KODENSHI AUK

SIT304

Photo Interrupter

The SIT304 is a high performance transmissive type photointerrupter, combines high-output GaAs IRED with high sensitive phototransistor.

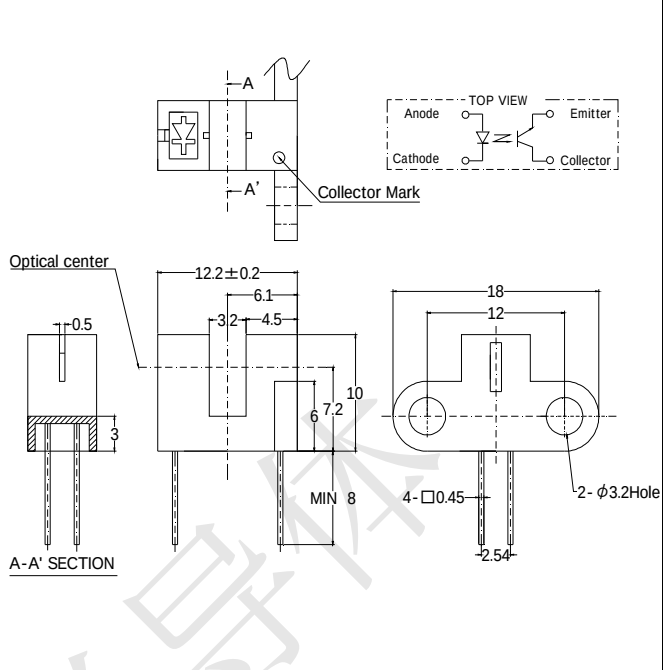
Features

- PCB direct mount type
- GAP:3.2mm
- Double-sided screw-mount

Applications

- Printers
- FAX
- Ticket vending machines
- Auto stampers

Dimensions (Unit: mm)



Maximum Ratings

(Ta=25℃)

Item		Symbol	Rating	Unit
Input	Reverse Voltage	V_R	5	V
	Forward current	I_F	60	mA
	Pulse Forward Current *1	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
Operaing Temperature Range *2		Topr.	-20 ～ +85	℃
Storage Temperature Range *2		Tstg.	-30 ～ +85	℃
Soldering temp.*3		Tsol.	260	℃

* 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

Electro-Optical Characteristics

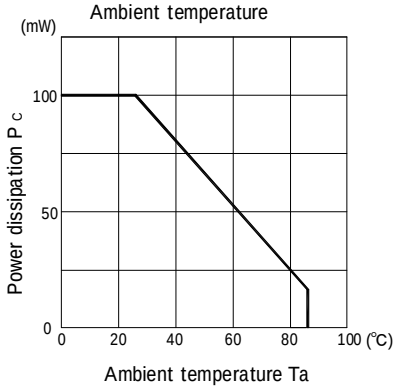
(Ta=25℃)

Item		Symbol	Conditions	Min.	Typ.	Max.	Unit
Input	Forward voltage	V_F	I_F=20mA	-	1.2	1.4	V
	Peak Wavelength	λ_p	I_F=20mA	-	940	-	nm
	Reverse current	I_R	V_R=5V	-	-	10	μA
Output	Dark current	I_{CEO}	V_{CE}=10V E_V=0 lx	-	1	100	nA
Transfer characteristics	Collector Current	I_C	V_{CE}=5.0V, I_F=20mA Non-shading	0.5	-	10	mA
	Leakage Current	I_{CEOD}	V_{CE}=5.0V, I_F=20mA shading	-	0.5	10	μA
	C-E sat.voltage	$V_{CE(sat)}$	I_C=0.2mA, I_F=20mA	-	0.15	0.4	V
	Rise Time	t_r	V_{CC}=5.0V, I_C=2mA R_L=100Ω	-	4	-	μsec
	Fall Time	t_f		-	5	-	μsec

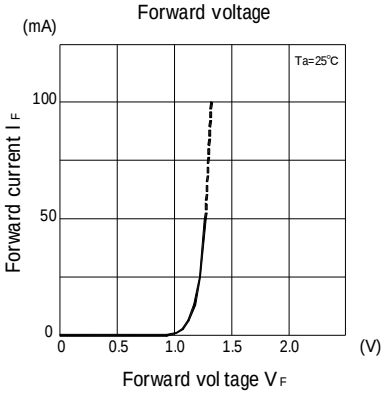
Photo Interrupter(Transmissive)

SIT304

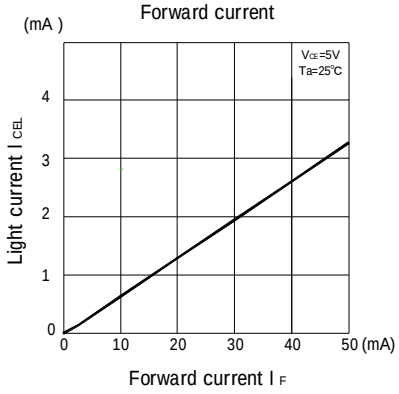
Power dissipation Vs. Ambient temperature



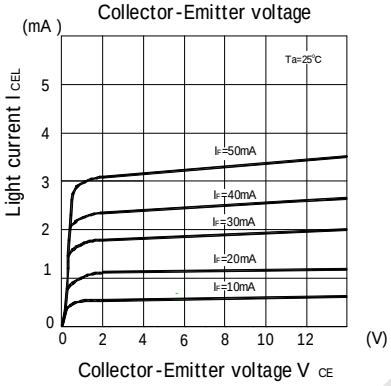
Forward current Vs. Forward voltage



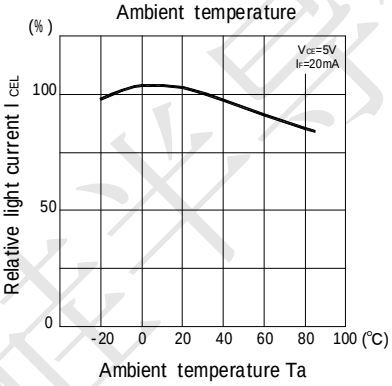
Light current Vs. Forward current



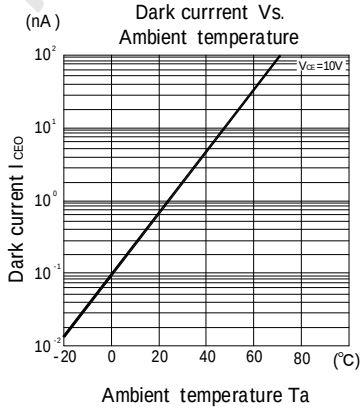
Light current Vs. Collector-Emitter voltage



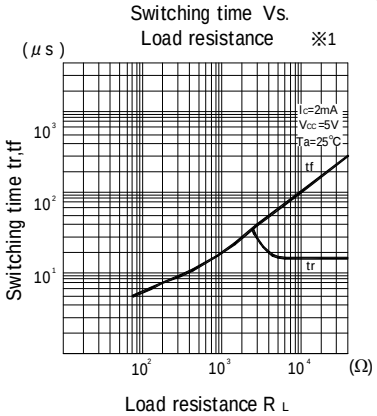
Relative light current Vs. Ambient temperature



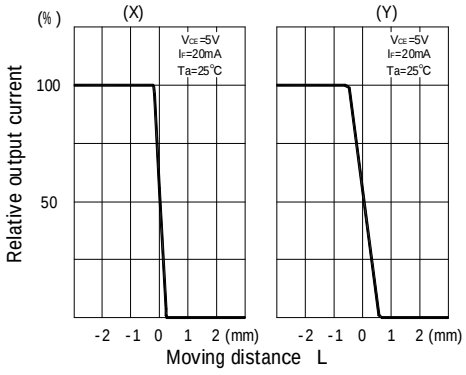
Dark currrent Vs. Ambient temperature



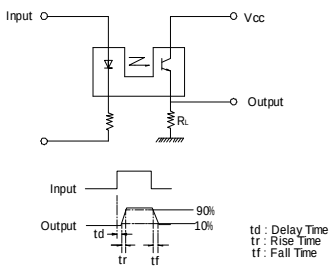
Switching time Vs. Load resistance ※1



Relative output current Vs. Moving distance ※2



*1 Switching time measurement circuit



*2 Method of measuring position detection characteristic