

SG - 248R

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

FEATURES

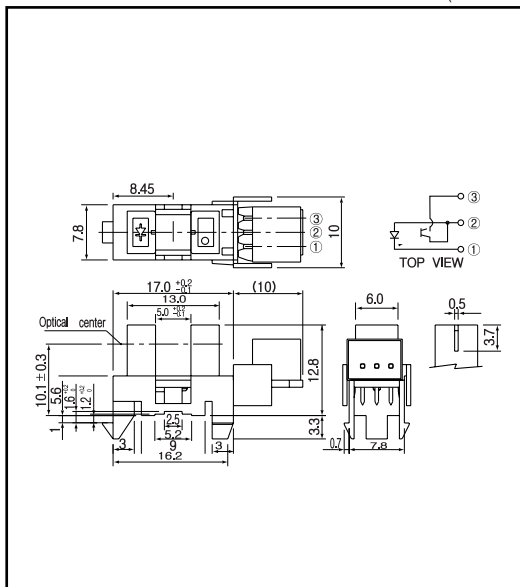
- Connector type AMP(JAPAN)Ltd.
- GAP : 5.0mm
- Snap– in mount
- 3 kinds of mounting plate thicknesses :1.0mm,1.2mm,1.6mm
- Different connector order type from SG –248

APPLICATIONS

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

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

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

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

*2. No icebound or dew

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

ELECTRO-OPTICAL CHARACTERISTICS

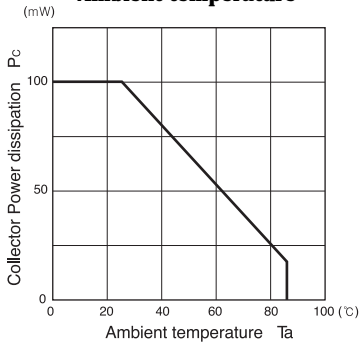
(Ta=25)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Input	Forward voltage	V _F	I _F =20mA	1.2	1.4	V
	Reverse current	I _R	V _R =5V		10	ꝑA
	Peak wavelength	p	I _F =20mA		940	nm
Output	Collector dark current	I _{CEO}	V _{CE} =10V	1	100	nA
	Light current	I _c	I _F =20mA, V _E =5V, Non – shading	0.5	10	mA
Transmissi	leakage current	I _{CEOD}	I _F =20mA, V _E =5V(shading)	0.5	10	ꝑA
	C - E saturation voltage	V _{CE(sat)}	I _F =20mA, I _c =0.1 mA	0.15	0.4	V
	Rise time	t _r	V _{CC} =5V, I _b =2mA, R=100		4	ꝑsec.
	Fall time	t _f		5		ꝑsec.

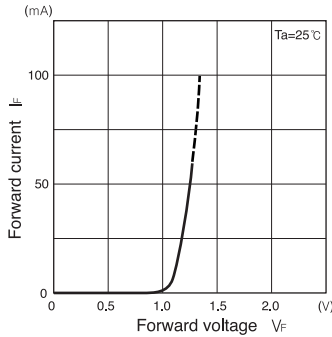
Photointerrupters(Transmissive)

SG - 248R

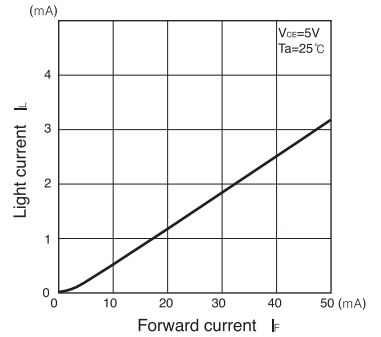
Collector Power dissipation Vs. Ambient temperature



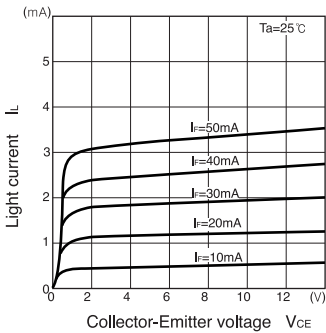
Forward current Vs. Forward voltage



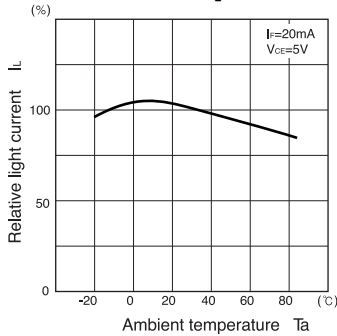
Light current Vs. Forward current



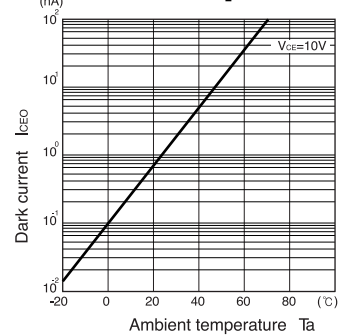
Light current Vs. Collector-Emitter voltage



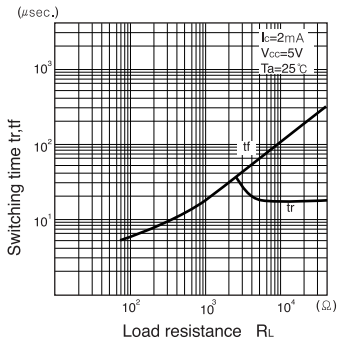
Relative light current Vs. Ambient temperature



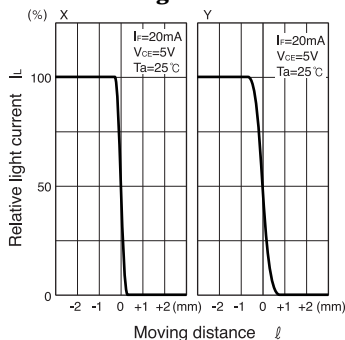
Dark current Vs. Ambient temperature



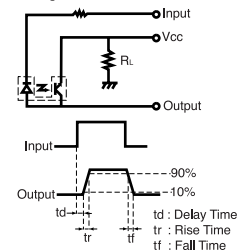
Switching time Vs. Load resistance



Relative light current Vs. Moving distance



Switching time measurement circuit



Method of measuring position detection characteristic

