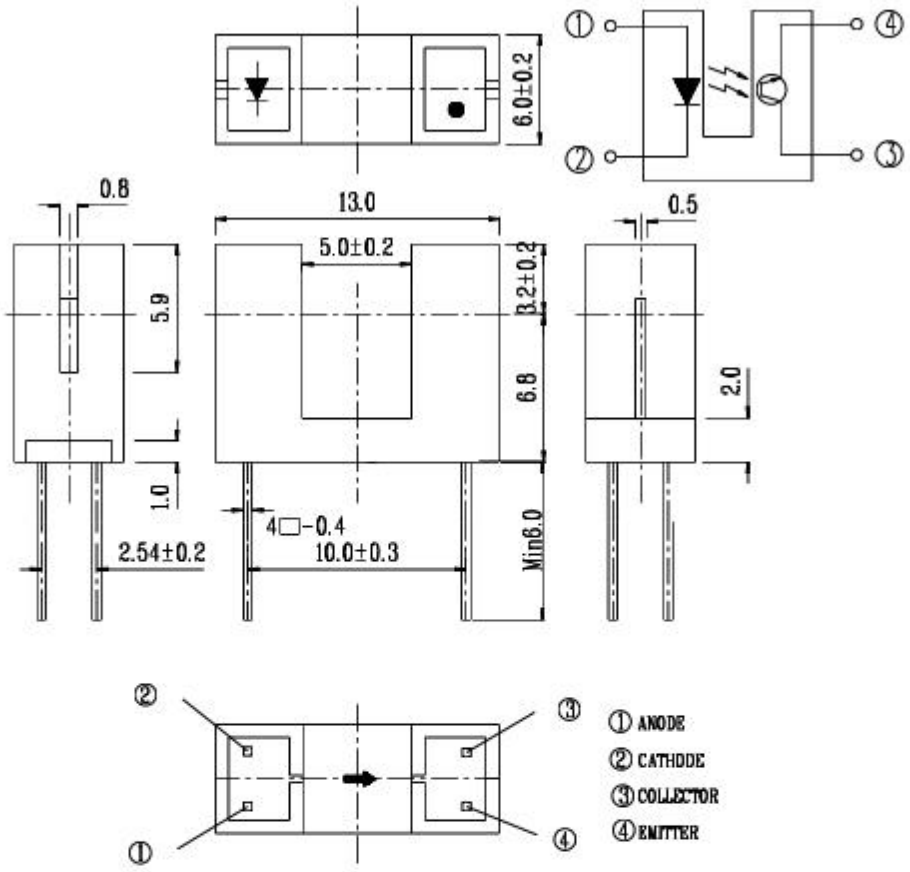
. Mouse copier
. switch scanner
. Floppy disk driver
. Non-contact switching
• For Direct Board

Device selection Guide

Device No.	chip Material	LENS COLOR
IR928	GaAlAs	water clear
PT928	silicon	water clear

ITR-9608

Package Dimensions



Note: Tolerances unless dimensions ±0.25mm

ITR-9608

□ Absolute Maximum Ratings (Ta=25℃)

parameter		symbol	Ratings	unit
Input	power Dissipation at(or below) 25℃ Free Air Temperature	pd	75	mw
	Reverse voltage	VR	5	V
	Forward current	IF	50	mA
	peak Forward current (* 1) pulse width ≦ 100μ s, Duty cycle= 1%	IFP	1	A
output	collector power Dissipation	PC	75	mw
	collector current	Ic	20	mA
	collector-Emitter voltage	B VCEO	30	V
	Emitter-collector voltage	B VECO	5	V
operating Temperature		Topr	-25~+85	℃
storage Temperature		Tstg	-40~+85	℃
Lead soldering Temperature (*2) (1/16 inch form body for 5 seconds)		Tsol	260	℃

(* 1) tw=100 μ sec. , T=10 msec. (*2) t=5 sec

□ Electro-optical characteristics (Ta=25℃)

parameter		symbol	Min.	TYP.	Max.	unit	conditions
Input	Forward voltage	VF1	—	1.2	1.5	V	IF=20mA
		VF2	—	1.4	1.8		IF= 100mA,tp- 100μ S,tp/T=0.01
		VF3	—	2.6	4.0		IF= 1A,tp= 100μ s,tp/T=0.01
	Reverse current	IR	—	—	10	μA	VR=5V
	peak wavelength	λP	—	940	—	nm	IF=20mA
	view Angle	291/2	—	60	—	Deg	IF=20mA
output	Dark current	ICEO	—	--	100	nA	VCE=20V,Ee=0mw/cm^2
	C-E Saturation voltage	VCE(sat)	—	--	0.4	V	Ic=2mA ,Ee= Imw/cm^2
Transfer characteristics	collect current	Ic(ON)	0.5	--	10	mA	VCE=5V IF=20mA
	Rise time	tr	—	15	—	μ sec	VCE=5V Ic= ImA RL= 1KΩ
	Fall time	tf	—	15	—	μ sec	

□ Typical Electrical/optical/characteristics curves for IR

Fig. 1 Forward current Vs. Ambient Temperature

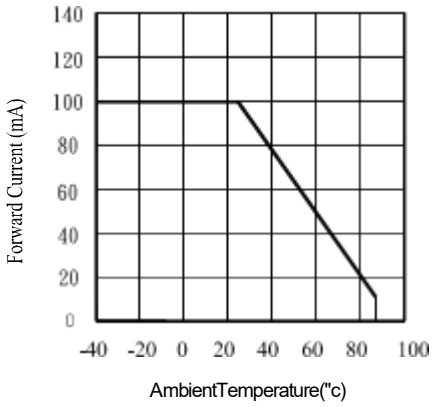


Fig. 2 spectral Distribution

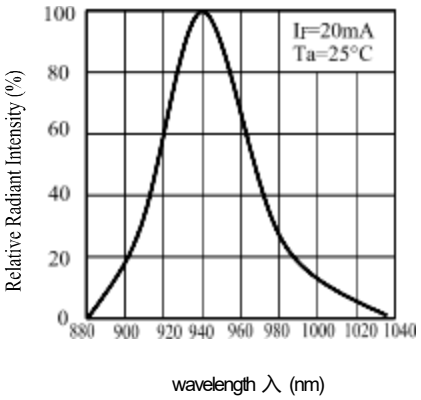


Fig. 5 Relative Intensity Vs. Forward current

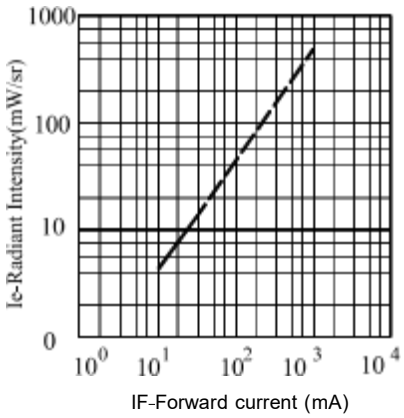


Fig. 6 Relative Radiant Intensity Vs. Angular Displacement

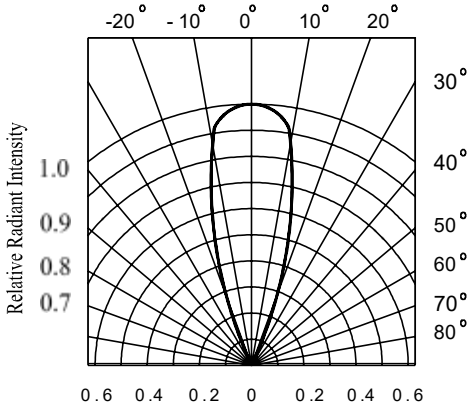


Fig. 7 Relative Intensity Vs. Ambient Temperature(" C)

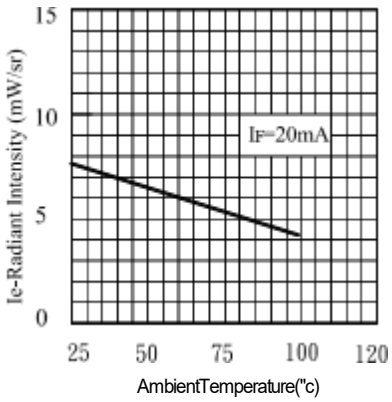
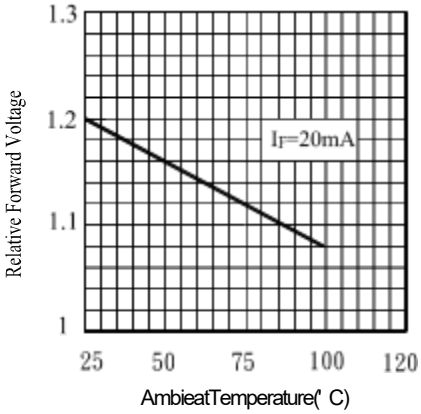


Fig. 8 Forward current Vs. Ambient Temperature(" C)



Typical Electrical/Optical/Characteristics Curves for PT

Fig.1Collector Power Dissipation vs. Ambient Temperature

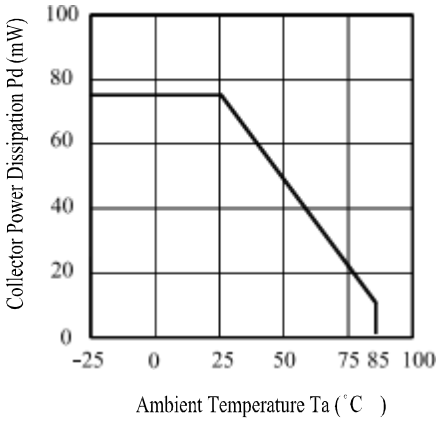


Fig.2 Spectral Sensitivity

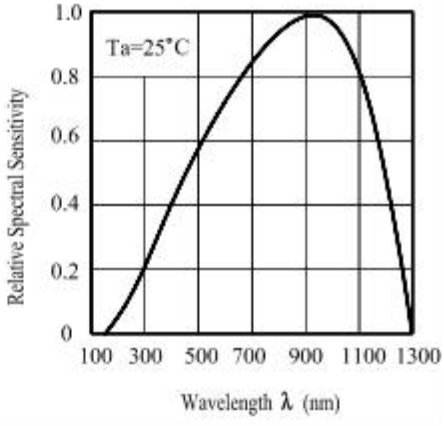


Fig.3 Relative Collector Current vs. Ambient Temperature

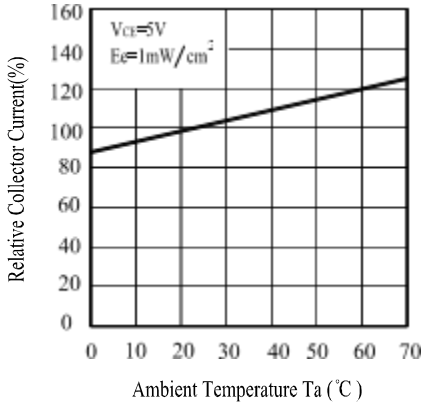


Fig.4 Collector Current vs. Irradiance

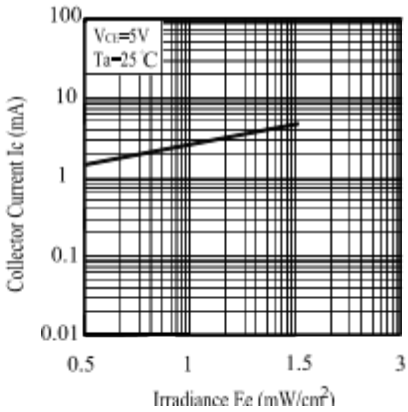


Fig.5 Collector Dark Current vs. Ambient Temperature

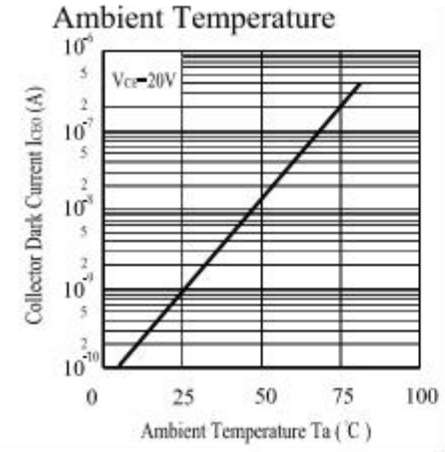


Fig.6 Collector Current vs. Collector-Emitter Voltage