GP2S28

Long Focal Distance, Case Type Photointerrupter

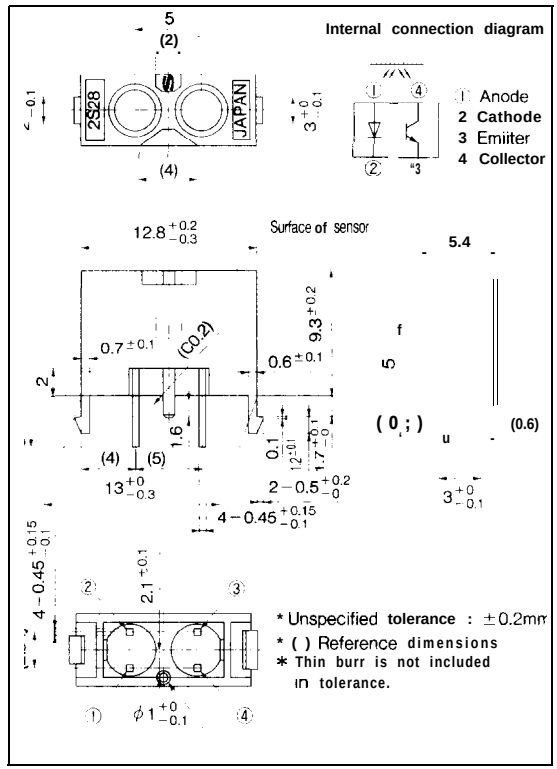
■ Features

1. Long focal distance type
   (Detecting range : 6mm)
2. With pins for protection of wrong insertion
3. Snap-in mounting type

■ Applications

1. CD players
2. Facsimiles
3. Printers

■ Outline Dimensions (Unit : mm)



Absolute Maximum Ratings (Ta=25℃)

Parameter		Symbol	Rating	Unit
Input	Forward current	I_F	60	mA
	*1 Peak forward current	I_{FM}	1	A
	Reverse voltage	V_R	6	V
	Power dissipation	P	150	mW
outpot	Collector -emitter voltage	V_{CEO}		V
	Emitter -collector voltage	V_{ECO}	6	V
	Collector current	I_C	20	mA
	Collector power dissipation	P_C	50	mW
Operating temperature		T_{opr}	−25 to +85	℃
Storage temperature		T_{stg}	−40 to +85	℃
*2 Soldering temperature		T_{sol}	260	℃

*1 Pulse width ≦ 100" μs, Duty ratio : 0.01
*2 For 5 seconds

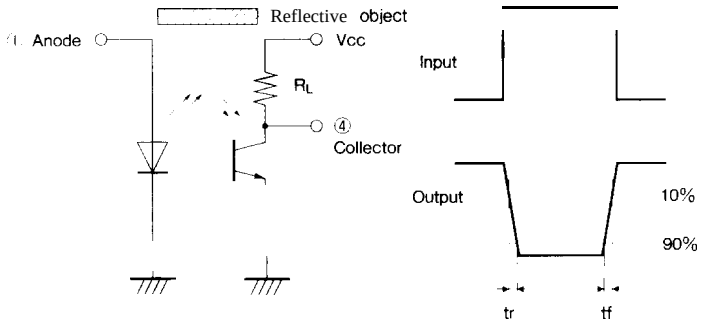
■ Electro-optical Characteristics

(Ta = 25℃)

Parameter			Symbol	Condition	MIN.	TYP.	MAX	Unit
Input	Forward voltage		V_F	I_F = 20mA		1.3	1.5	V
	Peak forward voltage		V_{FM}	I_F = 0.5A		2.2	3.5	V
	Reverse current		I_R	V_R = 3V			10	μA
Output	Collector current		I_{CEO}	V_{CE} = 20V	–	1	100	nA
Transfer characteristics	Collector current		I_C	V_{CE} = 5V, I_F = 20mA, *3	0.04		0.9	mA
	Collector -emitter saturation voltage		$V_{CE(sat)}$	I_F = 40mA, I_C = 0.04mA	-		0.4	V
	Response time	Rise time	t_r	V_{CE} = 2V, I_C = 0.1mA			20	μs
		Fall time	t_f	R_L = 100Ω	--	– 1	30 –	μs

*3 The condition and arrangement of reflective object is shown in the following figure

Test Circuit for Response Time



Teat **Arrangement** of **Collector Current**

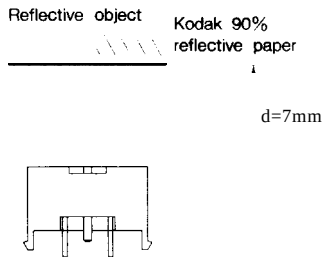


Fig. 1 Forward **Current vs.** Ambiant **Temperature**

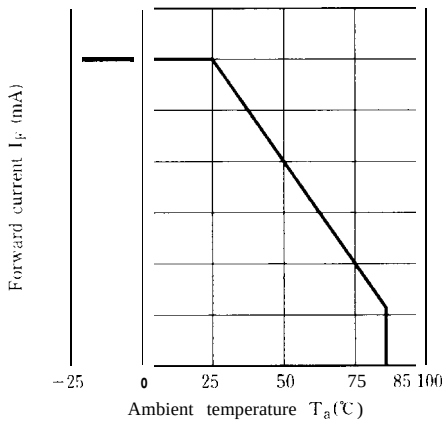


Fig. 2 Collector Power Dissipation vs. Ambient Temperature

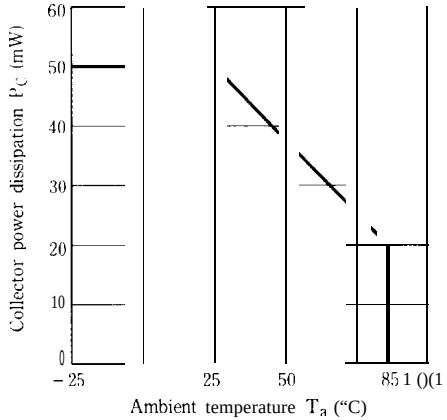


Fig. 3 Peak Forward Current vs. Duty Ratio

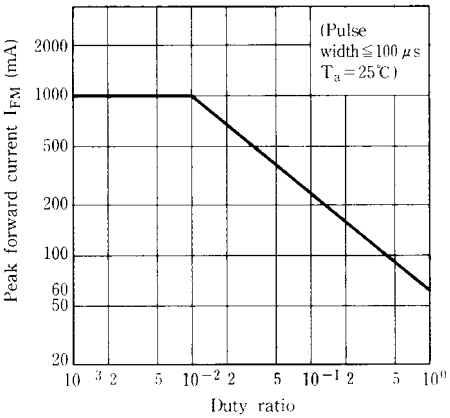


Fig. 4 Forward Current vs. Forward Voltage

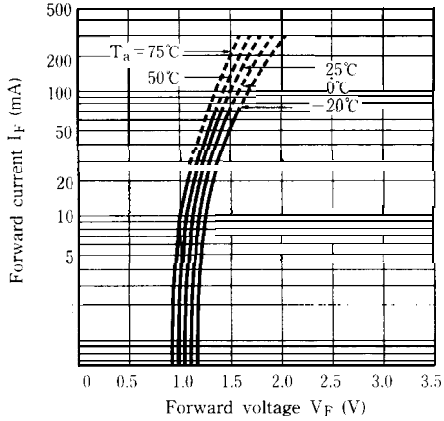


Fig. 5 **Collector** -curTent vs. **Forward Currnt**

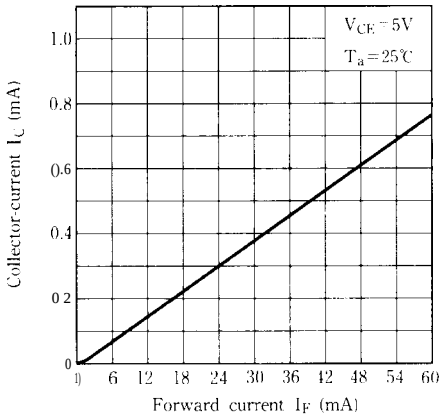


Fig. 6 Collector Current vs. Collector-emitter Voltage

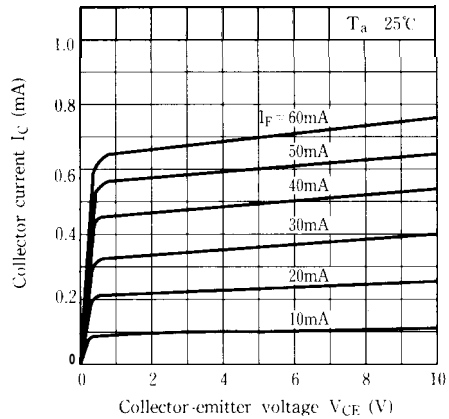


Fig. 7 Collector Current vs. Ambient Temperature

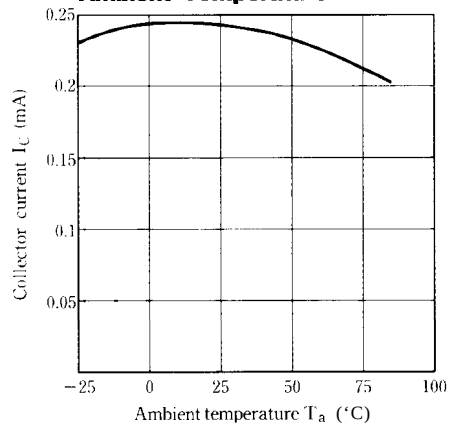


Fig. 8 Collector Dark currant vs. Ambient Temperature

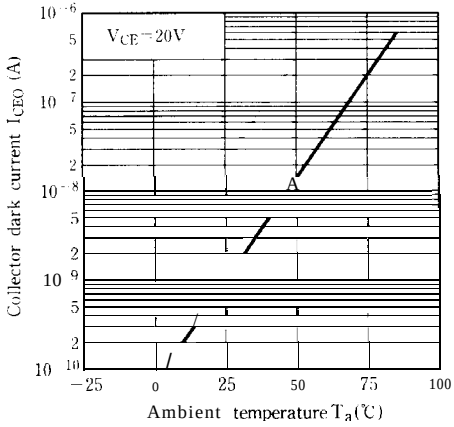
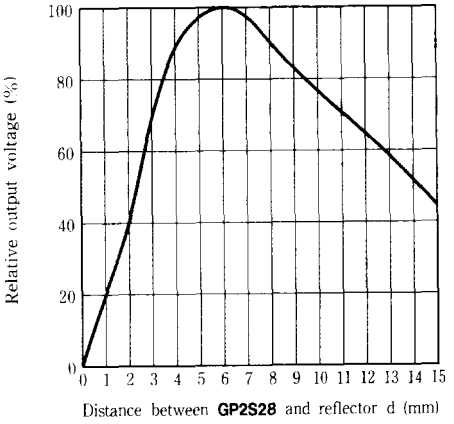
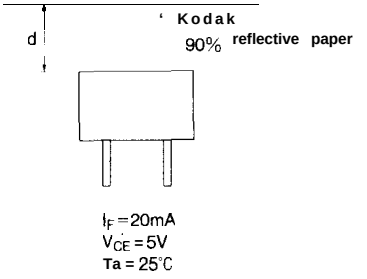


Fig. 9 Relative Output Voltage vs. Detecting Distance





● pIeaSe refer to the chapter "Precautions for Use" (Page 78 to 93)