

# Photointerrupters(Actuator type)

**KODENSHI**

## SG -405

The SG -405 actuator type photointerrupter combined GaAs IRED, high sensitive phototransistor and actuator, is ideal for copiers, facsimiles.

### FEATURES

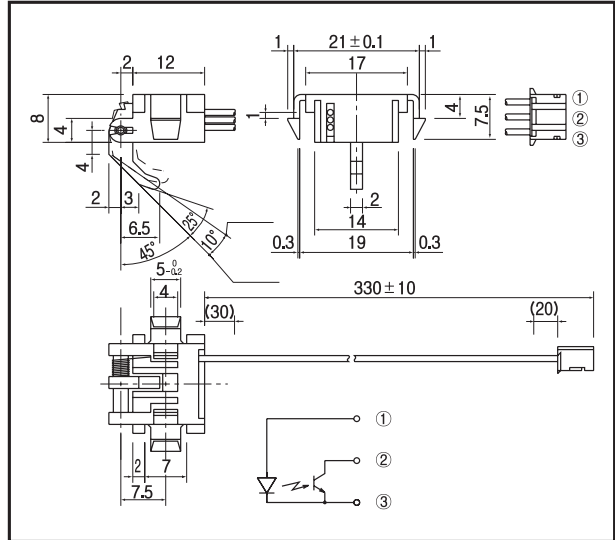
- Widely applicable
- Compact & light
- Wide choice of levers
- Connector type

### APPLI CATIONS

- Copiers
- Facsimiles
- Printers
- Banking machines

### DIMENSIONS

(Unit : mm)



### MAXIMUM RATINGS

(Ta=25°C)

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

\*1. t w 100μsec. period : T=10msec.

\*2. No icebound or dew

### ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25°C)

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
	Light 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>C</sub> =0.3mA			0.4	V

### MECHANICAL CHARACTERISTICS

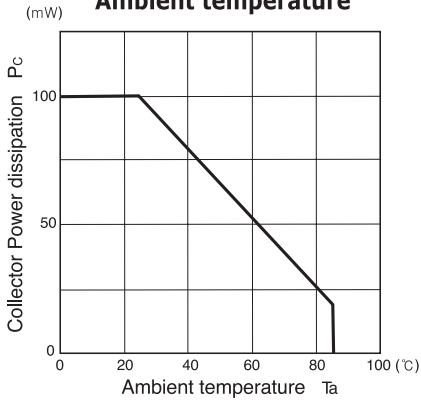
Item	Conditions	Min	Typ	Max	Unit
Static point θ1			45		deg.
Open point θ2		5	10	15	deg.
Movement torque				1.5	gf/cm
Shock endurance	packing status	Min 30G			-

Item	Conditions	Min	Typ	Max	Unit
Vibration endurance		10~55~10Hz/Min			-
		Vibration Axis 1.5mm			-
		X,Y,Z Each Direction			-
Mechanical life time		Min 10 <sup>8</sup> times			-

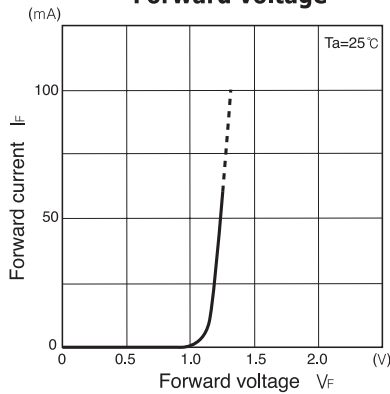
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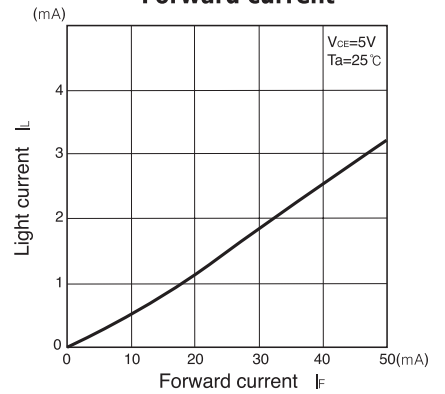
**Collector power dissipation Vs. Ambient temperature**



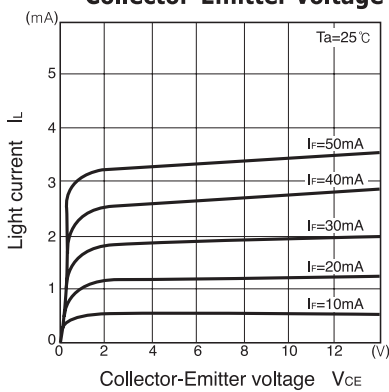
**Forward current Vs. Forward voltage**



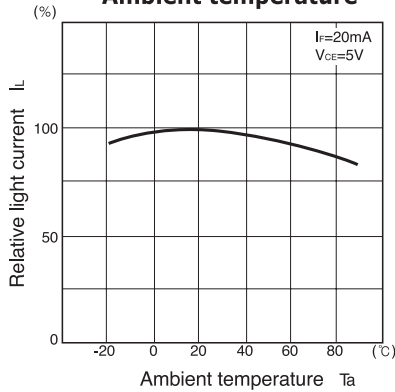
**Light current Vs. Forward current**



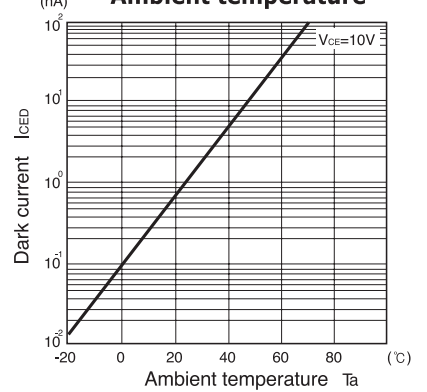
**Light current Vs. Collector-Emitter voltage**



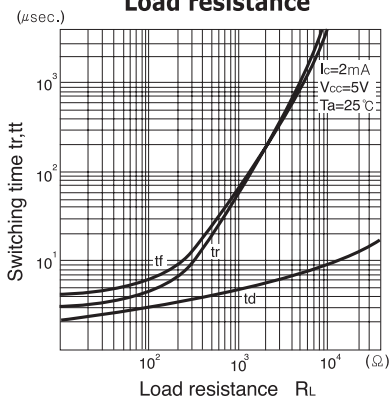
**Relative light current Vs. Ambient temperature**



**Dark current Vs. Ambient temperature**



**Switching time Vs. Load resistance**



**Relative light current Vs. Angle**

