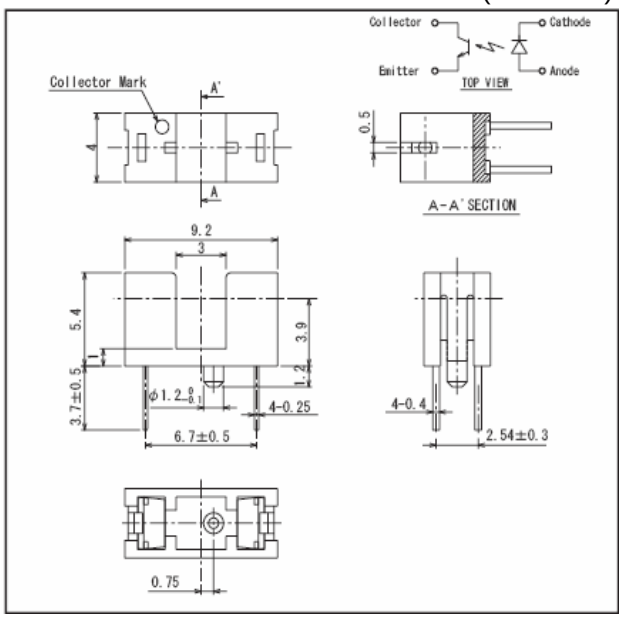
PhotoInterrupter(Transimissive)

SG278

The SG278 photointerrupter high-performance standard type,combines high-output GaAs IRED with high sensitive phototransistor.

DIMENSIONS (Unit : mm)



FEATURES

- PWB direct mount type
- GAP : 3.0mm
- Compact/High performance
- With the installation positioning boss

APPLICATIONS

- Printers
- Facsimiles
- Car stereo
- Card readers/writers

MAXIMUM RATINGS

(Ta=25˚C)

Item		Symbol	Rating	Unit
Input	Power dissipation	P_D	75	mW
	Forward current	I_F	50	mA
	Reverse voltage	V_R	5	V
	Pulse forward current *1	I_{FP}	1	A
Output	Collector power dissipation	P_C	75	mW
	Collector current	I_C	20	mA
	Collector-Emitter voltage	V_{CEO}	30	V
	Emitter-Collector voltage	V_{ECO}	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	V_F	I_F=20mA	-	1.2	1.4	V
	Reverse current	I_R	V_R=5V	-	-	10	μA
	Peak wavelength	λ_p	I_F=20mA	-	940	-	nm
Output	Collector dark current	I_{CEO}	V_{CE}=10V,0 lx	-	1	100	nA
Trans-mission	Light current	I_C	I_F=20mA,V_{CE}=5V (Non-Shading)	0.7	-	14	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_L=100Ω	-	4	-	μs
Fall time		tf		-	5	-	μs

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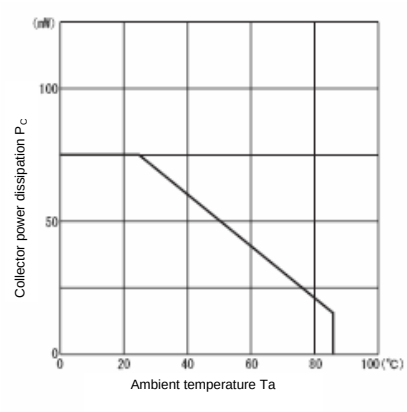
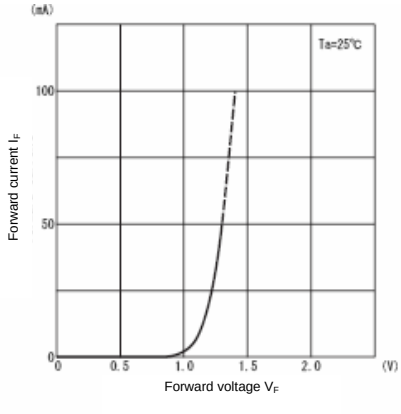
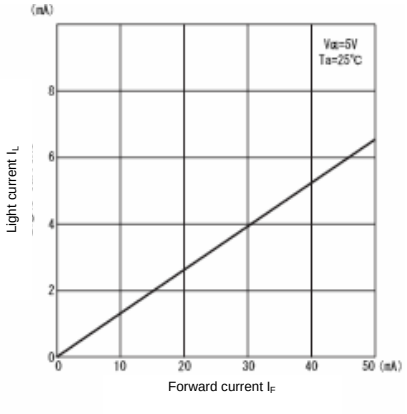
Collector power dissipation Vs. Ambient temperature



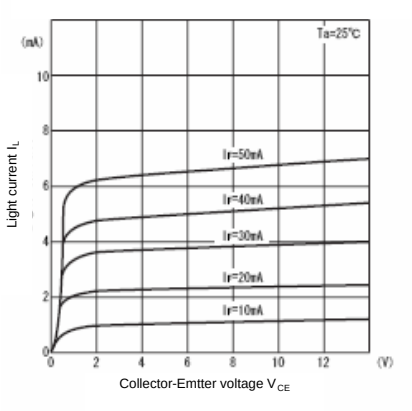
Forward current Vs. Forward voltage



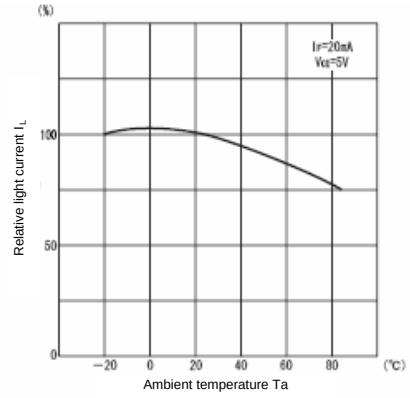
Light current Vs. Forward current



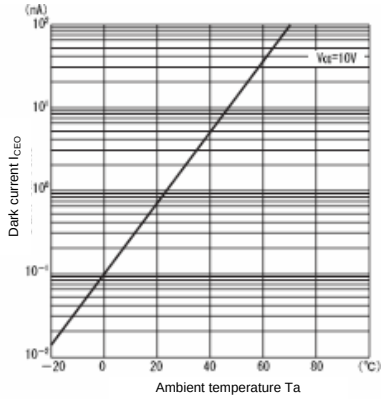
Light current Vs. Collector-Emitter voltage



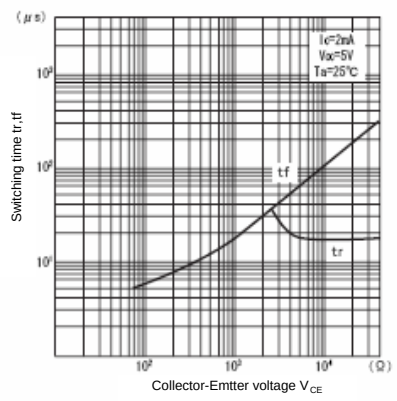
Relative light current Vs. Ambient temperature



Dark current Vs. Ambient temperature



Switching time Vs. Load resistance ※1



Relative light current Vs. Moving distance ※2