

SG - 248

The SG-248 photointerrupter high-performance standard type, combines high-output GaAs IRED with high sensitive phototransistor.

FEATURES

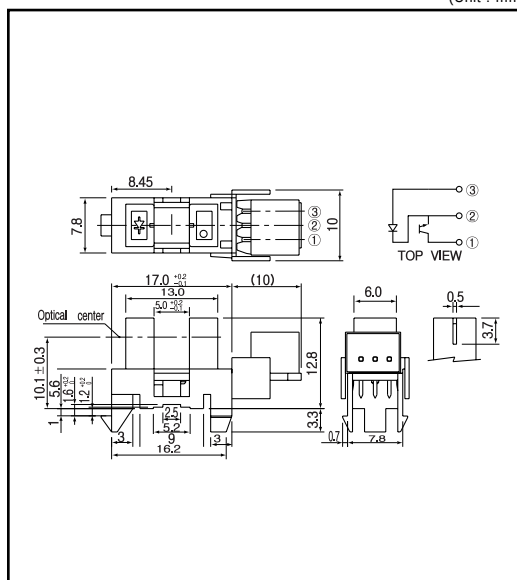
- Connector type AMP (JAPAN) Ltd.
- GAP : 5.0mm
- Snap-in mount
- 3 kinds of mounting plate thicknesses :
: 1.0mm, 1.2mm, 1.6mm

APPLICATIONS

- Copiers
- Printers
- A T M
- Ticket vending machines

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit
Input	Power dissipation	P _D	100
	Forward current	I _F	60
	Reverse voltage	V _R	5
	Pulse forward current ¹	I _{FP}	1
Output	Collector power dissipation	P _C	100
	Collector current	I _C	40
	C - E voltage	V _{CEO}	30
	E - C voltage	V _{ECO}	5
	Operating temp. ^{*2,3}	Topr.	- 20 ~ + 85
	Storage temp. ^{*2,3}	Tstg.	- 30 ~ + 85

*1.pulse width : t_w 100 μsec.period : T=10msec.

*2.No icebound or dew

*3.The connector shall be inserted or pulled out at normal temperature

ELECTRO-OPTICAL CHARACTERISTICS

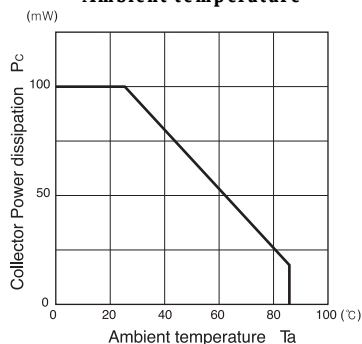
(Ta=25)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Input	Forward voltage	I _F = 20mA		1.2	1.4	V
	Reverse current	V _R = 5V			10	μA
	Peak wavelength	I _F = 20mA		940		nm
Output	Collector dark current	V _{CE} = 10V		1	100	nA
	Light current	I _F = 20mA, V _E = 5V, Non-shading	0.25		10	mA
Transmissi	leakage current	I _F = 20mA, V _E = 5V(shading)		0.5	10	μA
	C - E saturation voltage	I _F = 20mA, I _C = 0.1mA		0.15	0.4	V
	Rise time	V _{CC} = 5V, I _F = 2mA, R = 100Ω		4		μsec.
	Fall time			5		μsec.

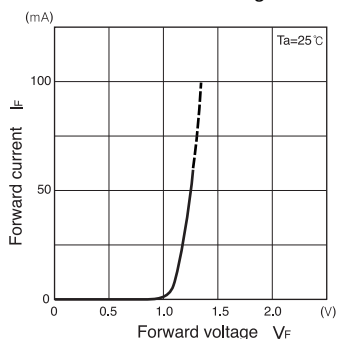
Photo interrupters(Transmissive)

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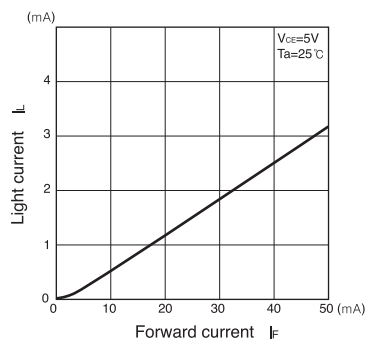
Collector Power dissipation Vs. Ambient temperature



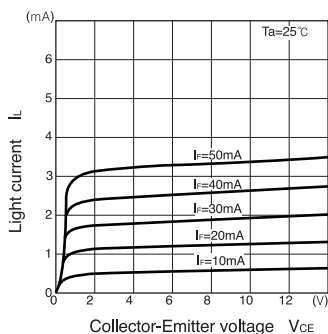
Forward current Vs. Forward voltage



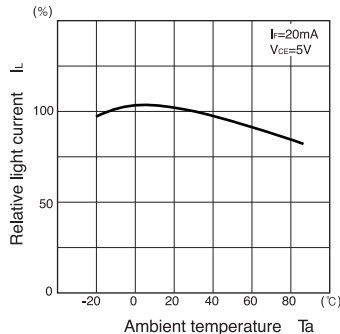
Light current Vs. Forward current



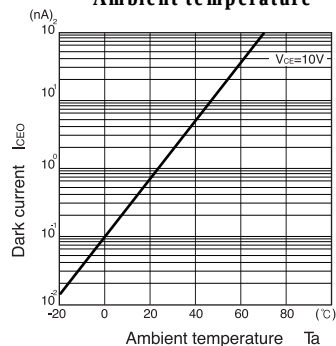
Light current Vs. Collector-Emitter voltage



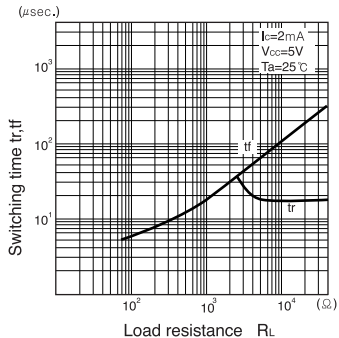
Relative light current Vs. Ambient temperature



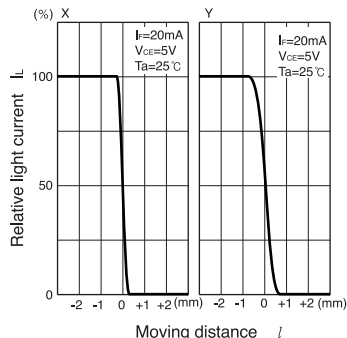
Dark current Vs. Ambient temperature



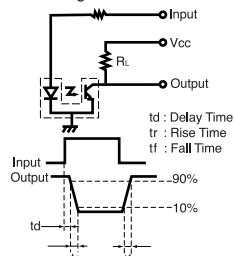
Switching time Vs. Load resistance



Relative light current Vs. Moving distance



Switching time measurement circuit



Method of measuring position detection characteristic

