ITR-8402

■ Features

.Fast response time
.High analytic
.Cut-off visible wavelength λp=940nm
.High sensitivity

■ Descriptions

.The ITR8402 consist of an infrared emitting diode and an silicon phototransistor, encased side-by-side on converging optical axis in a black thermoplastic housing,
.The phototransistor receives radiation from the IR LED 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 and PT928

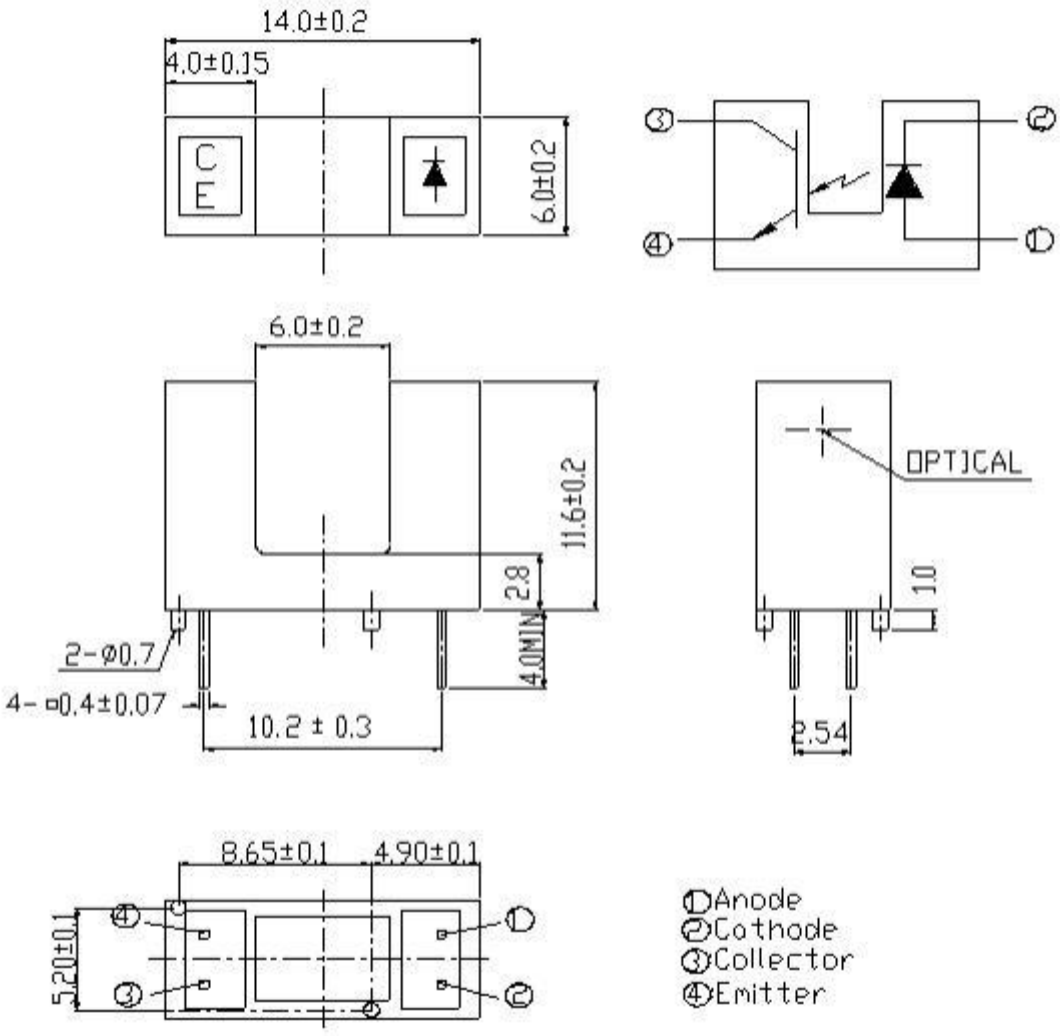
■ Applications

.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

■ Package Dimensions



Notes:

1. All dimensions are in millimeters.
2. Tolerances unless dimensions ±0.3mm.
3. Lead spacing is measured where the lead emerge from the package.

■ Absolute Maximum Ratings (Ta=25℃)

Parameter		Symbol	Ratings	Unit
Input	Power Dissipation at(or below) 25℃ Free Air Temperature	P_d	75	mW
	Reverse Voltage	V_R	5	V
	Forward Current	I_F	50	mA
Output	Collector Power Dissipation	P_C	75	mW
	Collector Current	I_C	30	mA
	Collector-Emitter Voltage	B V_{CEO}	30	V
	Emitter-Collector Voltage	B V_{ECO}	5	V
Operating Temperature		Topr	-25~+85	℃
Storage Temperature		Tstg	-40~+85	℃
Lead Soldering Temperature (*1) (3mm from the package)		Tsol	260	℃

Note: (*1) Soldering time≤5 sec.

■ Electro-Optical Characteristics (Ta=25℃)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Conditions
Input	Forward Voltage	V_F	---	1.2	1.5	V	I_F=20mA
	Reverse Current	I_R	---	---	10	μA	V_R=5V
	Peak Wavelength	λ_P	---	940	---	nm	I_F=20mA
Output	Dark C urrent	I_{CEO}	---	---	100	nA	V_{CE}=20V,Ee=0mW/cm^2
	C-E Saturation Voltage	$V_{CE(sat)}$	---	---	0.4	V	I_C=0.9mA, I_F=20mA
Transfer Characteristics	Collect Current	$I_{C(ON)}$	0.5	---	---	mA	V_{CE}=5V I_F=20mA
	Rise time	t_r	---	15	---	μsec	V_{CE}=5V I_C=1mA R_L=1KΩ
	Fall time	t_f	---	15	---	μsec	

■ Typical Electrical/Optical/Characteristics Curves for IR

Fig.1 Forward Current vs. Ambient Temperature

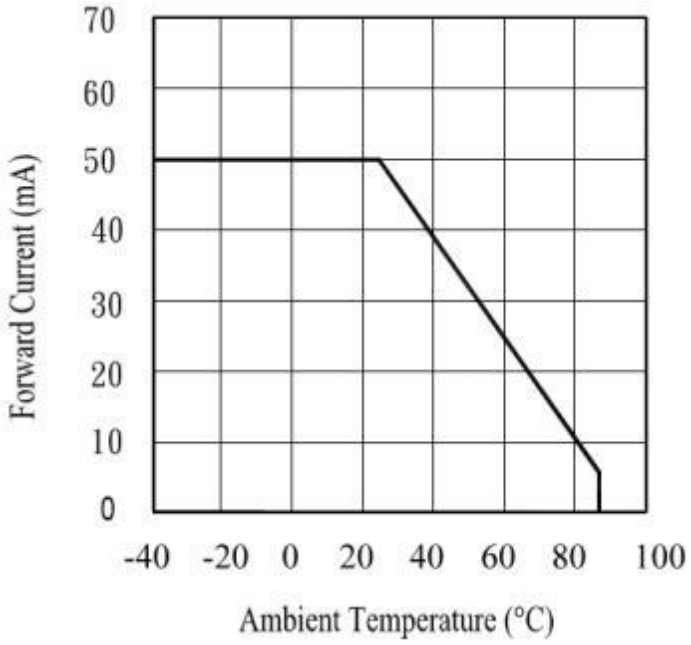
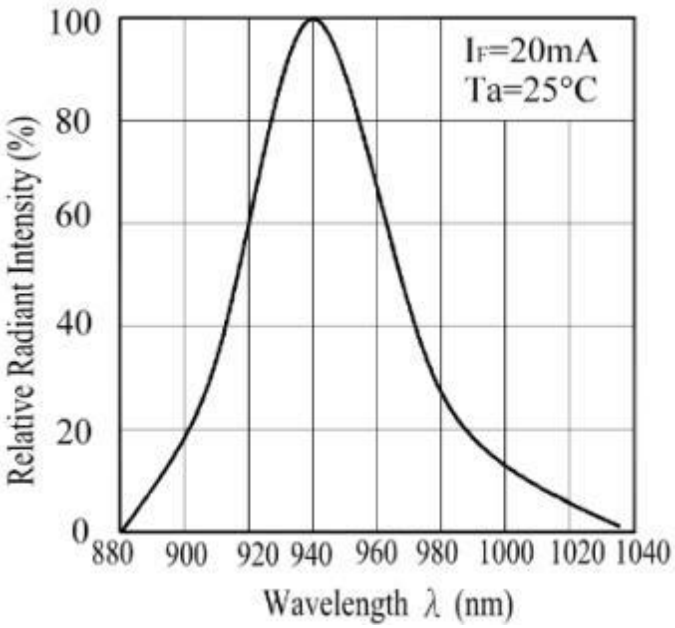
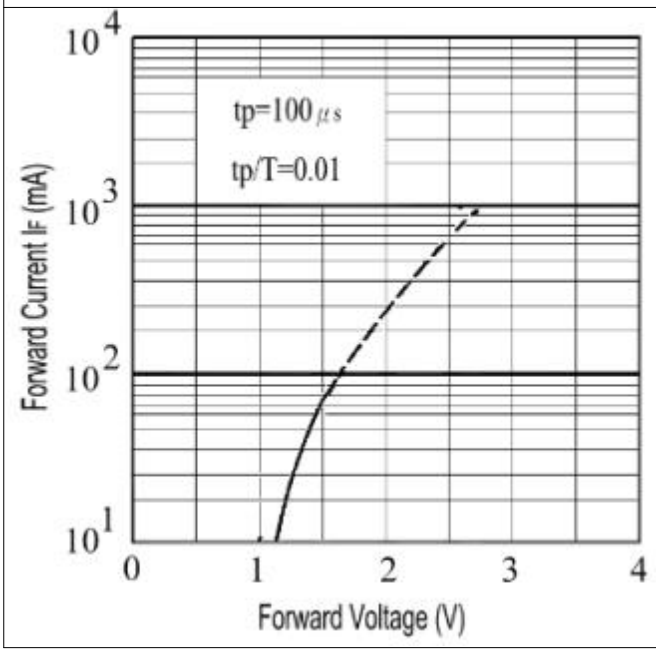


Fig.2 Spectral Distribution



Forward Current vs. Forward Voltage



■ Typical Electrical/Optical/Characteristics Curves for PT

Fig.1Collector Power Dissipation vs.

Spectral Sensitivity