SG - 288

The SG – 288 photointerrupter high – performance standard type,combines high – output GaAs IRED with high sensitive phototransistor.

FEATURES

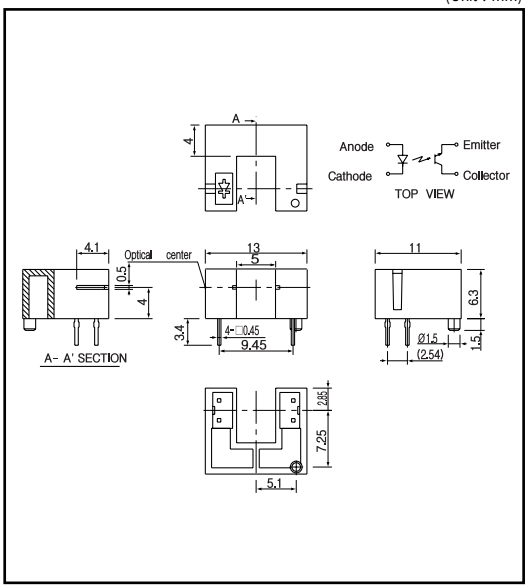
- PWB direct mount type
- GAP ：5.0mm
- With the installation positioning boss
- Horizontal slit

APPLICATIONS

- Mouses
- Rotary encoders
- Facsimiles

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25℃)

Item		Symbol	Rating	Unit
Input	Power dissipation	P_D	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
	Collector - Emitter voltage	V_{CEO}	30	V
	Emitter - Collector voltage	V_{ECO}	5	V
Operating temp.*2		Topr.	- 20 ~ + 85	℃
Storage temp.*2		Tstg.	- 30 ~ + 85	℃
Soldering temp.*3		Tsol.	260	℃

*1. pulse width ：tw≦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_F	I_F=20mA		1.2	1.4	V
	Reverse current	I_R	V_R=5V			10	μA
	Peak wavelength	λp	I_F =20mA		940		nm
Output	Collector dark current	I_{CEO}	V_{CE}=10V		1	100	nA
Transmission	Light current	I_C	I_F=20mA, V_{CE}=5V,(Non– shading)	0.8		10	mA
	Leakage current	I_{CEOD}	I_F=20mA, V_{CE}=5V,(shading)		0.5	10	μA
	C - E saturation voltage	$V_{CE(sat)}$	I_F=20mA, I_C=0.1mA		0.15	0.4	V
	Rise time	tr	V_{CC}=5V, I_C=2mA,R=100Ω		4		μsec.
	Fall time	tf			5		μsec.

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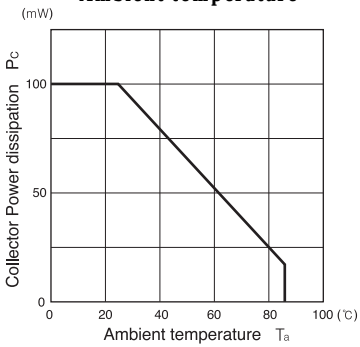
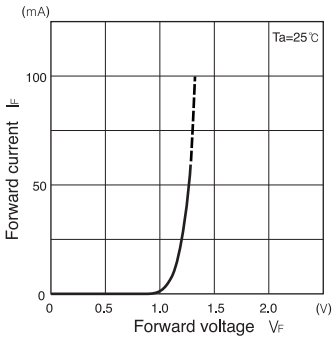
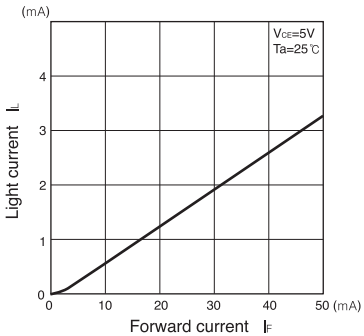
Collector power dissipation Vs. Ambient temperature



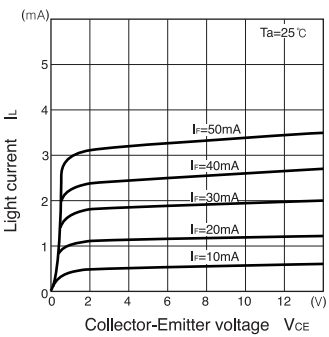
Forward current Vs. Forward voltage



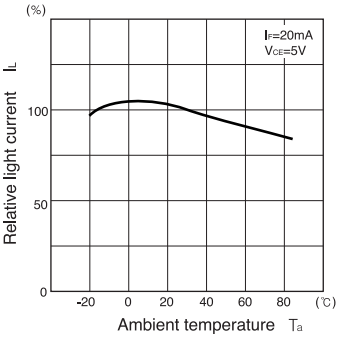
Light current Vs. Forward current



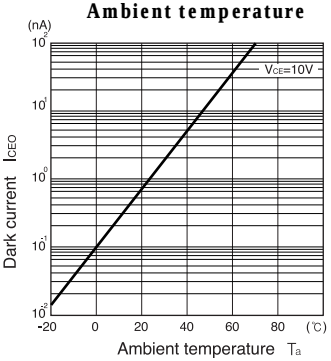
Light current Vs. Collector-Emitter voltage



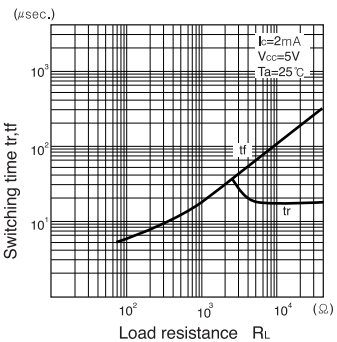
Relative light current Vs. Ambient temperature



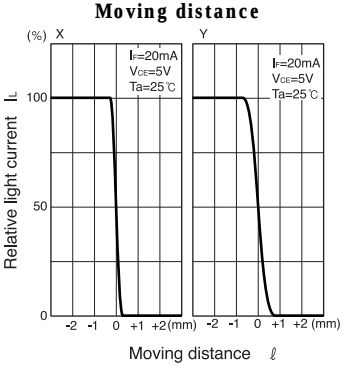
Dark current Vs. Ambient temperature



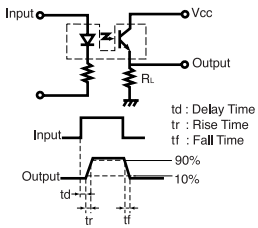
Switching time Vs. Load resistance



Relative light current Vs. Moving distance



Switching time measurement circuit



Method of measuring position detection characteristic