Specification

产品规格书

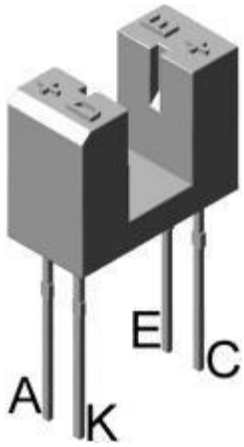
客户名称 (CUSTOMER):	
样品名称 (DESCRIPTION):	光电开关
型号 (Part No):	DP-ITR150
日期 (Date):	2026-07-16

公司邮箱：josensong@163.com
销售热线：15914189777

生产部 Production Dept.	品质部 Quality Dept.	工程部 Engineering Dept.	市场部 Marketing Dept.
客户承认结果 Customer acknowledges Results	客户签名确认 Customer signature confirmation	批　准 Approval	制　定 Formulate

DP-ITR150

■ Features



.Fast response time
.High analytic
. Cut-offvisible wavelength λp=940nm
.High sensitivity
.Pb free
.The product itselfwill remain within RoHS compliant version.

■ Descriptions

The ITR-ST150 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 IRED 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

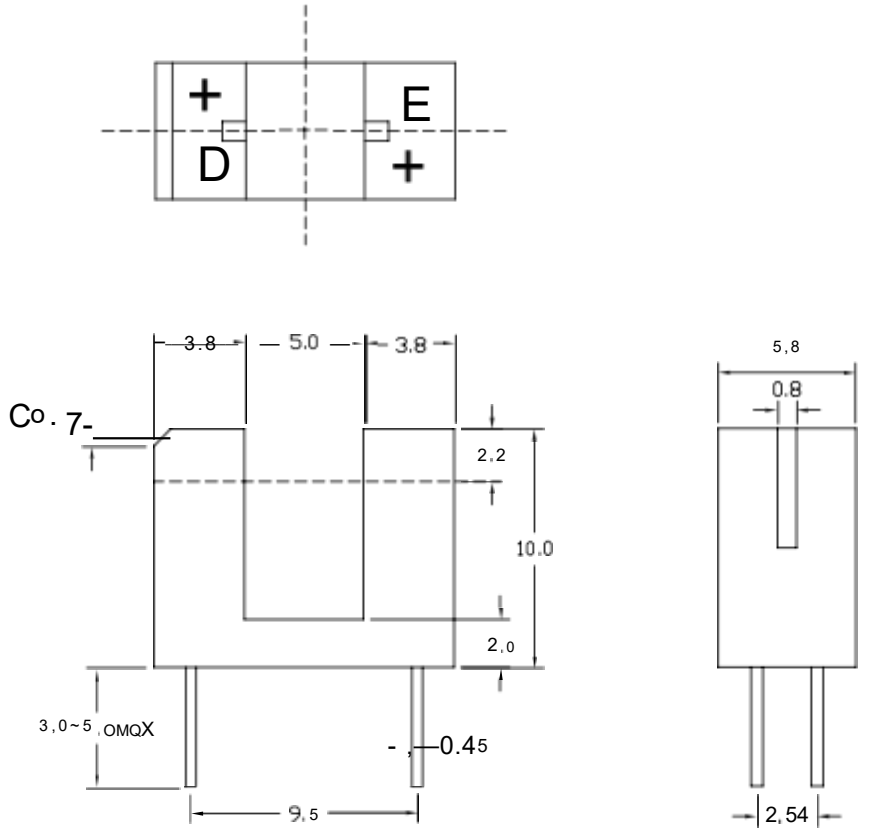
■ Applications

.Mouse Copier
. Switch Scanner
.Floppy disk driver
.Non-contact Switching
.For Direct Board

■ Device Selection Guide

Device No.	Chip Material	LENS COLOR
IR928-6C	GaAlAs	Water clear
PT928-6C	Silicon	Water clear

■ Package Dimensions





A: Anode
K: Cathode
C: Collector
E: Emitter

Dimensional Tolerance ± 0.2 mm

■ Absolute Maximum Ratings (Ta=25℃)

Parameter		Symbol	Ratings	Unit
Input	Power Dissipation at(or below) 25℃ Free Air Temperature	Pd	75	mW
	Reverse Voltage	V_R	5	V
	Forward Current	I_F	50	mA
	Peak Forward Current (*1) Pulse width ≦100μs, Duty cycle=1%	I_{FP}	1	A
Output	Collector Power Dissipation	P_C	100	mW
	Collector Current	I_C	50	mA
	Collector-Emitter Voltage	B V_{CEO}	30	V
	Emitter-Collector Voltage	B V_{ECO}	5	V
Operating Temperature		Topr	-20~+65	℃
Storage Temperature		Tstg	-30~+70	℃
Lead Soldering Temperature (*2) (1/16 inch form body for 5 seconds)		Tsol	260	℃

(*1) tw=100 μsec., T=10 msec. (*2) t=5 Sec

■ Electro-Optical Characteristics (Ta=25℃)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Conditions
Input	Forward Voltage	V_{F1}	---	1.2	1.6	V	I_F=20mA
		V_{F2}	---	1.4	1.85		I_F=100mA,tp=100μs,tp/T=0.01
		V_{F3}	---	2.6	4.0		I_F=1A,tp=100μs,tp/T=0.01
	Reverse Current	I_R	---	---	10	μA	V_R=5V
	Peak Wavelength	λ_P	---	940	---	nm	I_F=20mA
	View Angle	2θ1/2	---	60	---	Deg	I_F=20mA
Output	Dark Current	I_{CEO}	---	---	100	nA	V_{CE}=20V,Ee=0mW/cm^2
	C-E Saturation Voltage	V_{CE}(sat)	---	---	0.4	V	I_C=2mA ,Ee=1mW/cm^2
Transfer Characteristics	Collect Current	I_C(ON)	0.7	---	---	mA	V_{CE}=5V I_F=20mA
	Rise time	t_r	---	15	---	μ sec	V_{CE}=5V I_C=1mA R_L=1KΩ
	Fall time	t_f	---	15	---	μ sec	

■ Typical Electrical/Optical/Characteristics Curves for IR

Fig.1 Forward Current vs. Ambient Temperature

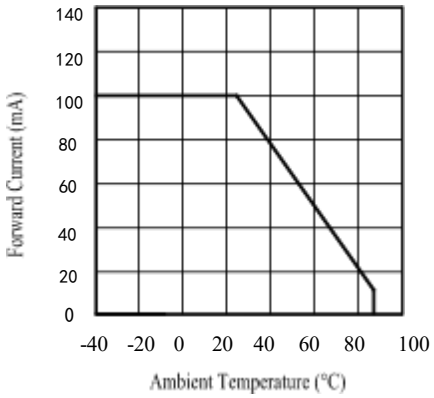


Fig.2 Spectral Distribution

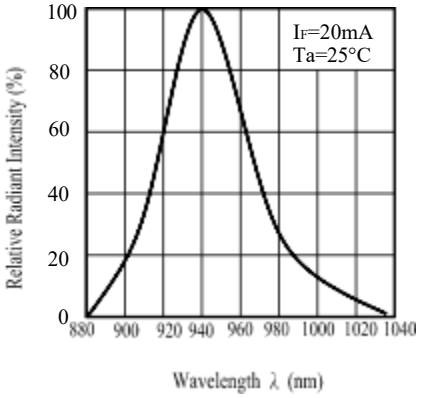


Fig.5 Relative Intensity vs. Forward Current

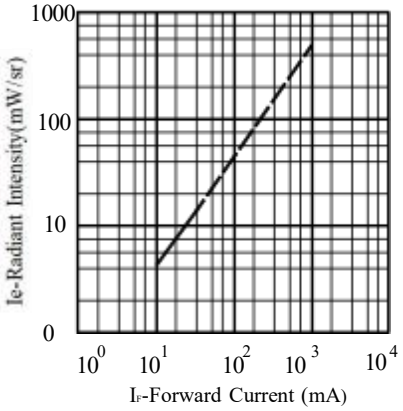


Fig.6 Relative Radiant Intensity vs. Angular Displacement

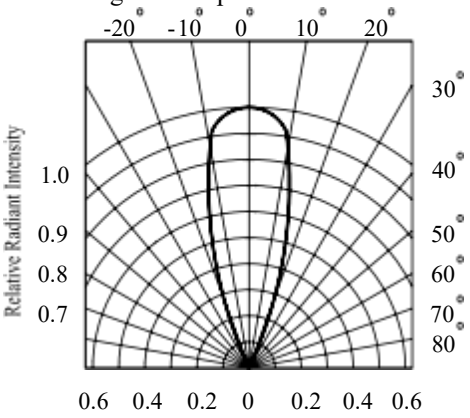


Fig.7 Relative Intensity vs. Ambient Temperature(。C)

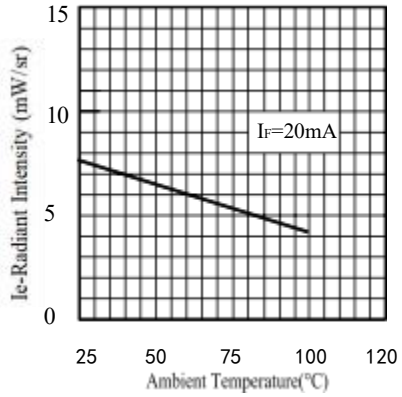
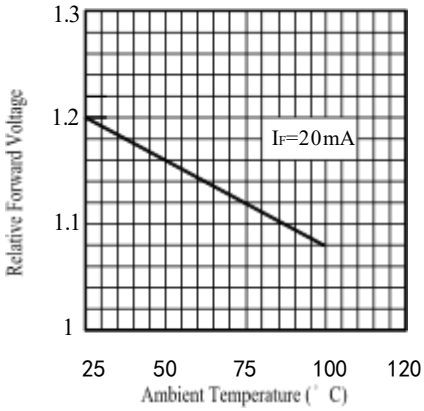


Fig.8 Forward Current vs. Ambient Temperature(°C)



■ Typical Electrical/Optical/Characteristics Curves for PT

Fig.1Collector Power Dissipation vs. Ambient Temperature

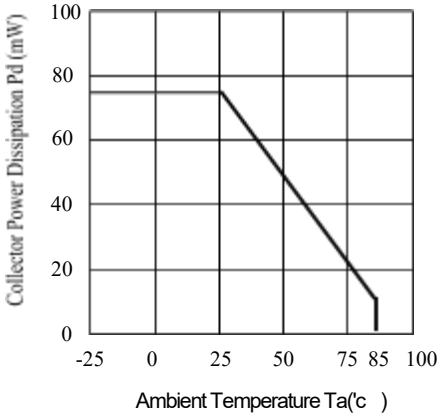


Fig.2 Spectral Sensitivity

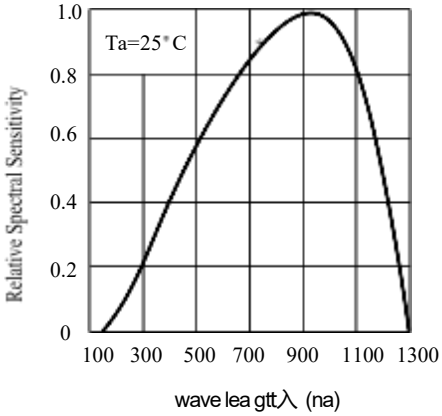


Fig.3 Relative Collector Current vs. Ambient Temperature

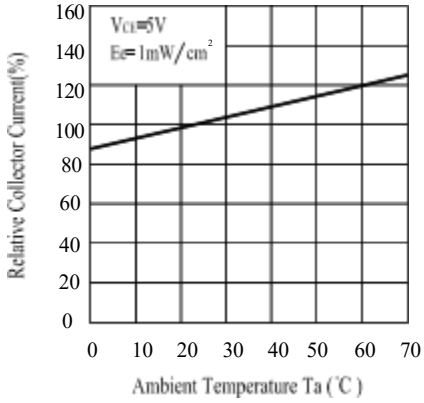


Fig.4 Collector Current vs. Irradiance

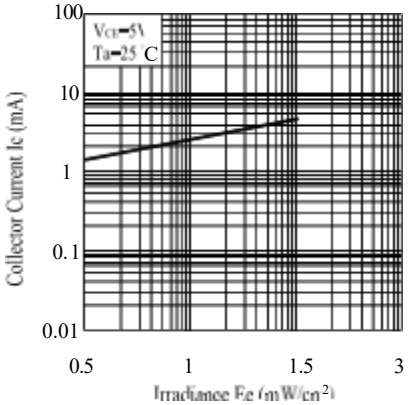


Fig.5 Collector Dark Current vs. Ambient Temperature

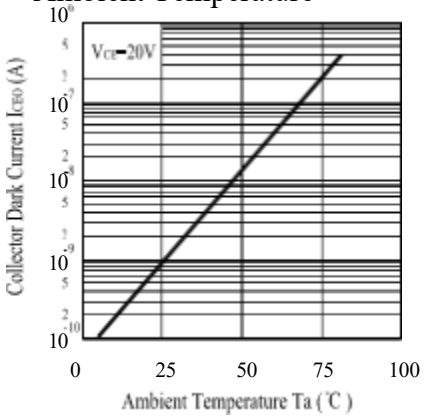


Fig.6 Collector Current vs. Collector-Emitter Voltage

