

Photointerrupters(Transmissive)

KODENSHI

SG - 244

The SG - 244 photointerrupter high - performance standard type,combines high - output GaAs IRED with high sensitive phototransistor.

FEATURES

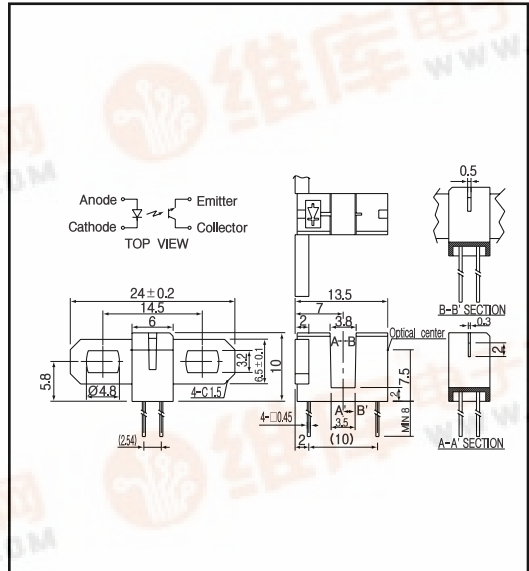
- PWB direct mount type
- GAP : 3.5mm
- Double-sided screw - mount
- Slit 0.3mm
- With adjustable mounting position

APPLICATIONS

- Printers
- Plotters
- Robots
- Auto stampers

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25 )

Item	Symbol	Rating	Unit	
Input	Power dissipation	P <sub>D</sub>	100	mW
	Forward current	I <sub>F</sub>	60	mA
	Reverse voltage	V <sub>R</sub>	5	V
	Pulse forward current *1	I <sub>FP</sub>	1	A
Output	Collector power dissipation	P <sub>C</sub>	100	mW
	Collector current	I <sub>C</sub>	40	mA
	C - E voltage	V <sub>CEO</sub>	30	V
	E - C voltage	V <sub>ECCO</sub>	5	V
Operating temp. *2	T <sub>opr.</sub>	- 20 ~ + 85		
Storage temp. *2	T <sub>stg.</sub>	- 30 ~ + 85		
Soldering temp. *3	T <sub>sol.</sub>	260		

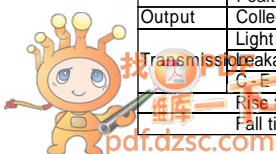
\*1. pulse width : t w 100 μsec.period : T=10msec.

\*2. No icebound or dew \*3. For MAX.5 seconds at the position of 1mm from the package

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25 )

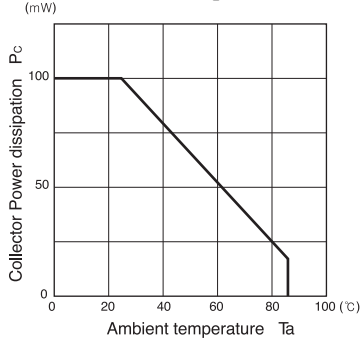
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Input	Forward voltage	V <sub>F</sub> I <sub>F</sub> =20mA		1.2	1.4	V
	Reverse current	I <sub>R</sub> V <sub>R</sub> =5V			10	μA
Output	Peak wavelength	p I <sub>F</sub> =20mA		940		nm
	Collector dark current	I <sub>ED</sub> V <sub>CE</sub> =10V		1	100	nA
	Light current	I <sub>C</sub> I <sub>F</sub> =20mA, V <sub>EE</sub> =5V(Non-shading)	0.2		2	mA
	Leakage current	I <sub>CEOD</sub> I <sub>F</sub> =20mA, V <sub>EE</sub> =5V(shading)		0.5	10	μA
	C - E saturation voltage	V <sub>CE(sat)</sub> I <sub>F</sub> =20mA, I <sub>C</sub> =0.1mA		0.15	0.4	V
	Rise time	tr V <sub>CC</sub> =5V, I <sub>C</sub> =2mA, R=100			4	μsec.
Fall time	tf			5	μsec.	



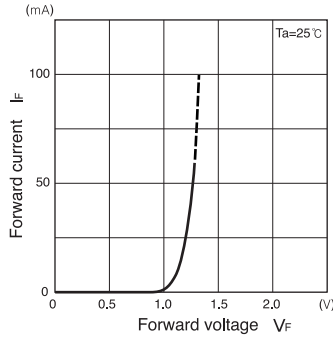
**Photo interrupters(Transmissive)**

**SG - 244**

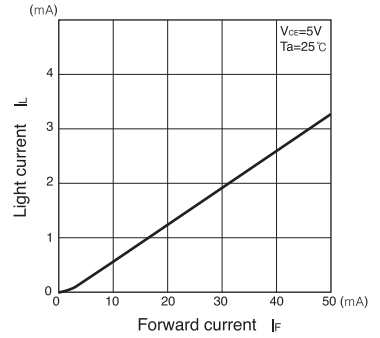
**Collector power dissipation Vs. Ambient temperature**



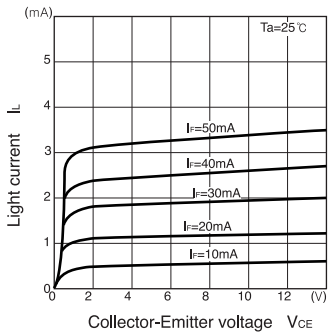
**Forward current Vs. Forward voltage**



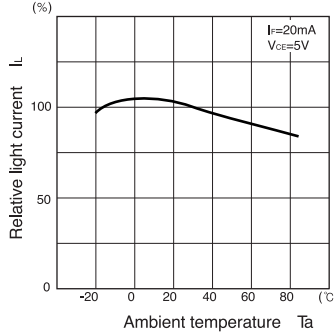
**Light current Vs. Forward current**



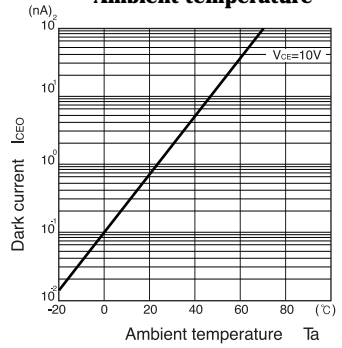
**Light current Vs. Collector-Emitter voltage**



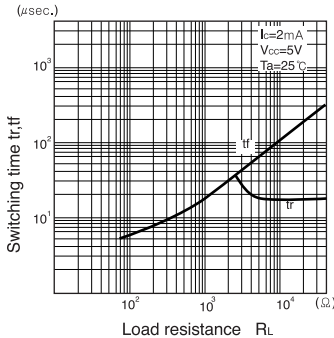
**Relative light current Vs. Ambient temperature**



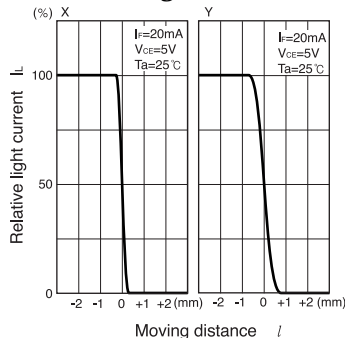
**Dark current Vs. Ambient temperature**



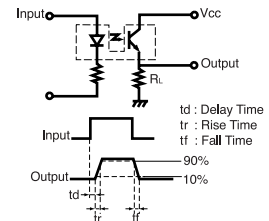
**Switching time Vs. Load resistance**



**Relative light current Vs. Moving distance**



**Switching time measurement circuit**



**Method of measuring position detection characteristic**

