

SG - 290

The SG - 290 photointerrupter high - performance standard type,combines high - output GaAs IRED with high sensitive phototransistor Ultra - compact size.

FEATURES

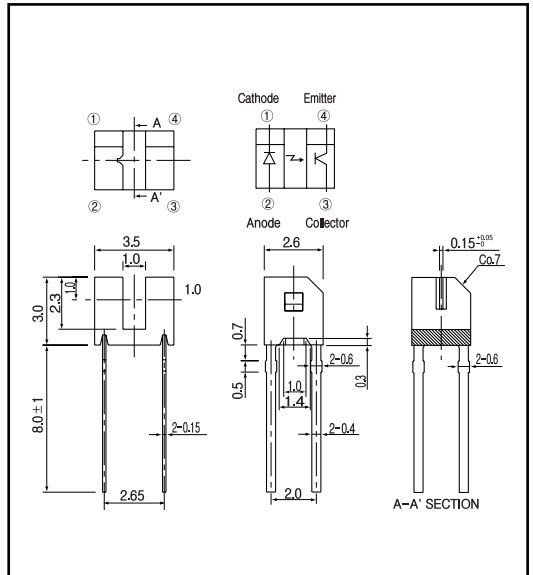
- PWB direct mount type
- GAP : 1.0mm
- High resolution(slit 0.15mm)
- Ultra- compact

APPLICATIONS

- Copiers
- Video movies
- Digital cameras
- Encoders

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25 °C)

Item	Symbol	Rating	Unit	
Input	Power dissipation	P _b	75	mW
	Forward current	I _F	50	mA
	Reverse voltage	V _R	5	V
	Pulse forward current ^{*1}	I _{FP}	0.5	A
Output	Collector power dissipation	P _c	75	mW
	Collector current	I _c	20	mA
	C - E voltage	V _{CEO}	30	V
	E - C voltage	V _{ECO}	5	V
Operating temp. ^{*2}	T _{opr.}	- 20 ~ + 85		
Storage temp. ^{*2}	T _{stg.}	- 30 ~ + 100		
Soldering temp. ^{*3}	T _{sol.}	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

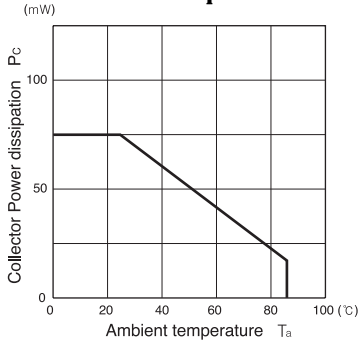
(Ta=25 °C)

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 =10mA, V _E =5V, Non-shading	0.3		1.5	mA
Transmissio	leakage current	I _{CEOD}		0.5	10	μA
	C - E saturation voltage	I _F =10mA, I _c =0.03mA		0.15	0.4	V
	Rise time	V _{CC} =5V, I _F =1mA, R=100		10		μsec.
	Fall time			10		μsec.

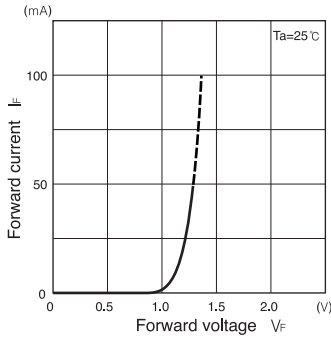
Photointerrupters(Transmissive)

SG - 290

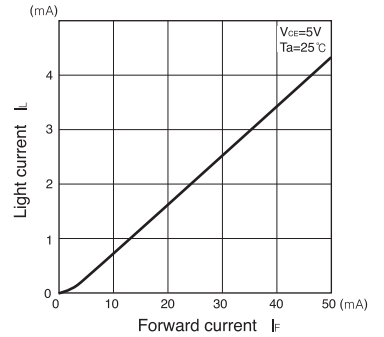
Collector power dissipation Vs. Ambient temperature



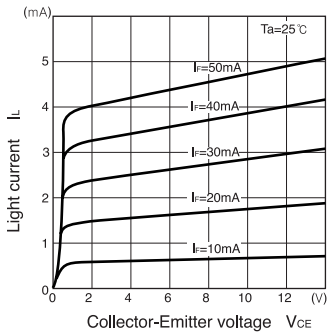
Forward current Vs. Forward voltage



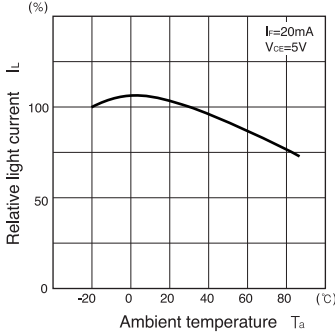
Light current Vs. Forward current



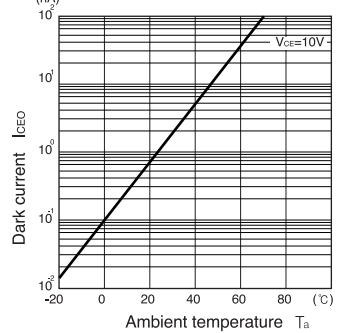
Light current Vs. Collector-Emitter voltage



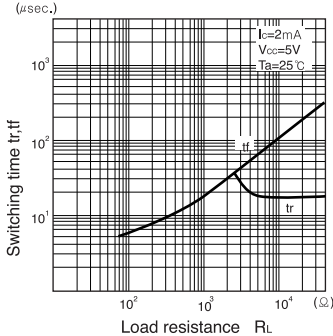
Relative light current Vs. Ambient temperature



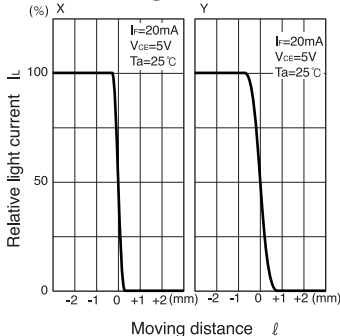
Dark current Vs. Ambient temperature



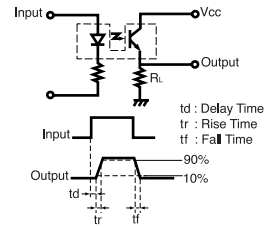
Switching time Vs. Load resistance



Relative light current Vs. Moving distance



Switching time measurement circuit



Method of measuring position detection characteristic

