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SHENZHEN CGX OPTOELECTRONIC TECHNOLOGY, INC..

样品规格承认书

SAMPLE APPROVAL SHEET

客户名称

Company Name : _____

产品型号

Part Number: **CGX-ITR150-L3**

送样日期

Sample Date: _____

APPROVED	SIGNATURES. / 0 1 2 3 4	
核准	56	工程

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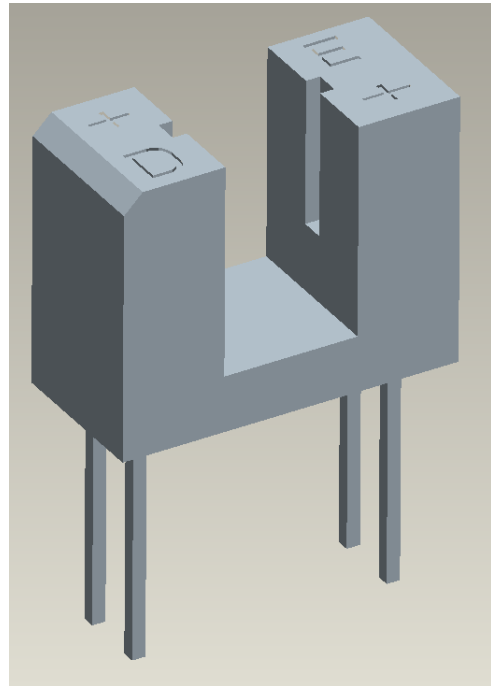
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核准	工程	56

Add : 深圳市 DE ? F G H I J K L G M & N B O

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Http: www.szcgx.com



Features

Fast response time

High analytic

High sensitivity

Cut-off visible wavelength $\lambda_c=940\text{nm}$

Pb free

This product itself will remain within RoHS compliant version.

Descriptions

- The ITR150 consist of an 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.

Applications

Mouse Copier

Switch Scanner

Floppy disk driver

Non-contact Switching

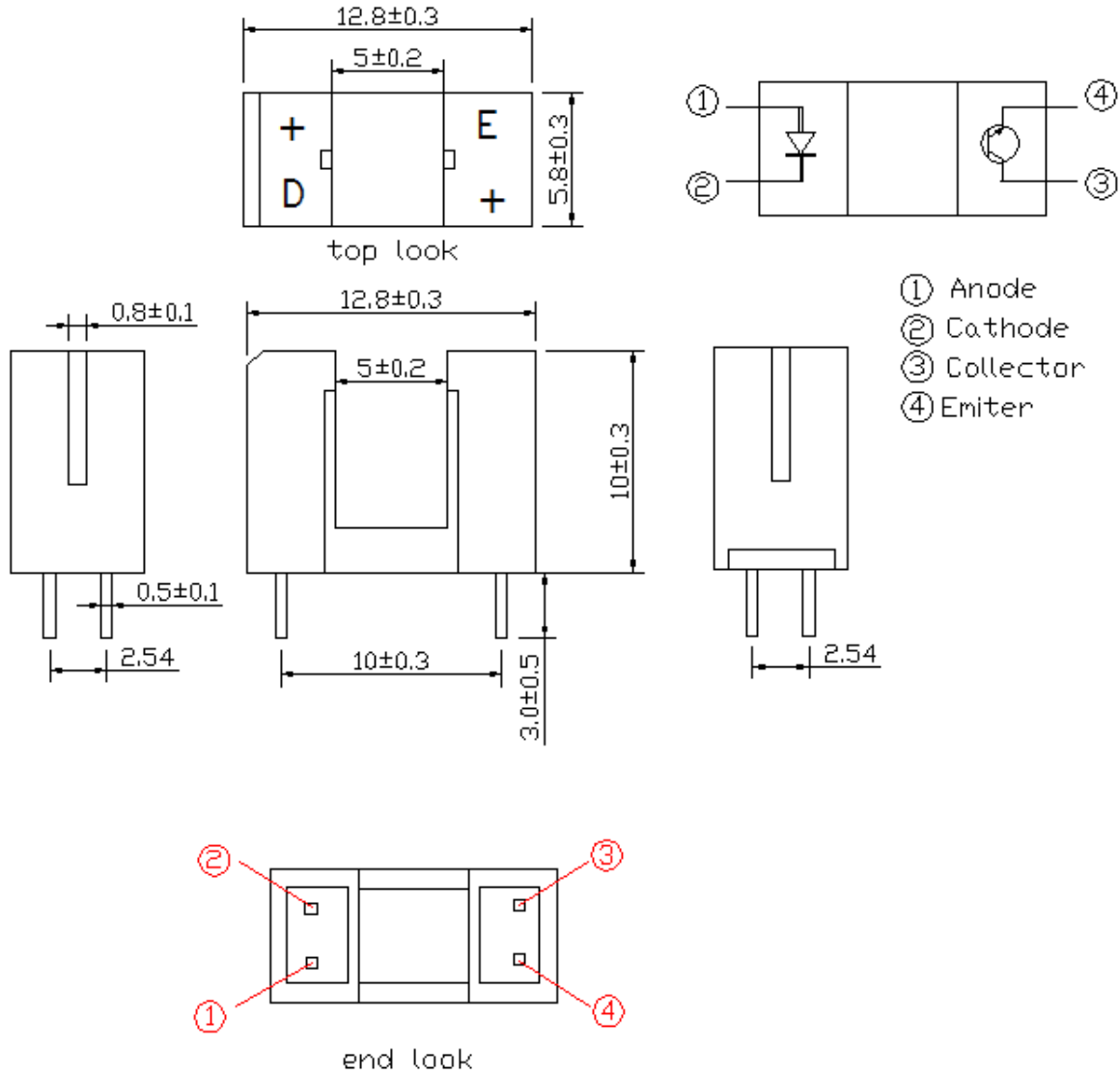
For Direct Board



Opto Interrupter

CGX-ITR150-L3

Package Dimensions





Opto Interrupter

CGX-ITR150-L3

Absolute Maximum Ratings (Ta=25 °C)

Parameter		Symbol	Ratings	Unit
Input	Power Dissipation at(or below) 25 °C Free Air Temperature	Pd	75	mW
	Reverse Voltage	V _R	5	V
	Forward Current	I _F	50	mA
	Peak Forward Current (*1) Pulse width 100 μs, Duty cycle=1%	I _{FP}	1	A
Output	Collector Power Dissipation	P _C	75	mW
	Collector Current	I _C	20	mA
	Collector-Emitter Voltage	B V _{CEO}	30	V
	Emitter-Collector Voltage	B V _{ECO}	5	V
Operating Temperature		Topr	-40~+85	
Storage Temperature		Tstg	-40~+85	
Lead Soldering Temperature (*2) (1/16 inch form body for 5 seconds)		Tsol	260	

(*1) $t_w=100 \mu\text{s}$, $T=10 \text{msec}$. (*2) $t=5 \text{Sec}$

Electro-Optical Characteristics (Ta=25 °C)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Condition
Input	Forward Voltage	V _F	-	1.2	1.5	V	I _F =20mA
	Reverse Current	I _R	-	-	10	A	V _R =5V
	Peak Wavelength	λ _P	-	940	-	nm	I _F =20mA
	View Angle	2θ	-	30	-	Deg	I _F =20mA
Output	Dark Current	I _{CEO}	-	-	100	nA	V _{CE} =20V, E _e =0mW/cm ²
	C-E Saturation Voltage	V _{CE(sat)}	-	-	0.4	V	I _C =0.04mA, I _F =40mA
Collector Current		I _{C(ON)}	0.5	-	-	A	V _{CE} =5V, I _F =5mA
Response Time	Rise Time	t _R	-	15	-	s	V _{CE} =5V, I _C =100 μA, R _L =100 Ω
	Fall Time	t _F	-	15	-	s	

Typical Electrical/Optical/Characteristics Curves for IR

Fig. 1 Forward Current vs. Ambient Temperature

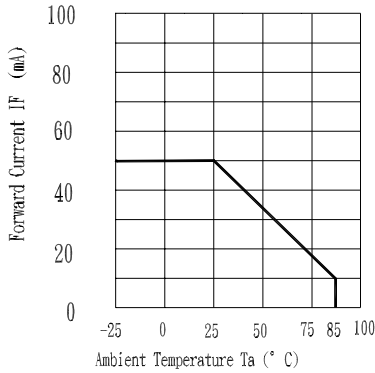


Fig. 2 Spectral Distribution

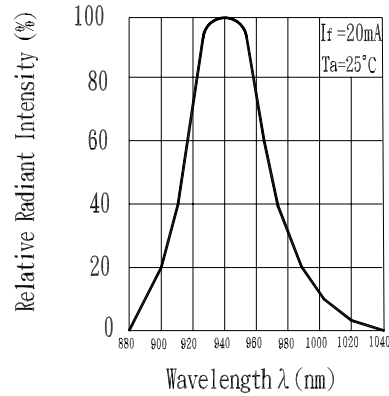


Fig. 3 Peak Emission Wavelength vs. Ambient Temperature

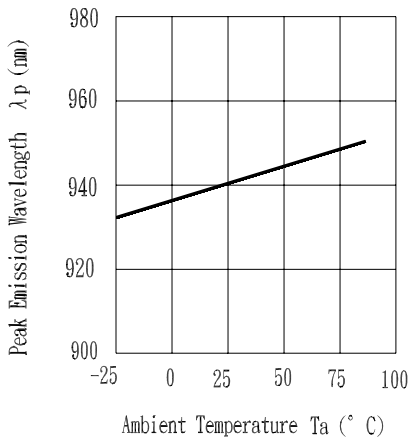


Fig. 4 Forward Current vs. Forward Voltage

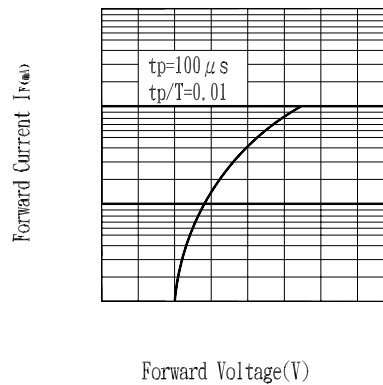


Fig. 5 Relative Intensity vs. Forward Current

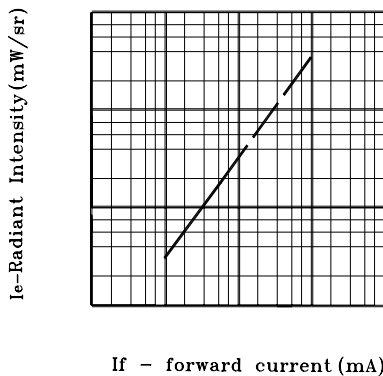
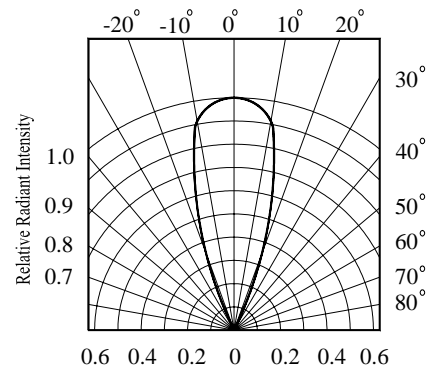
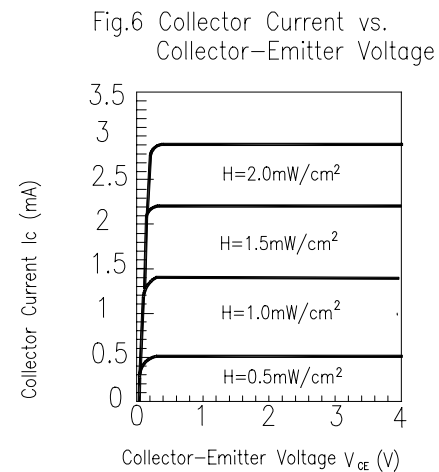
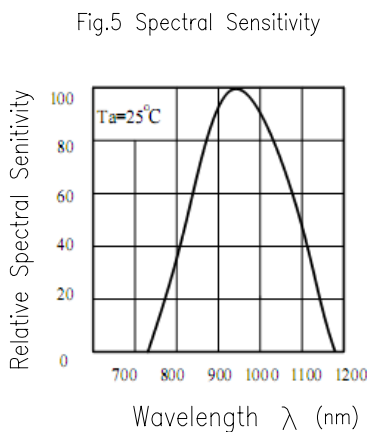
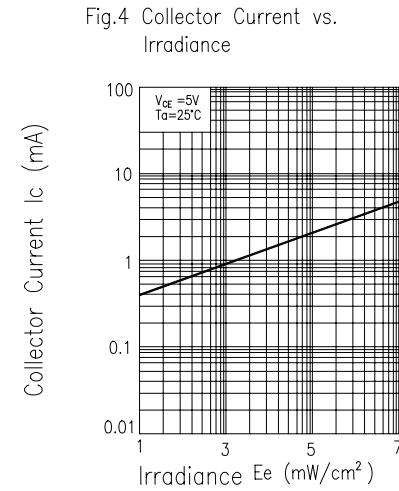
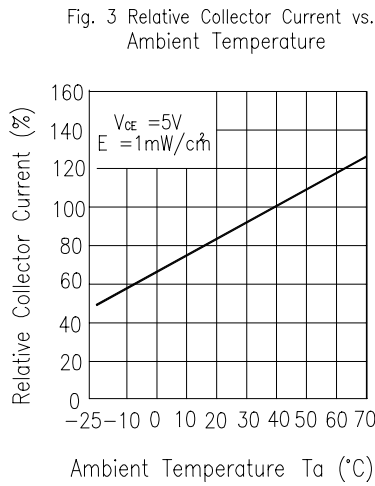
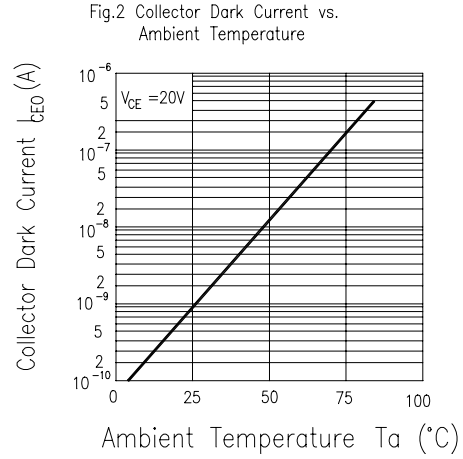
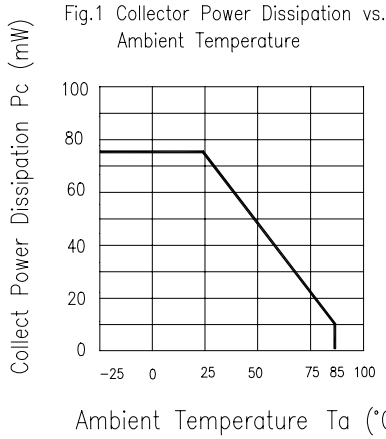


Fig. 6 Relative Radiant Intensity vs. Angular Displacement



Typical Electrical/Optical/Characteristics Curves for PT





Opto Interrupter

CGX-ITR150-L3

Reliability Test Item And Condition

The reliability of products shall be satisfied with items listed below.

Confidence level 90%

LTPD 10%

NO.	Item	Test Condition	Test Hours/ Cycle	Sample Size	Failure Judgement Criteria	Ac/Re
1	Solder Heat	TEMP : 260°C ± 5 °C	5 sec	22 PCs	Ic(on) ≤ L×0.8 L :Lower specification limit	0/1
2	Temperature Cycle	H : +100°C 15 mins ↓ 5 min L : -40°C 15 min	100 cycle	22 PCs		0/1
3	Thermal Shock	H : +100°C 5 min ↓ 10 sec L : -10°C 5 min	300 cycle	22 PCs		0/1
4	High Temperature Storage	TEMP. : +100°C	1000 hrs	22 PCs		0/1
5	Low Temperature Storage	TEMP. : -40°C	1000 hrs	22 PCs		0/1
6	DC Operating Life	V _{CE} =5V I _F =20mA	1000 hrs	22 PCs		0/1
7	High Temperature / High Humidity	85°C / 85% R.H.	1000 hrs	22 PCs		0/1