

GP1S092HCPI

Subminiature, Surface Mount Type Photointerrupter

■ Features

1. Subminiature, transmissive type (4.5×2.6×2.9mm)
2. Surface mount type
3. Wide gap (Gap width : 2mm)
4. Slit width (Detector side) : 0.3mm
5. Tape-packaged product

■ Applications

1. Cameras
2. CD-ROM drives
3. VCR

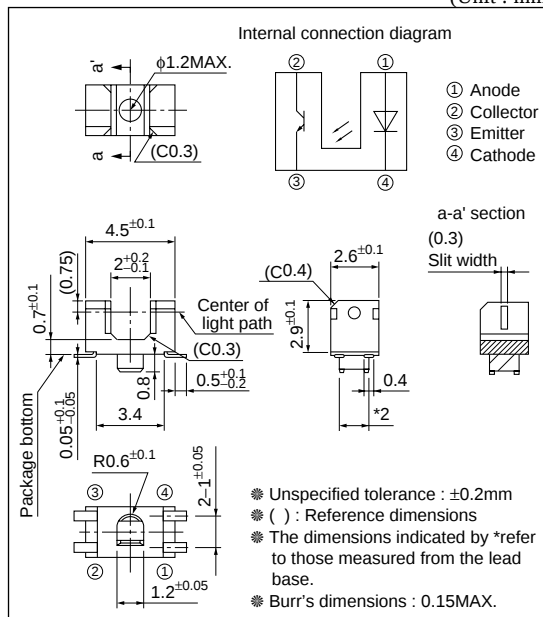
■ Absolute Maximum Ratings (Ta=25°C)

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

*1 For MAX. 5s

■ Outline Dimensions

(Unit : mm)



■ Electro-optical Characteristics

(Ta=25°C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage	V_F	$I_F=20\text{mA}$	—	1.2	1.4	V
	Reverse current	I_R	$V_R=3\text{V}$	—	—	10	μA
Output	Collector dark current	I_{CEO}	$V_{CE}=20\text{V}$	—	—	100	nA
Transfer characteristics	Collector current	I_C	$V_{CE}=5\text{V}, I_F=5\text{mA}$	100	—	400	μA
	Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_F=10\text{mA}, I_C=40\mu\text{A}$	—	—	0.4	V
	Response time	Rise time	$V_{CE}=5\text{V}, I_C=100\mu\text{A}$ $R_L=1\ 000\Omega$	—	50	150	μs
		Fall time		—	50	150	μs

Fig.1 Forward Current vs. Ambient Temperature

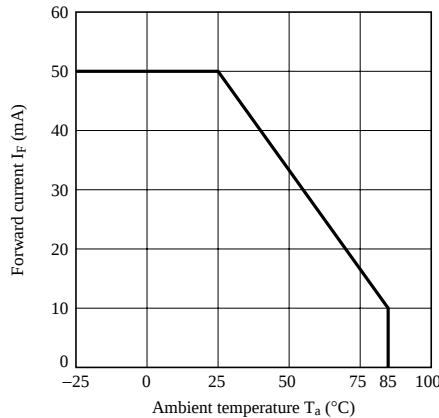


Fig.2 Power Dissipation vs. Ambient Temperature

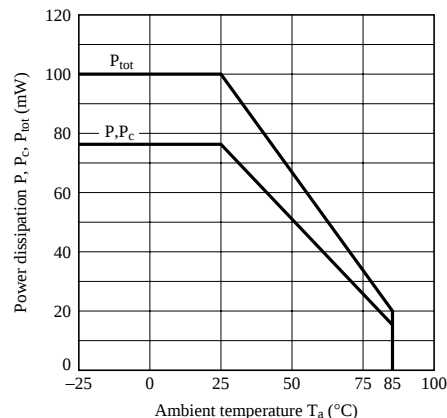


Fig.3 Forward Current vs. Forward Voltage

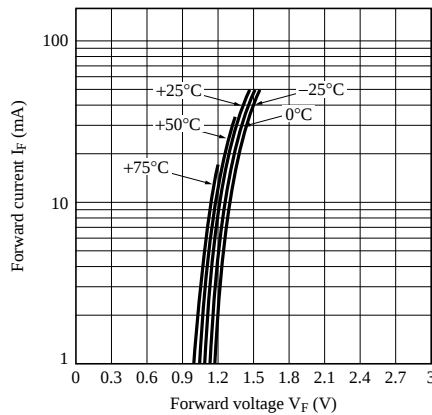


Fig.4 Collector Current vs. Forward Current

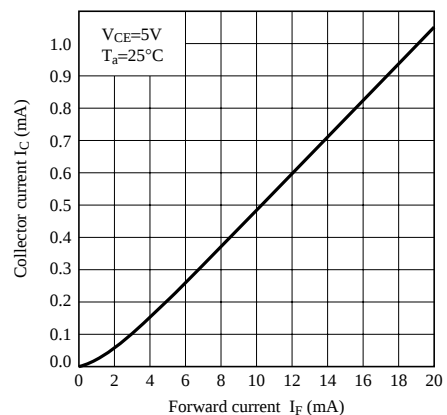


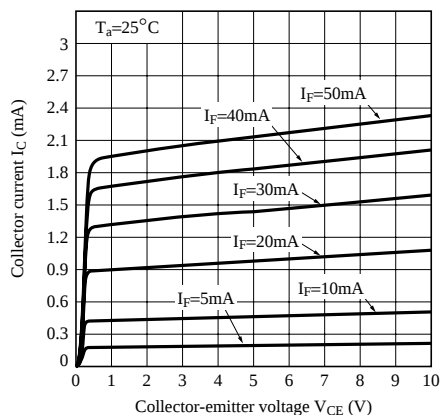
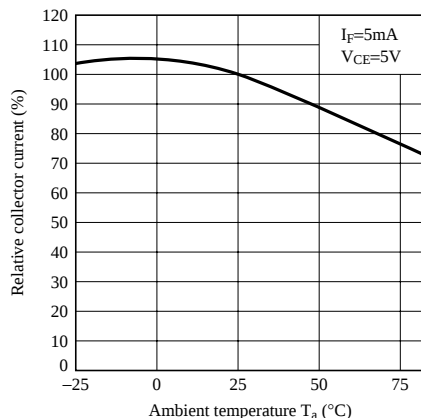
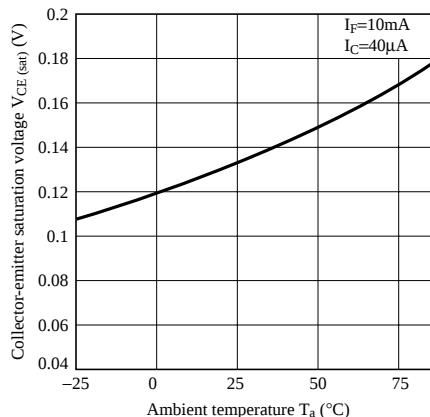
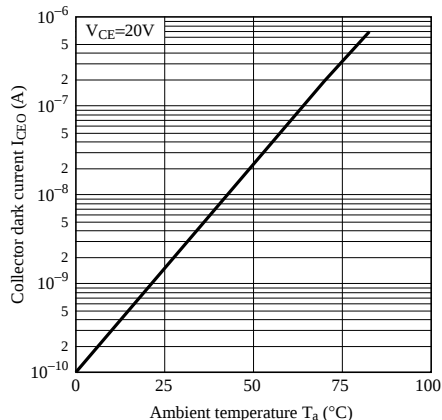
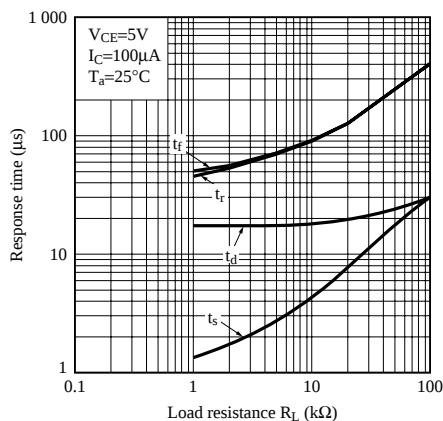
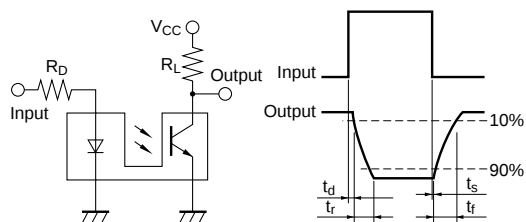
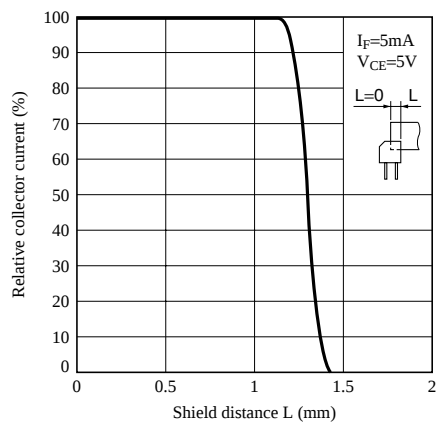
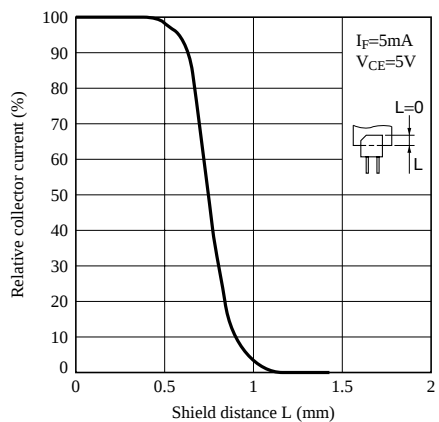
Fig.5 Collector Current vs. Collector-emitter Voltage**Fig.6 Relative Collector Current vs. Ambient Temperature****Fig.7 Collector - emitter Saturation Voltage vs. Ambient Temperature****Fig.8 Collector Dark Current vs. Ambient Temperature****Fig.9 Response Time vs. Load Resistance****Fig.10 Test Circuit for Response Time**

Fig.11 Relative Collector Current vs. Shield Distance (1)**Fig.12 Relative Collector Current vs. Shield Distance (2)**

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