

# SG - 402

The SG - 402 actuator type photointerrupter combined GaAs IRED, high sensitive phototransistor and actuator, is ideal for copiers, facsimiles.

## FEATURES

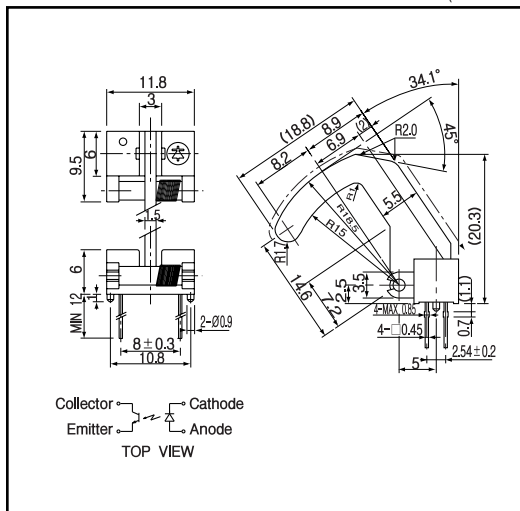
- Widely applicable
- Compact & light
- Wide choice of levers

## APPLICATIONS

- Copiers
- Facsimiles
- Printers
- Banking machines

## DIMENSIONS

(Unit : mm)



## MAXIMUM RATINGS

(Ta=25 )

Item		Symbol	Rating	Unit
Input	Power dissipation	P <sub>D</sub>	100	mW
	Forward current	V <sub>R</sub>	5	V
	Reverse voltage	I <sub>F</sub>	60	mA
	Pulse forward current *1	I <sub>FP</sub>	1	A
Output	Collector power dissipation	P <sub>C</sub>	100	mW
	Collector current	I <sub>C</sub>	40	mA
	Collector - Emitter voltage	V <sub>CEO</sub>	30	V
	Emitter - Collector voltage	V <sub>ECO</sub>	5	V
Operating temp.*2		T <sub>opr.</sub>	- 20 +70	
Storage temp.*2		T <sub>stg.</sub>	- 30 +85	

\*1. t w 100µsec. period : T=10msec.

\*2. No icebound or dew

## ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25 )

Item		Symbol	Conditions	Min.	Typ.	Max.	Unit.
Input	Forward voltage	V <sub>F</sub>	I <sub>F</sub> =30mA		1.2	1.5	V
	Reverse current	I <sub>R</sub>	V <sub>R</sub> =5V			10	µA
Output	Collector dark current	I <sub>CEO</sub>	V <sub>CE</sub> =10V		5	100	nA
	High current	I <sub>L</sub>	V <sub>CE</sub> =5V, I <sub>F</sub> =20mA	0.5	1.5		mA
	C - E saturation voltage	V <sub>CE(sat)</sub>	I <sub>F</sub> =20mA, I <sub>E</sub> =0.3mA			0.4	V

## MECHANICAL CHARACTERISTICS

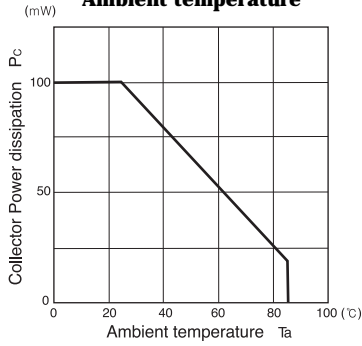
Item	Conditions	Min.	Typ.	Max.	Unit
Static point 1			34.1		deg.
Open point 2		7	10	13	deg.
Movement torque				1.5	gf/cm
Shock endurance	packing status	Min 30G			-

Item	Conditions	Min.	Typ.	Max.	Unit
Vibration endurance		10~55~10Hz/Mir			-
		Vibration Axis 1.5mm			-
		X,Y,Z Each Direction			-
Mechanical life time		Min 10 <sup>7</sup> times			-

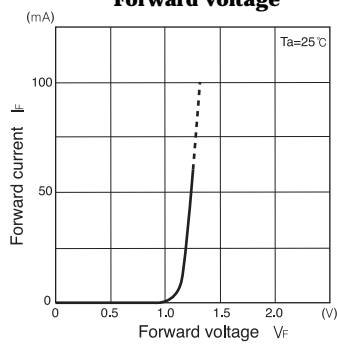
Photointerrupters(Actuator type)

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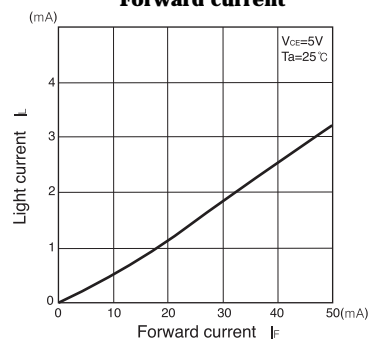
**Collector power dissipation Vs. Ambient temperature**



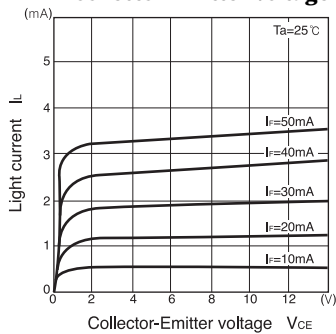
**Forward current Vs. Forward voltage**



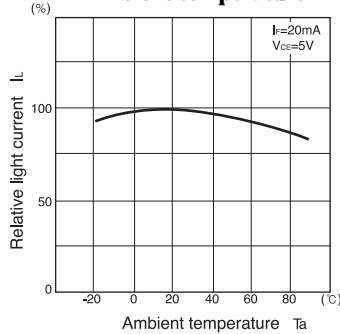
**Light current Vs. Forward current**



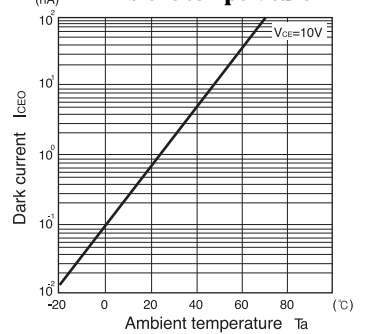
**Light current Vs. Collector-Emitter voltage**



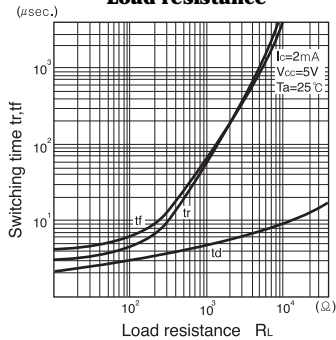
**Relative light current Vs. Ambient temperature**



**Dark current Vs. Ambient temperature**



**Switching time Vs. Load resistance**



**Relative light current Vs. Angle**

