

GP1S29

Subminiature Photointerrupter

■ Features

1. Ultra-compact type
2. Thin detection portion
(Thickness of detection portion: 3.2mm)

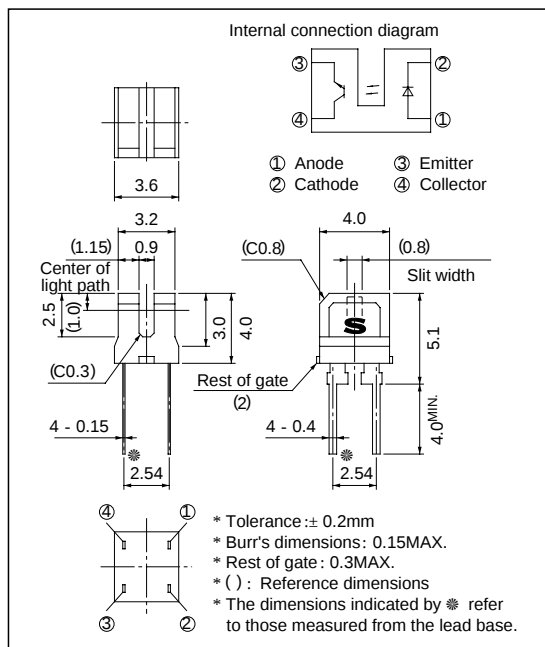
■ Applications

1. Cameras
2. Floppy disk drives

Note) Please use carefully not to receive external disturbing light because the back face of detector element is not covered with case.

■ Outline Dimensions

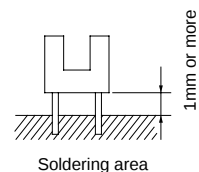
(Unit : mm)



■ Absolute Maximum Ratings

(Ta = 25°C)

Parameter	Symbol	Rating	Unit
Input	Forward current	I _F	50
	Reverse voltage	V _R	6
	Power dissipation	P	75
Output	Collector-emitter voltage	V _{CEO}	35
	Emitter-collector voltage	V _{ECO}	6
	Collector current	I _C	20
	Collector power dissipation	P _C	75
Total power dissipation		P _{tot}	100
Operating temperature		T _{opr}	- 25 to + 85
Storage temperature		T _{stg}	- 40 to + 100
*1 Soldering temperature		T _{sol}	260



*1 For 5 seconds

■ Electro-optical Characteristics

(Ta = 25°C)

Parameter			Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage		VF	IF = 20mA	-	1.2	1.4	V
	Reverse current		IR	VR = 3V	-	-	10	μ A
Output	Collector dark current		ICEO	VCE = 20V	-	-	1 x 10 ⁻⁷	A
Transfer-characteristics	Collector Current		IC	IF = 1.5mA, VCE = 5V	40	-	240	μ A
	Collector-emitter saturation voltage		VCE(sat)	IF = 3mA, IC = 30 μ A	-	-	0.4	V
	Response time	Rise time	tr	VCE = 5V, RL = 1kΩ IC = 100μ A	-	50	150	μ s
		Fall time	tf		-	50	150	μ s

Fig. 1 Forward Current vs. Ambient Temperature

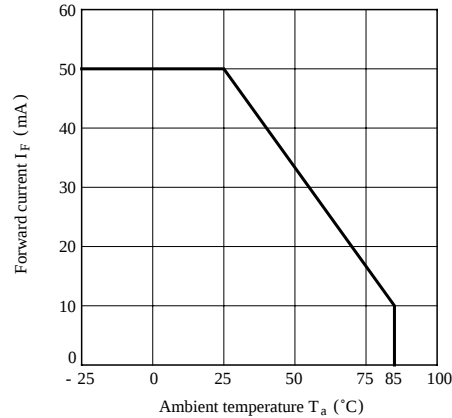


Fig. 2 Power Dissipation vs. Ambient Temperature

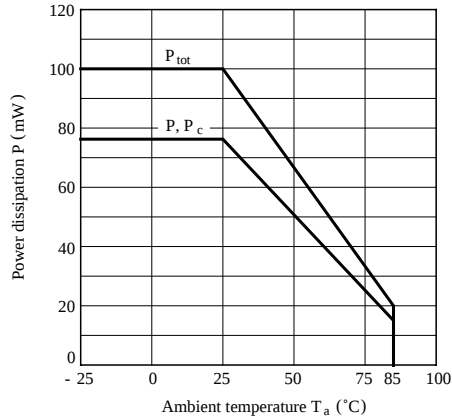


Fig. 3 Forward Current vs. Forward Voltage

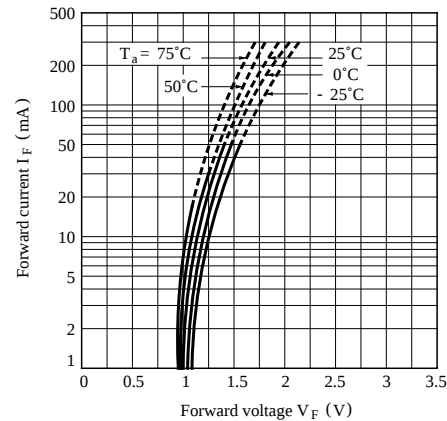


Fig. 4 Collector Current vs. Forward Current

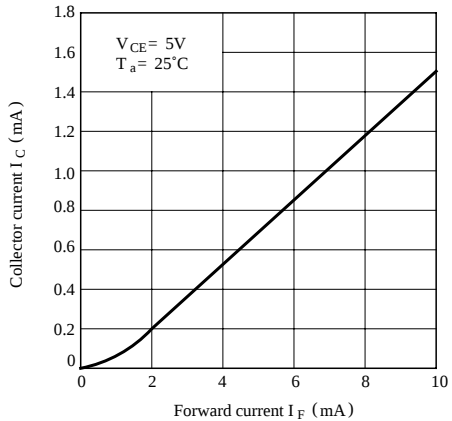


Fig. 5 Collector Current vs. Collector-emitter Voltage

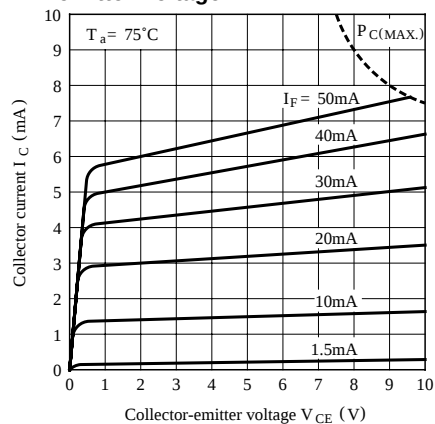


Fig. 6 Collector Current vs. Ambient Temperature

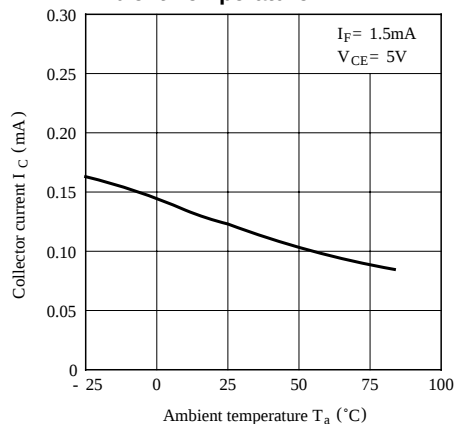


Fig. 7 Collector-emitter Saturation Voltage vs. Ambient Temperature

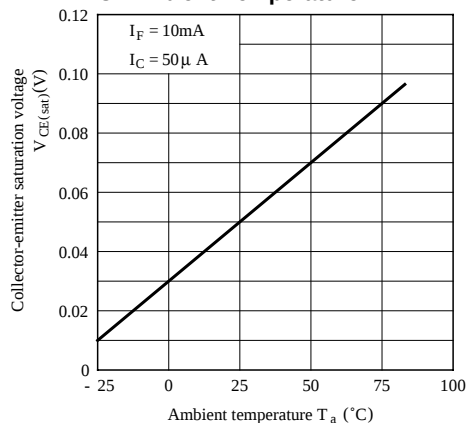


Fig. 8 Collector Dark Current vs. Ambient Temperature

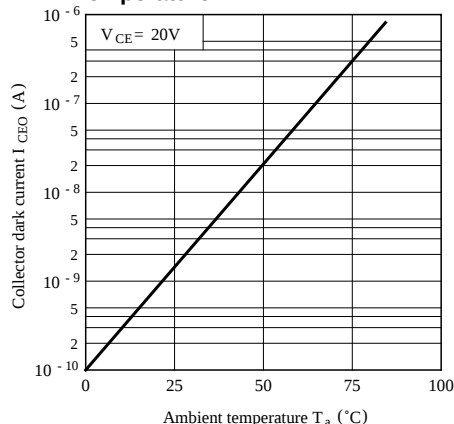
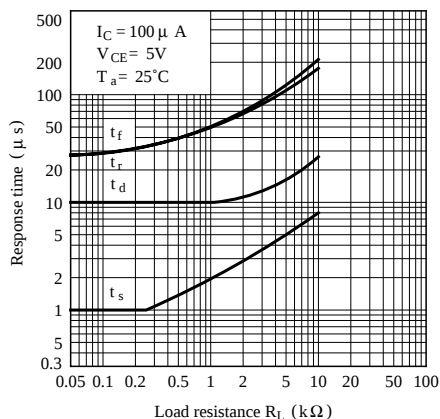


Fig. 9 Response Time vs. Load Resistance



Test Circuit for Response Time

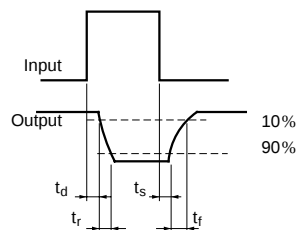
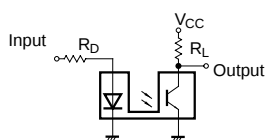


Fig.10 Relative Collector Current vs. Shield Distance (1)

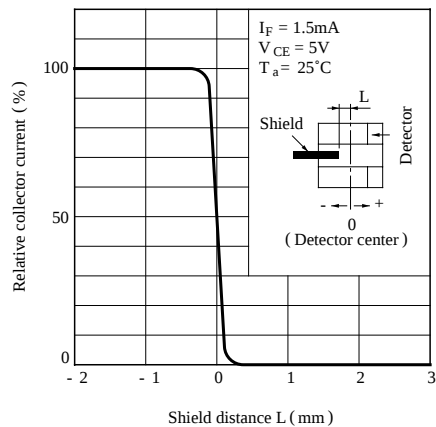
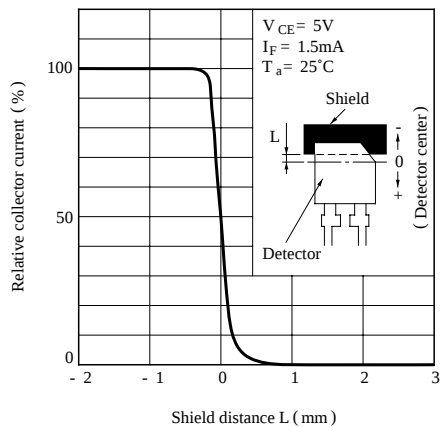


Fig.11 Relative Collector Current vs. Shield Distance (2)



- Please refer to the chapter “Precautions for Use”.

This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.