GP1S44S1

Transmissive Type Photointerrupter with Actuator

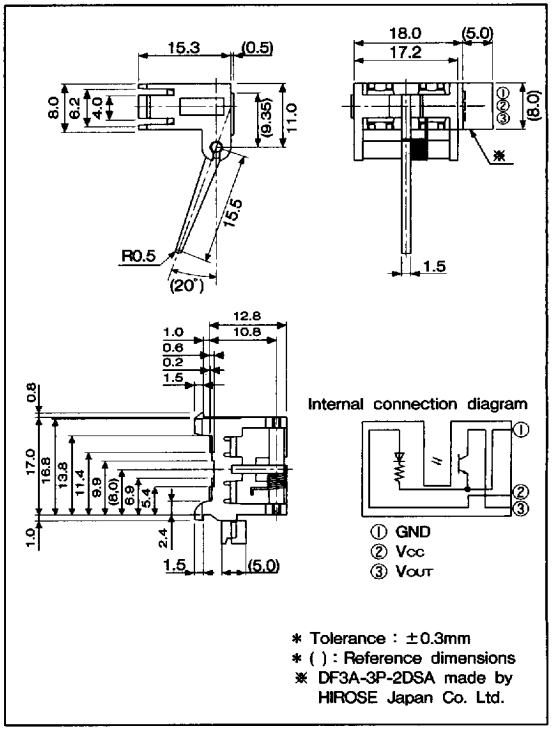
■ Features

1. High sensing accuracy (Slit width : 0.5mm)
2. Easy wiring due to built-in connector
3. Snap-in mounting type in order to mount to an equipment easily

■ Applications

1. Copiers
2. Laser beam printers
3. Facsimiles

■ Outline Dimensions (Unit : mm)



■ Absolute Maximum Ratings (Ta=25℃)

Paramerter	Symbol	Rating	Unit
Supply voltage	V_{CC}	−0.5 to +10	V
*1Output voltage	V_O	35	V
*2Output current	I_C	20	mA
*3Output power dissipation	P_O	75	mW
*4Operating temperature	T_{opr}	−20 to +75	℃
*4Storage temperature	T_{stg}	−40 to +85	℃

*1 Collector-emitter ,voltage of phtotransistor
*2 Collector current of phtotransistor
*3 Collector dissipation of phototransistor
*4 The connector should be plugged in/out at normal temperature.

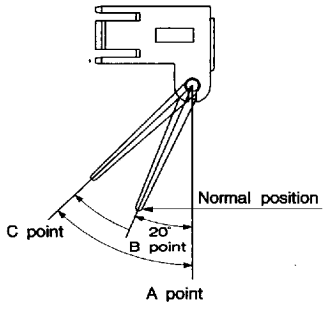
■ Electro-optical Characteristics

(Unless otherwise specified, V_{CC}=5V, Ta=25℃)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Dissipation current	I_{CC1}	Light beam interrupted	–	–	20	mA
Dissipation current	I_{CC2}	Light beam uniterrupted	–	–	20	mA
Collector current	I_{C1}	Light beam interrupted, V_O=5V, without external disturbing light illuminance	–	–	0.05	mA
	I_{C2}	Light beam uninterrupted, V_O=5V without external diturbing light illuminance	0.25	–	–	mA
Operating supply voltage	V_{CC}	Ta=−20 to +75℃	4.5	5.0	5.5	V

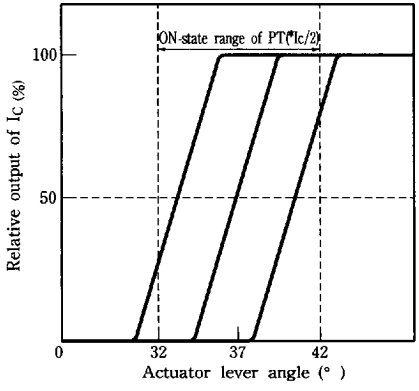
*Condition of light beam interrupted : Lever is normal condition on the Fig.1
Condition of light beam uniterrupted : Lever is 30° or more movement condition from A point to B point on Fig.1

Fig. 1 Detecting Position



Phototransistor between A point and C point shall be ON-state when the actuator lever rotated (37° ±5°) from normal condition A point to C point in Fig.1. At this time, L_C of phototransistor shall be (*I_C/2).
*I_C is an actual measurement value on collector current in electro-optical characteristics.
Normal condition B point shall be opaque condition.

Fig. 2 Relative Output of I_C vs. Actuator Lever Angle



■ Mechanical Characteristics

Lever starting torque : 1gf · cm or less

■ Lever Life

100 000 times or more
(Lever reciprocating operation between normal condition B point and C point at the condition of no load.)

Fig. 3 Power Dissipation vs. Ambient Temperature

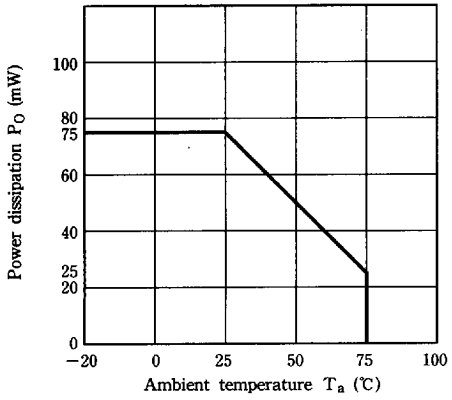


Fig. 4 Collector Current vs. Output Voltage

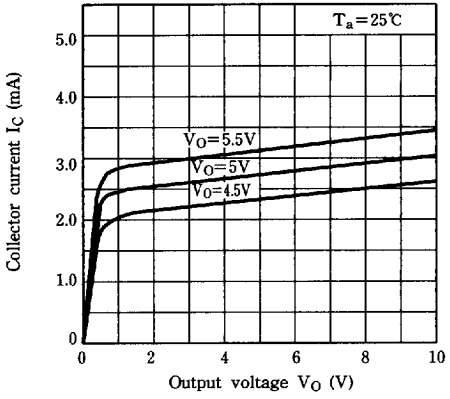


Fig. 5 Collector Current 2 vs. Ambient Temperature (Light Beam Uninterrupted)

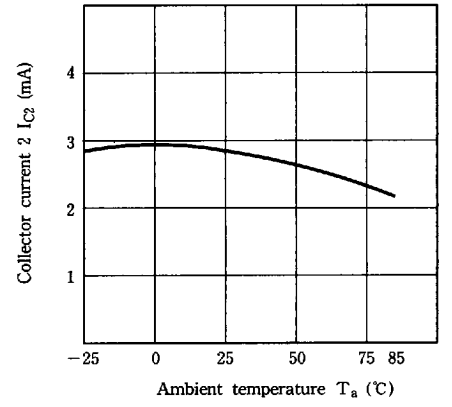


Fig. 6 Output Saturation Voltage vs. Ambient Temperature

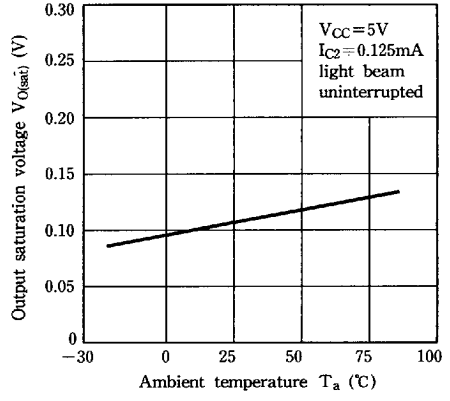


Fig. 7 Collector Current 1 vs. Ambient Temperature (Light Beam Interrupted)

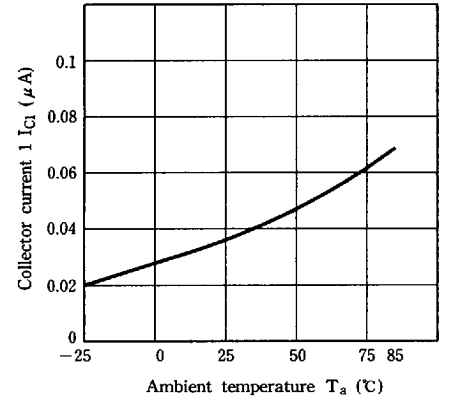
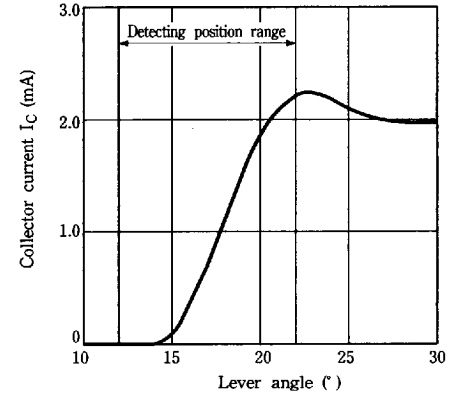


Fig. 8 Lever Angle vs. Collector Current



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