

# Photointerrupters(Transmissive)

KODENSHI

SG - 267

The SG - 267 photointerrupter high - performance standard type, combines high - output GaAs IRED with high sensitive phototransistor.

## FEATURES

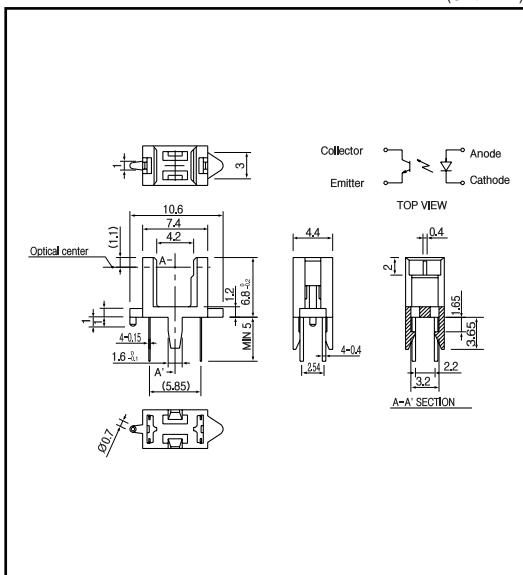
- PWB direct mount type
- GAP : 4.2mm
- Snap-in mount
- With the installation positioning boss

## APPLICATIONS

- Cassette mecha
- Facsimiles
- CD changers
- VTR

## DIMENSIONS

(Unit : mm)



## MAXIMUM RATINGS

(Ta=25 °C)

	Item	Symbol	Rating	Unit
Input	Power dissipation	P <sub>D</sub>	75	mW
	Forward current	I <sub>F</sub>	50	mA
	Reverse voltage	V <sub>R</sub>	5	V
	Pulse forward current <sup>1)</sup>	I <sub>FP</sub>	0.5	A
Output	Collector power dissipation	P <sub>C</sub>	75	mW
	Collector current	I <sub>C</sub>	20	mA
	C - E voltage	V <sub>CEO</sub>	30	V
	E - C voltage	V <sub>ECC</sub>	5	V
Operating temp. <sup>2)</sup>		Topr.	- 20 ~ + 85	
Storage temp. <sup>2)</sup>		Tstg.	- 30 ~ + 100	
Soldering temp. <sup>3)</sup>		Tsol.	260	

<sup>1)</sup> 1. pulse width : t w = 100 μsec, period : T = 10msec.

<sup>2)</sup> No icebound or dew

<sup>3)</sup> For MAX.5 seconds at the position of 1mm from the package

## ELECTRO-OPTICAL CHARACTERISTICS

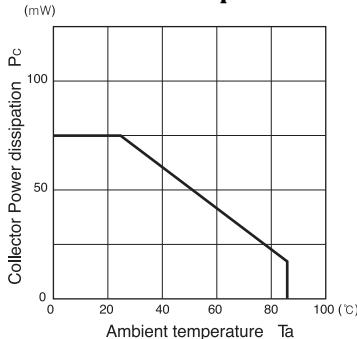
(Ta=25 °C)

	Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Input	Forward voltage	V <sub>F</sub>	I <sub>F</sub> =20mA		1.2	1.4	V
	Reverse current	I <sub>R</sub>	V <sub>R</sub> =5V			10	μA
	Peak wavelength	λ	I <sub>F</sub> =20mA		940		nm
Output	Collector dark current	I <sub>CEO</sub>	V <sub>C</sub> =10V		1	100	nA
Transmiss.	Light current	I <sub>C</sub>	I <sub>F</sub> =20mA, V <sub>E</sub> =5V, Non-shading	0.2		5	mA
	Leakage current	I <sub>CEO</sub>	I <sub>F</sub> =20mA, V <sub>E</sub> =5V(shading)		0.5	5	μA
	C - E saturation voltage	V <sub>CE(sat)</sub>	I <sub>F</sub> =20mA, I <sub>C</sub> =0.05mA		0.15	0.4	V
	Rise time	tr	V <sub>CC</sub> =5V, I <sub>C</sub> =0.1mA, R=1K		50		μsec.
	Fall time	tf			50		μsec.

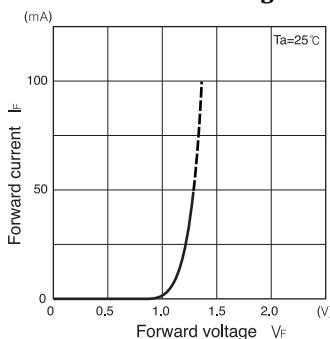
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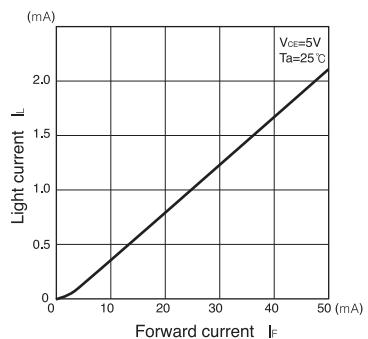
**Collector power dissipation Vs.  
Ambient temperature**



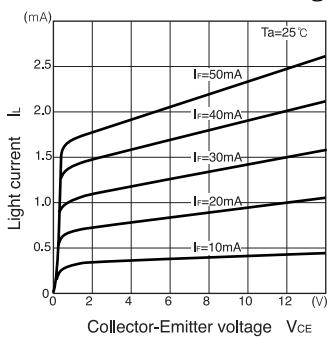
**Forward current Vs.  
Forward voltage**



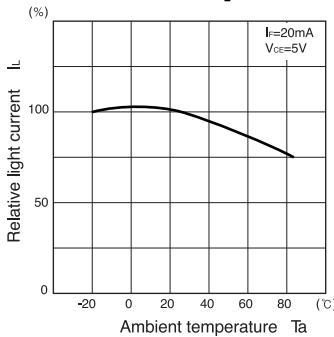
**Light current Vs.  
Forward current**



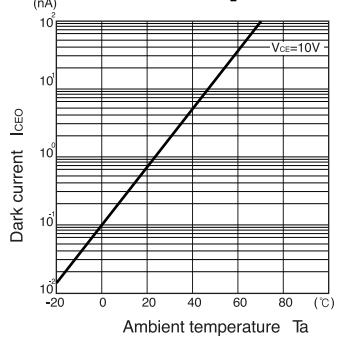
**Light current Vs.  
Collector-Emitter voltage**



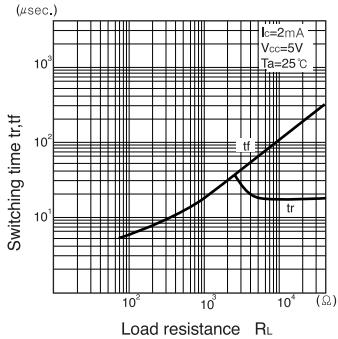
**Relative light current Vs.  
Ambient temperature**



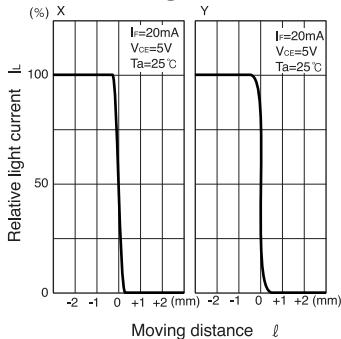
**Dark current Vs.  
Ambient temperature**



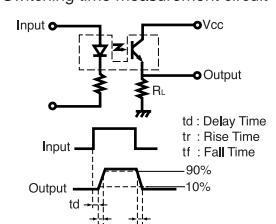
**Switching time Vs.  
Load resistance**



**Relative light current Vs.  
Moving distance**



Switching time measurement circuit



Method of measuring position detection characteristic

