

**SG277**

The SG277 photointerrupter high-performance standard type,combines high-output GaAs IRED with high sensitive phototransistor.

**FEATURES**

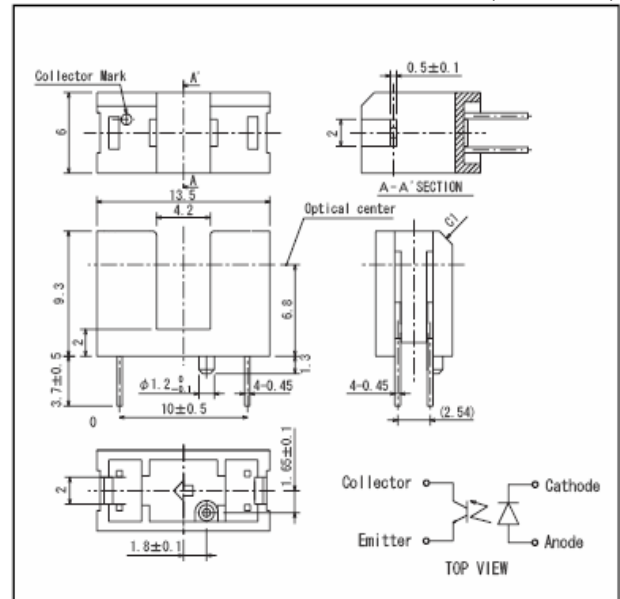
- PWB direct mount type
- GAP : 4.2mm
- With the installation positioning boss
- Low cost

**APPLICATIONS**

- Facsimiles
- Printers
- Copiers
- Scanners
- Amusement machines

**DIMENSIONS**

(Unit : mm)



**MAXIMUM RATINGS**

(Ta=25°C)

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
	Collector-Emitter voltage	V <sub>CEO</sub>	30	V
	Emitter-Collector voltage	V <sub>ECO</sub>	5	V
Operating temp.*2	Topr.	-20 ~ +85	°C	
Storage temp.*2	Tstg.	-30 ~ +85	°C	
Soldering temp.*3	Tsol.	260	°C	

\*1. Pulse width : tw≤100us. period T=10ms

\*2. No icebound or dew

\*3. For MAX. 5 seconds at the position of 1mm from the resin edge.

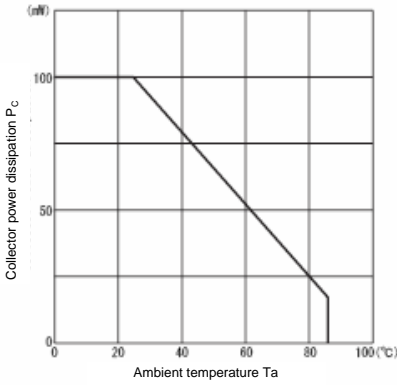
**ELECTRO-OPTICAL CHARACTERISTICS**

(Ta=25°C)

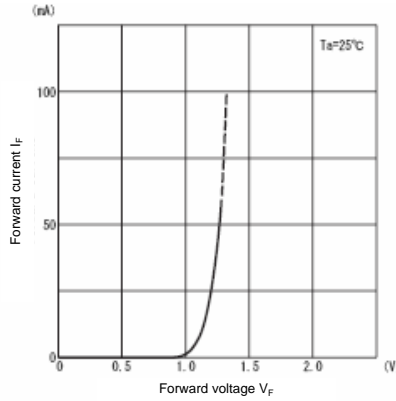
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Input	Forward voltage	I <sub>F</sub> =20mA	-	1.2	1.4	V
	Reverse current	V <sub>R</sub> =5V	-	-	10	μA
	Peak wavelength	I <sub>F</sub> =20mA	-	940	-	nm
Output	Collector dark current	V <sub>CE</sub> =10V, 0 lx	-	1	100	nA
Transmission	Light current	I <sub>F</sub> =20mA, V <sub>CE</sub> =5V (Non-Shading)	0.5	-	10	mA
	Leakage current	I <sub>F</sub> =20mA, V <sub>CE</sub> =5V (Shading)	-	0.5	10	μA
	C-E saturation voltage	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 <sub>L</sub> =100Ω	-	4	-	μs
Fall time	tf		-	5	-	μs

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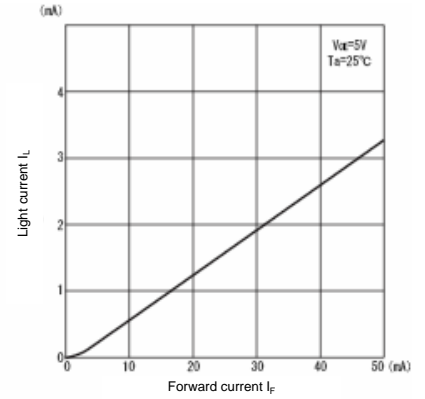
**Collector power dissipation Vs. Ambient temperature**



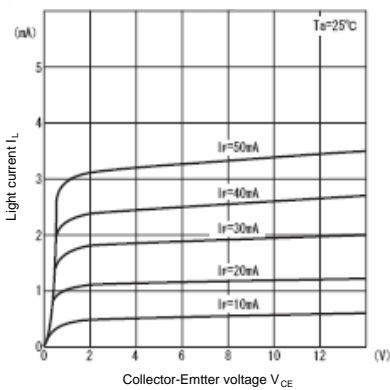
**Forward current Vs. Forward voltage**



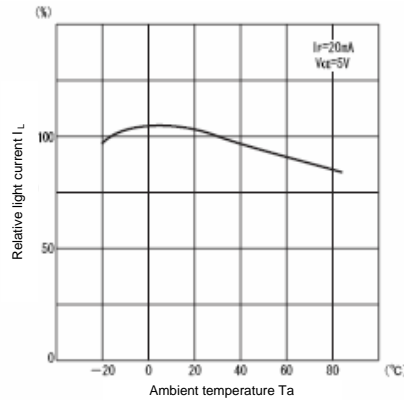
**Light current Vs. Forward current**



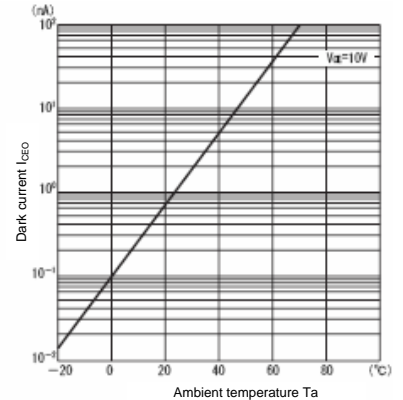
**Light current Vs. Collector-Emitter voltage**



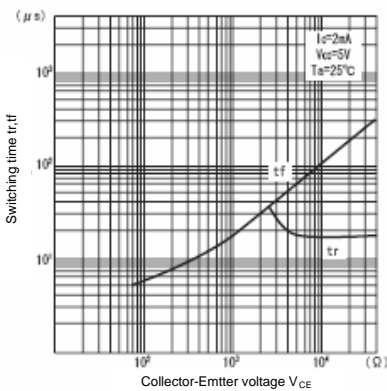
**Relative light current Vs. Ambient temperature**



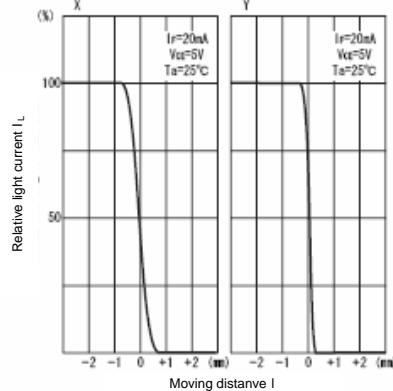
**Dark current Vs. Ambient temperature**



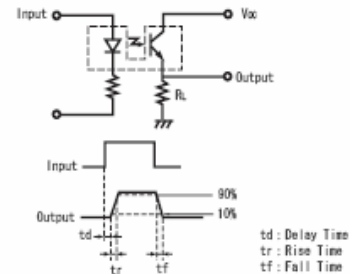
**Switching time Vs. Load resistance \*1**



**Relative light current Vs. Moving distance \*2**



\*1 Switching time measurement circuit



\*2 Method of measuring position detection characteristic

