Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

GP1S093HCZ

Subminiature, Low Profile, Transmissive Type Photointerrupter

■ Features

1. General purpose
2. Low profile(Height:2.9mm)
3. Wide gap(Gap width:2.0mm)
4. Slit width(Detector side):0.3mm

■ Applications

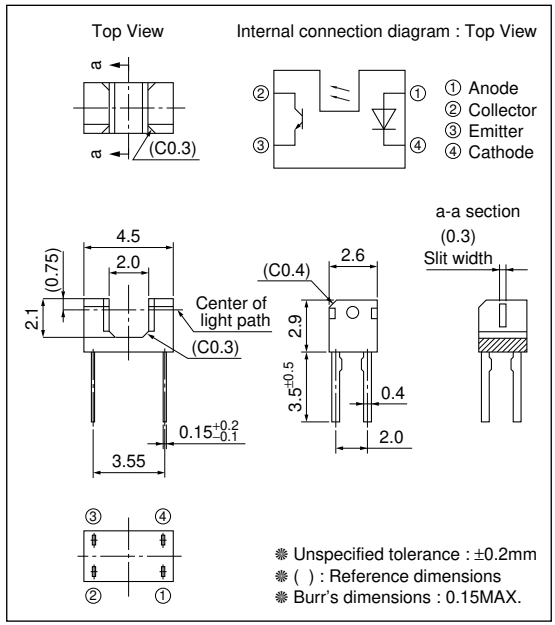
1. Cameras
2. CD-ROM drives
3. VCR

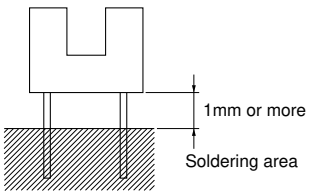
■ Absolute Maximum Ratings (Ta=25°C)

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=20mA	–	1.2	1.4	V
	Reverse current		I_R	V_R=3V	–	–	10	μA
Output	Collector dark current		I_{CEO}	V_{CE}=20V	–	–	100	nA
Transfer characteristics	Collector current		I_C	V_{CE}=5V, I_F=5mA	100	–	400	μA
	Collector-emitter saturation voltage		$V_{CE(sat)}$	I_F=10mA, I_C=40μA	–	–	0.4	V
	Response time	Rise time	t_r	V_{CE}=5V, I_C=100μA	–	50	150	μs
		Fall time	t_f	R_L=1 000Ω	–	50	150	μs

Fig.1 Forward Current vs. Ambient Temperature

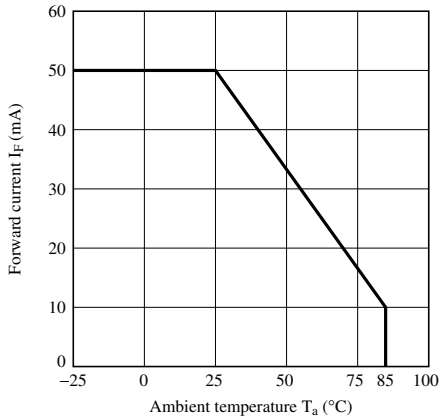


Fig.2 Power Dissipation vs. Ambient Temperature

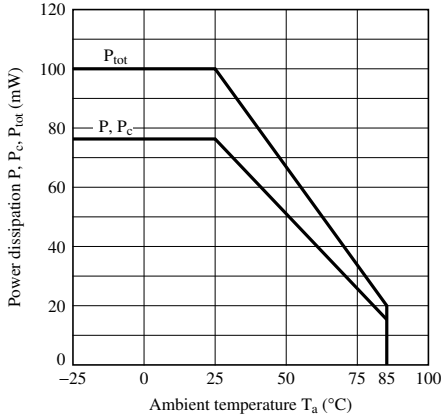


Fig.3 Forward Current vs. Forward Voltage

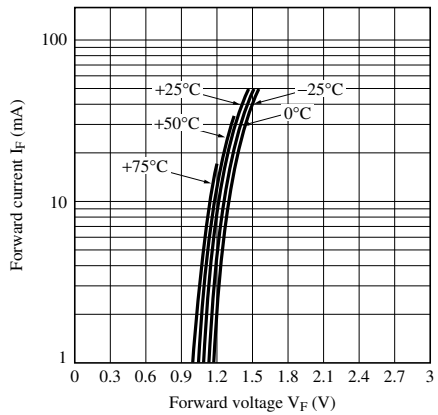


Fig.4 Collector Current vs. Forward Current

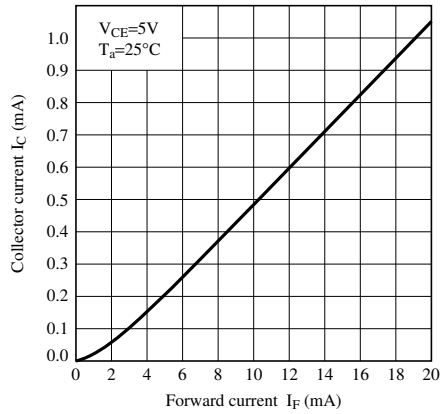


Fig.5 Collector Current vs. Collector-emitter Voltage

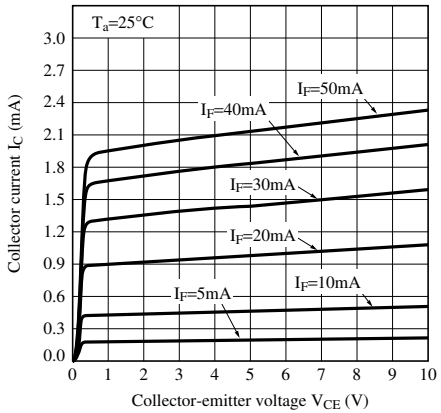


Fig.6 Relative Collector Current vs. Ambient Temperature

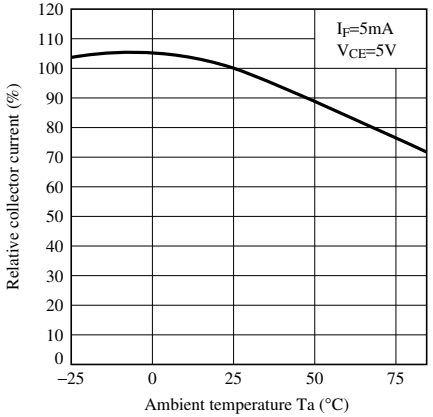


Fig.7 Collector - emitter Saturation Voltage vs. Ambient Temperature

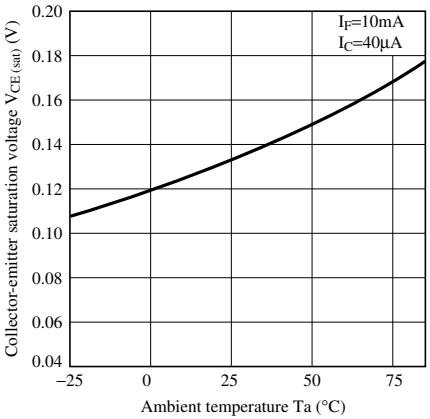


Fig.8 Collector Dark Current vs. Ambient Temperature

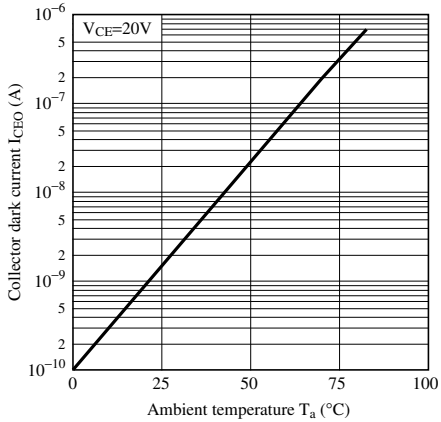


Fig.9 Response Time vs. Load Resistance

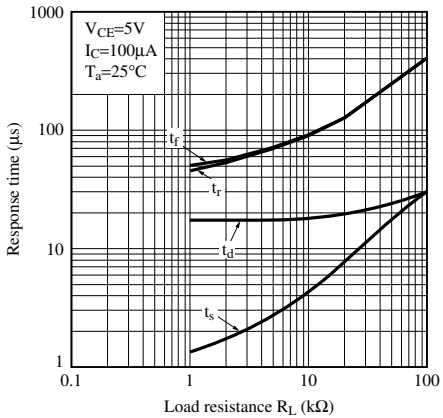


Fig.10 Test Circuit for Response Time

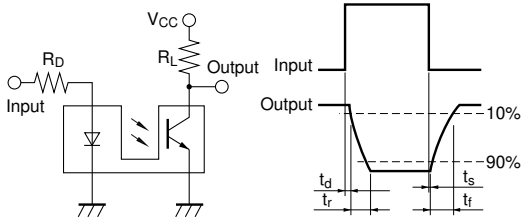


Fig.11 Relative Collector Current vs. Shield Distance (1)

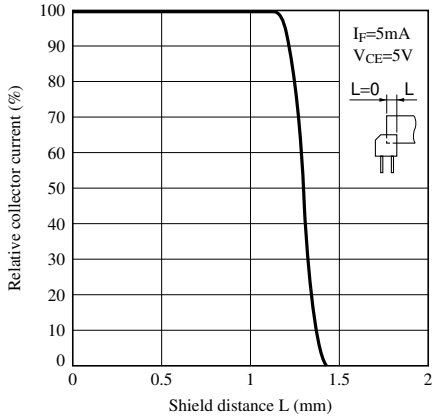
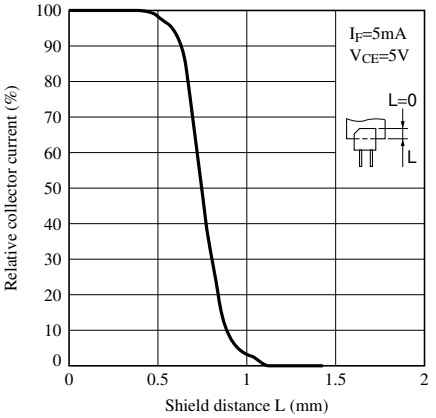


Fig.12 Relative Collector Current vs. Shield Distance (2)



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- Office automation equipment
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- Industrial control
- Audio visual equipment
- Consumer electronics

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- Alarm equipment
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