

# SIT302

## Photo Interrupter

The SIT302 is a high performance transmissive type photointerrupter, combines high-output GaAs IRED with high sensitive phototransistor.

### Features

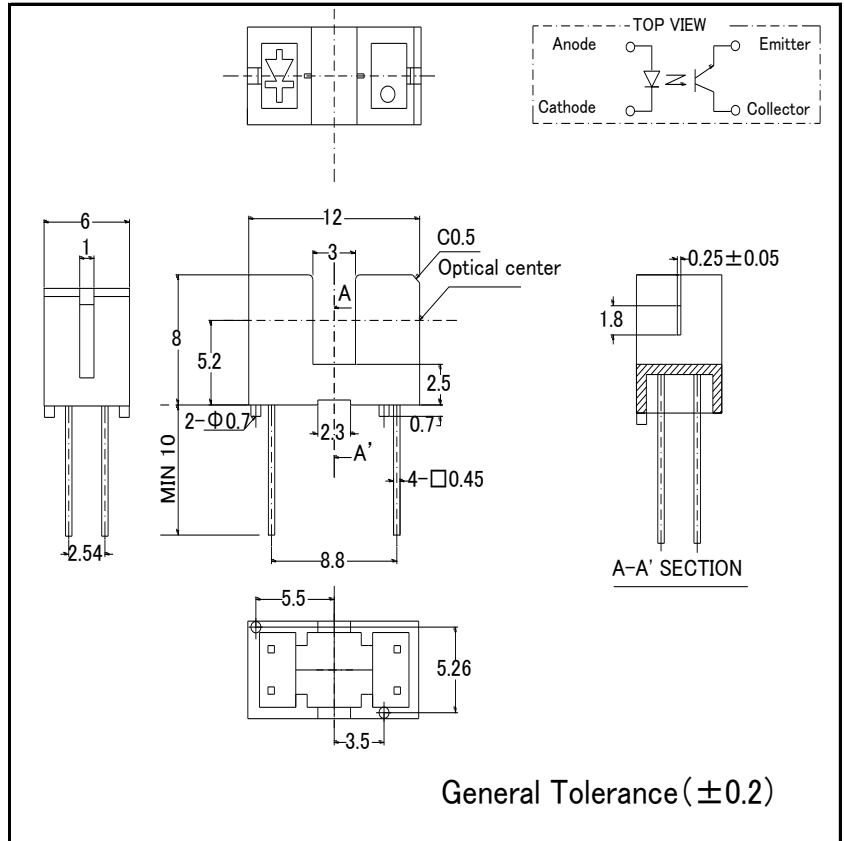
- PCB direct mount type
- GAP:3.0mm
- High resolution (slit 0.25mm)

### Applications

- CD changers
- Printers
- Scanners
- Encoders

### Dimensions

(Unit: mm)



### Maximum Ratings

(Ta=25°C)

Item		Symbol	Rating	Unit
Input	Reverse Voltage	$V_R$	5	V
	Forward current	$I_F$	60	mA
	Pulse Forward Current <sup>*1</sup>	$I_{FP}$	1	A
	Power Dissipation	$P_D$	100	mW
Output	Collector-Emitter Voltage	$V_{CEO}$	30	V
	Emitter-Collector Voltage	$V_{ECO}$	5	V
	Collector Current	$I_C$	40	mA
	Collector power dissipation	$P_C$	100	mW
Operating Temperature Range <sup>*2</sup>		Topr.	-20 ~ +85	°C
Storage Temperature Range <sup>*2</sup>		Tstg.	-30 ~ +100	°C
Soldering temp. <sup>*3</sup>		Tsol.	260	°C

\* 1. Pulse width (tw) ≤ 100μs, Period (T) = 10msec.

\* 2. No icebond or dew. \*3. The soldering should be 1mm away from bottom of the holder. t=within 5s

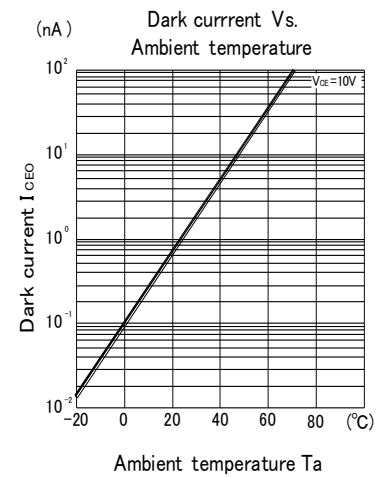
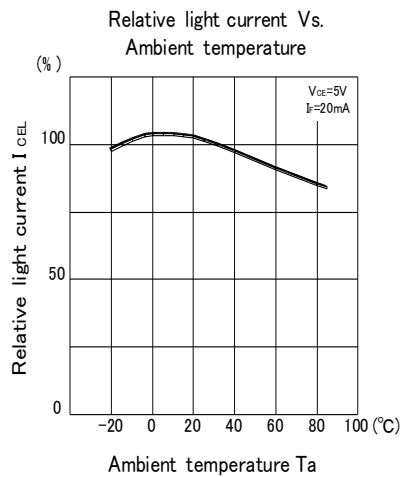
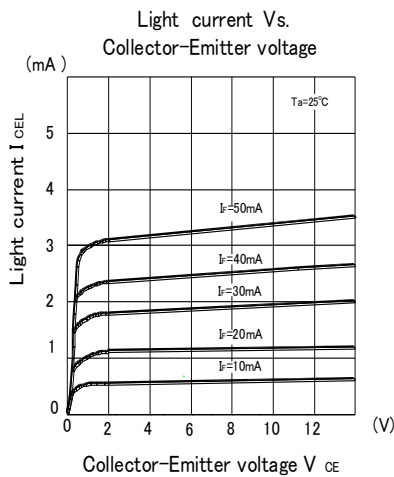
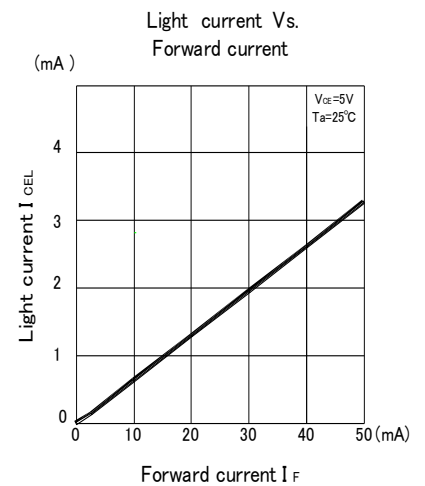
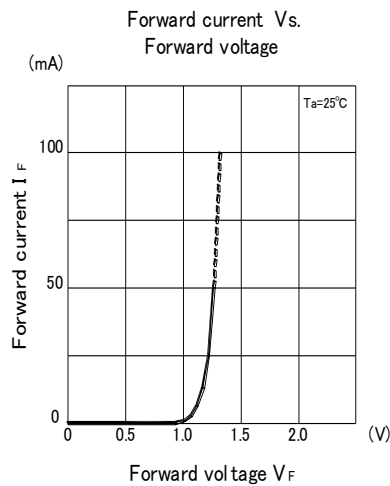
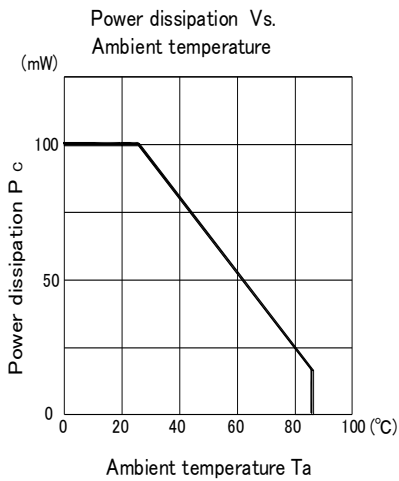
# Photo Interrupter(Transmissive)

## SIT302

### Electro-Optical Characteristics

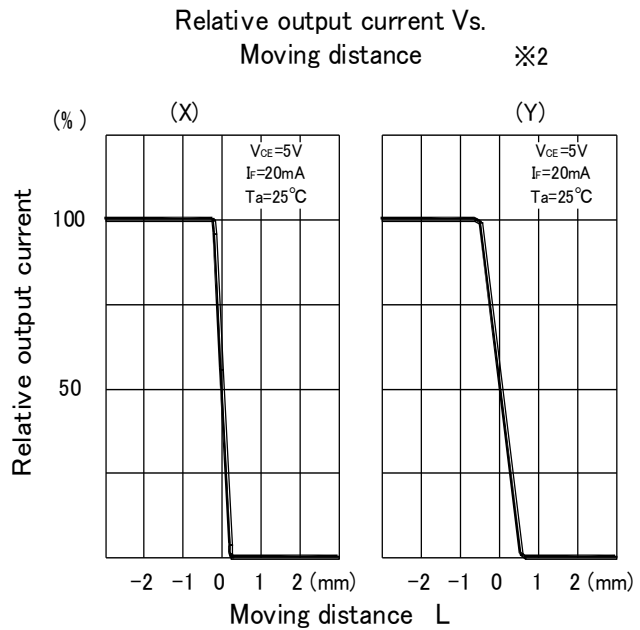
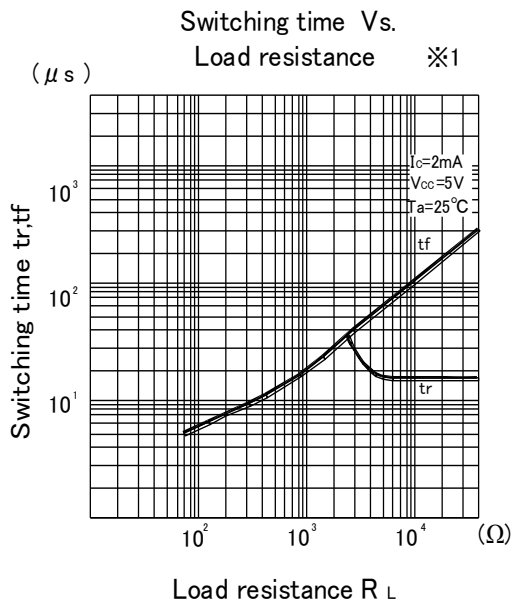
(Ta=25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Input	Forward voltage	$I_F=20\text{mA}$	-	1.2	1.4	V
	Peak Wavelength	$I_F=20\text{mA}$	-	940	-	nm
	Reverse current	$V_R=5\text{V}$	-	-	10	$\mu\text{A}$
Output	Dark current	$V_{CE}=10\text{V}$ $E_V=0\text{lx}$	-	1	100	nA
Transfer characteristics	Collector Current	$V_{CE}=5\text{V}$ , $I_F=20\text{mA}$ Non-shading	0.1	-	2.5	mA
	Leakage Current	$V_{CE}=5\text{V}$ , $I_F=20\text{mA}$ Shading	-	0.2	10	$\mu\text{A}$
	C-E Saturation voltage	$I_C=0.05\text{mA}$ , $I_F=30\text{mA}$	-	0.15	0.4	V
	Rise Time	$V_{CC}=5.0\text{V}$ , $I_C=2\text{mA}$	-	4	-	$\mu\text{sec}$
	Fall Time	$R_L=100\Omega$	-	5	-	$\mu\text{sec}$

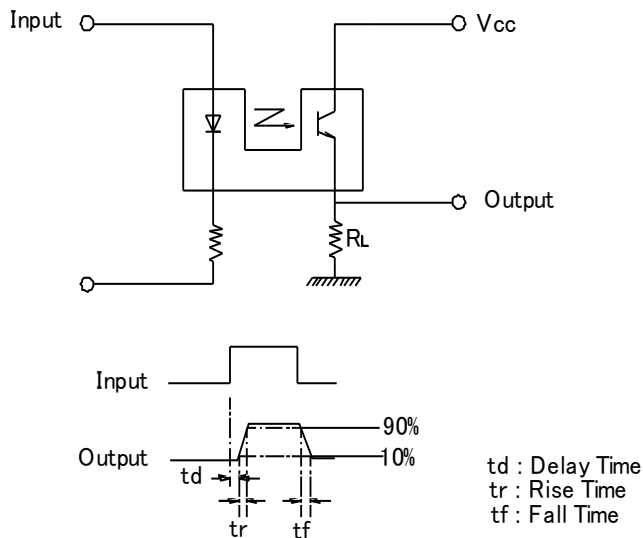


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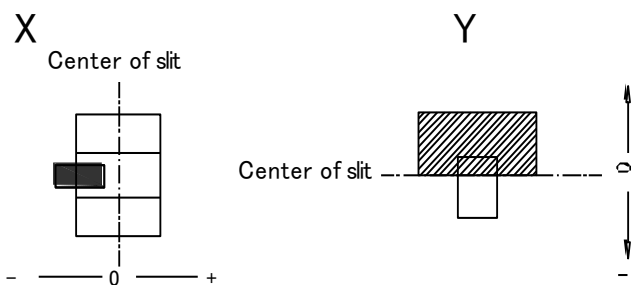
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### \*1 Switching time measurement circuit



### \*2 Method of measuring position detection characteristic



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### Packing Specification

- 1.Fixed quantity (max 1000pcs) of the products are packed into plastic bag
- 2.Six bags of the products are put into #2 box
- 3.Two #2 boxes are put into #3 box(max 12000pcs)
- 4.Packing slip is pasted on #3 box

