

SG278

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

FEATURES

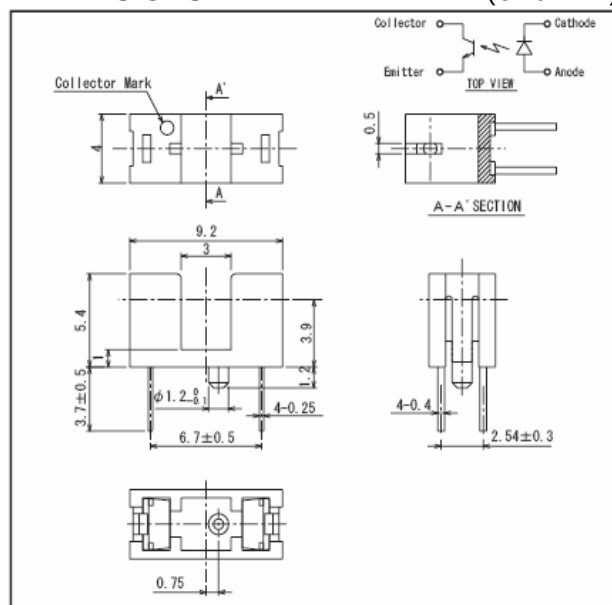
- PWB direct mount type
- GAP : 3.0mm
- Compact/High performance
- With the installation positioning boss

APPLICATIONS

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

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25°C)

Item	Symbol	Rating	Unit
Input	Power dissipation	P_D	75
	Forward current	I_F	50
	Reverse voltage	V_R	5
	Pulse forward current *1	I_{FP}	1
Output	Collector power dissipation	P_C	75
	Collector current	I_C	20
	Collector-Emitter voltage	V_{CEO}	30
	Emitter-Collector voltage	V_{ECO}	5
Operating temp. *2		$T_{opr.}$	-20 ~ +85
Storage temp. *2		$T_{stg.}$	-30 ~ +85
Soldering temp. *3		$T_{sol.}$	260

*1. Pulse width : $t_w \leq 100\mu s$, period $T=10ms$

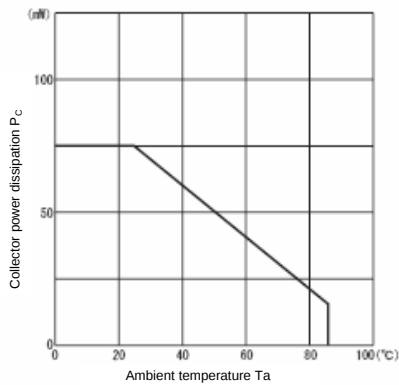
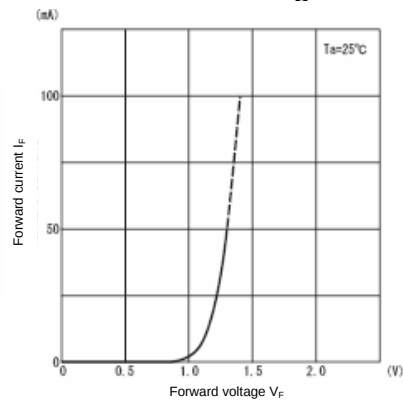
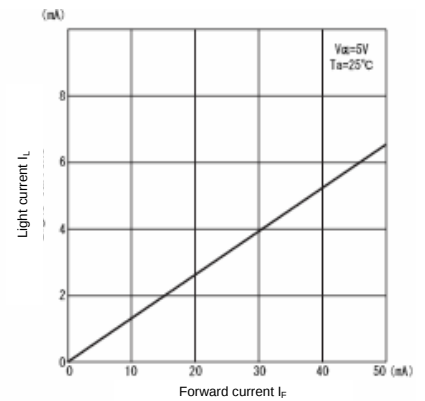
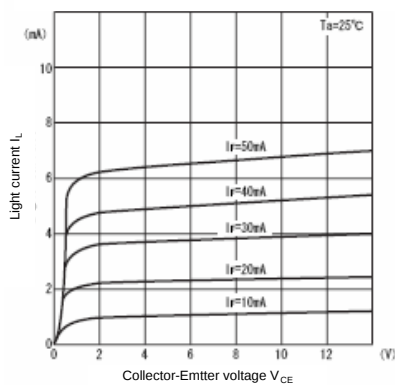
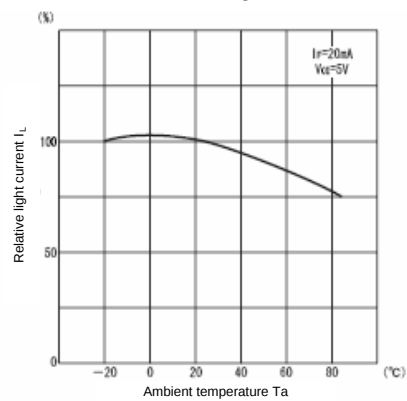
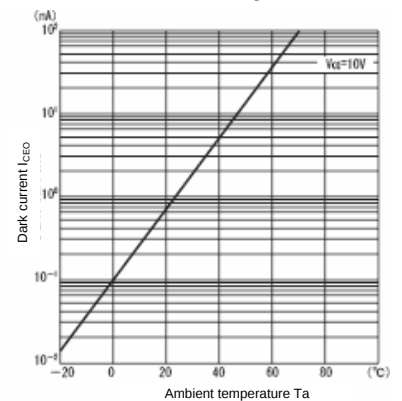
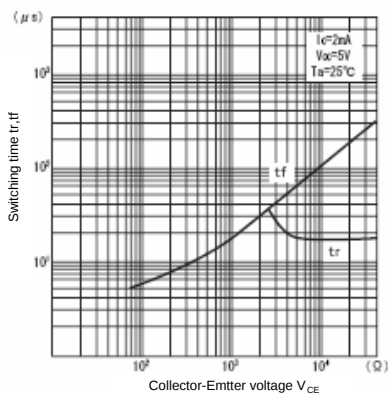
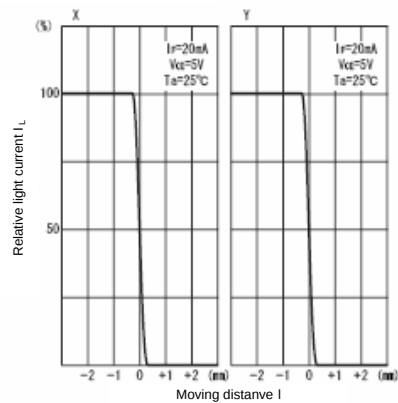
*2. No icebound or dew *3. For MAX. 5 seconds at the position of 1mm from the resin edge.

ELECTRO-OPTICAL CHARACTERISTICS

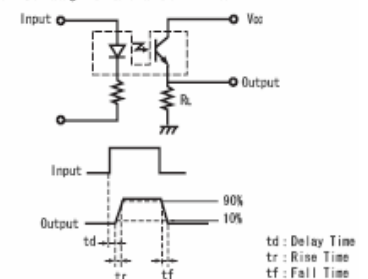
(Ta=25°C)

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

SG278

Collector power dissipation Vs.
Ambient temperatureForward current Vs.
Forward voltageLight current Vs.
Forward currentLight current Vs.
Collector-Emitter voltageRelative light current Vs.
Ambient temperatureDark current Vs.
Ambient temperatureSwitching time Vs.
Load resistance *1Relative light current Vs.
Moving distance *2

*1 Switching time measurement circuit



*2 Method of measuring position detection characteristic

