

SIR501

Photo Interrupter

Dimensions

(unit: mm)

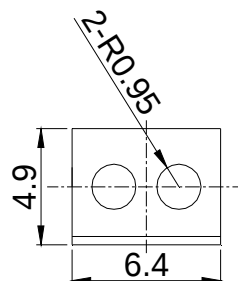
The SIR501 is a photointerrupter consisting of GaAs IRED and phototransistor.

Features

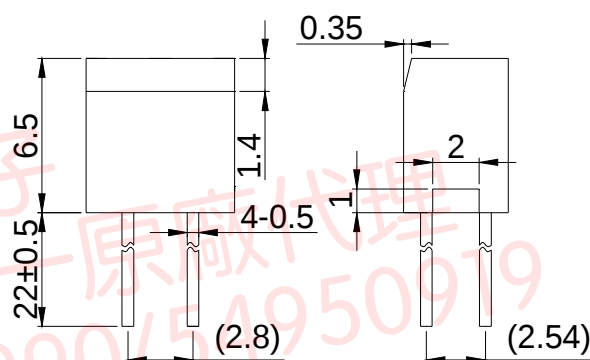
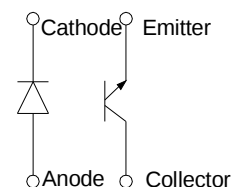
- Fast response time
- High sensitivity
- Cut-off visible wavelength
- RoHS Compliance

Applications

- Copier
- Scanner
- Printer
- Non-contact switching



TOP VIEW



General Tolerance (±0.2)

Maximum Ratings

(Ta=25°C)

Item		Symbol	Rating	Unit
Input	Power dissipation	P_D	75	mW
	Forward current	I_F	50	mA
	Reverse voltage	V_R	5	V
Output	Collector power dissipation	P_C	75	mW
	Collector current	I_C	20	mA
	Collector-Emitter voltage	V_{CEO}	30	V
	Emitter-Collector voltage	V_{ECO}	5	V
Operating temperature ^{*1}		Topr.	-20 ~ +85	°C
Storage temperature ^{*1}		Tstg.	-30 ~ +85	°C
Soldering temperature ^{*2}		Tsol.	260	°C

*1. No icebond or dew

*2. The soldering should be 1.2mm away from bottom of the holder t=within 3s

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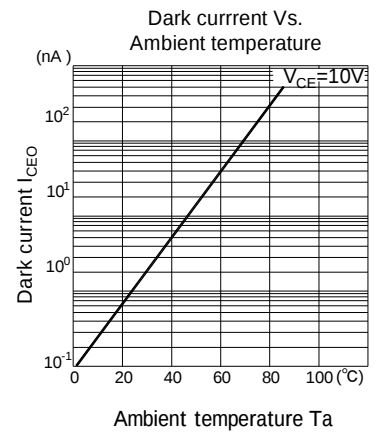
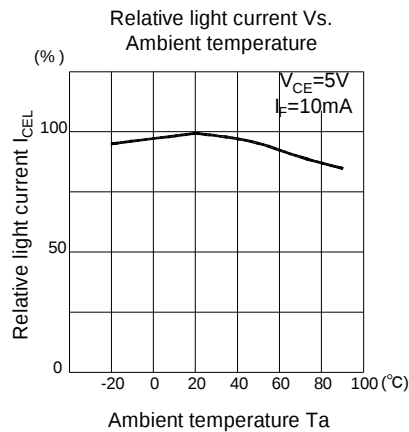
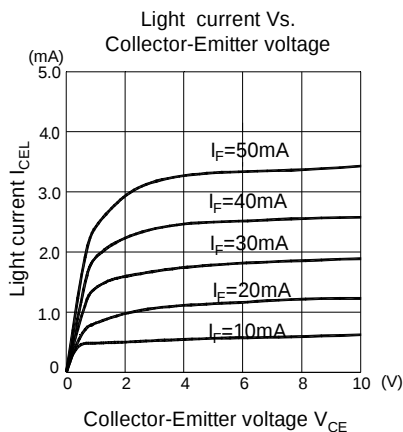
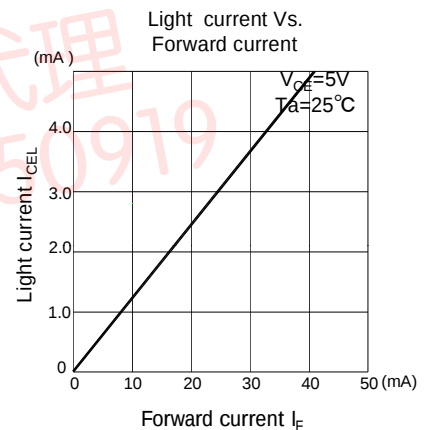
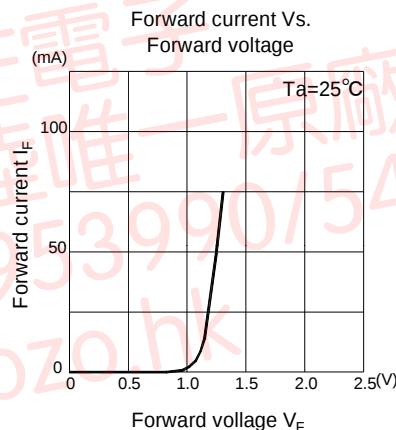
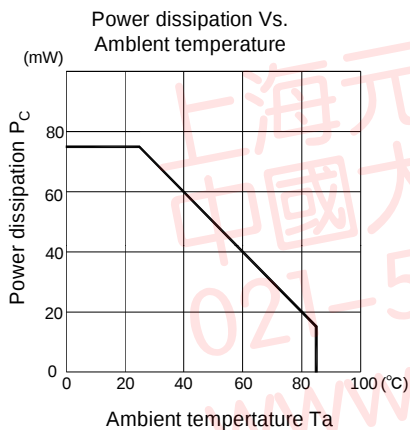
Electro-Optical Characteristics

(Ta=25°C)

Item		Symbol	Conditions	Min.	Typ.	Max.	Unit
Input	Forward voltage	V_F	$I_F=20\text{mA}$	-	1.2	1.4	V
	Reverse current	I_R	$V_R=5\text{V}$	-	-	10	μA
	Peak wavelength	λ_P	$I_F=20\text{mA}$	-	940	-	nm
Output	Dark current	I_{CEO}	$V_{CE}=10\text{V}$ $E_V=0\text{lx}$	-	3	100	nA
	Peak SENS.Wavelength	λ_P	-	-	880	-	nm
Transfer characteristics	Light current *3	I_{CEL}	$I_F=10\text{mA}$ $V_{CE}=5\text{V}$ $d=5\text{mm}$	0.5	-	6.0	mA
	Leak current *4	I_{CEOD}	$I_F=10\text{mA}$ $V_{CE}=5\text{V}$	-	-	20	μA
	C-E sat.voltage	$V_{CE(sat)}$	$I_F=20\text{mA}$ $I_C=0.1\text{mA}$	-	0.15	0.4	V
	Rise time	t_r	$I_C=100\mu\text{A}$ $V_{CC}=5\text{V}$ $R_L=100\Omega$	-	10	-	μs
	Fall time	t_f		-	10	-	μs

*3. d=5mm KODAK 90% Reflex Paper

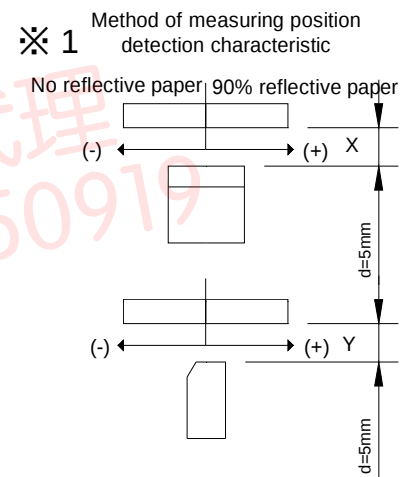
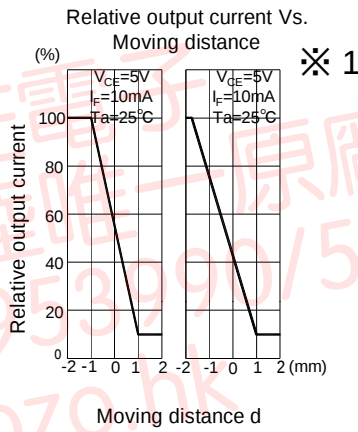
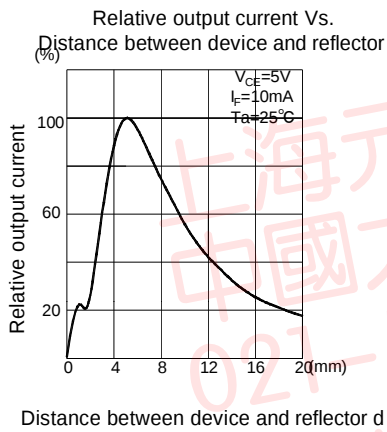
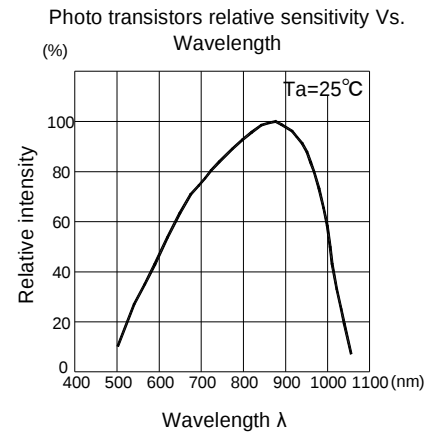
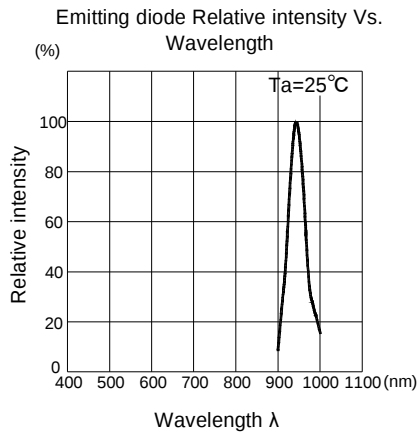
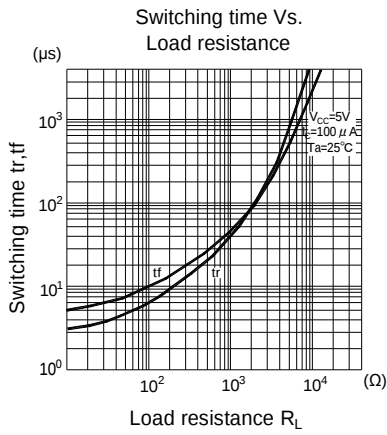
*4. No Reflector



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