

Photointerrupters(Transmissive)

KODENSHI

SG - 238V

The SG - 238V photointerrupter high - performance standard type,combines high - output GaAs IRED with high sensitive phototransistor.

FEATURES

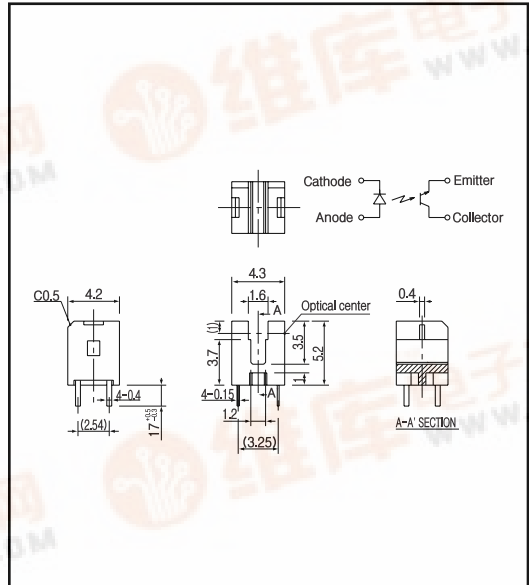
- PWB direct mount type
- GAP : 1.2mm
- Compact

APPLICATIONS

- Cameras
- Video cameras
- Floppy disk drives
- C D - ROM drives

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit	
Input	Power dissipation	P _D	75	mW
	Forward current	I _F	50	mA
	Reverse voltage	V _R	5	V
	Pulse forward current ¹	I _{FP}	0.5	A
Output	Collector power dissipation	P _C	75	mW
	Collector current	I _C	20	mA
	C - E voltage	V _{CEO}	30	V
	E - C voltage	V _{ECO}	5	V
Operating temp. ²	T _{opr.}	- 20 ~ + 85		
Storage temp. ²	T _{stg.}	- 30 ~ + 100		
Soldering temp. ³	T _{sol.}	260		

¹1. pulse width : t w 100 μsec.period : T=10msec.

²2. No icebound or dew ³3. For MAX.5 seconds at the position of 1mm from the package

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Input	Forward voltage	V _F I _F =20mA		1.2	1.4	V
	Reverse current	I _R V _R =5V			10	μA
	Peak wavelength	λ _p I _F =20mA		940		nm
Output	Collector dark current	I _{CEO} V _{CE} =10V		1	100	nA
	Light current	I _C I _F =10mA, V _{EE} =5V, Non - shading	0.25		2.5	mA
	Dark package current	I _{CEOD} I _F =10mA, V _{EE} =5V(shading)			10	μA
	C - E saturation voltage	V _{CE(sat)} I _F =10mA, I _C =0.03mA			0.4	V
	Rise time	T ₁ V _{CC} =4.4V, I _F =15mA, R=100k			125	μsec.
	Fall time	T ₂			1200	μsec.

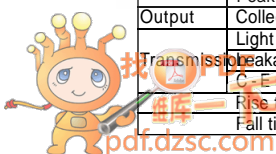
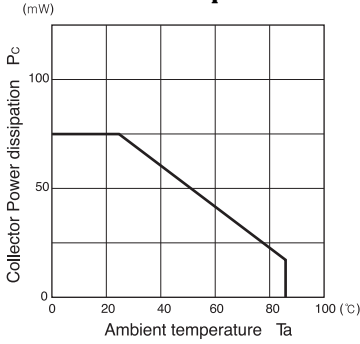


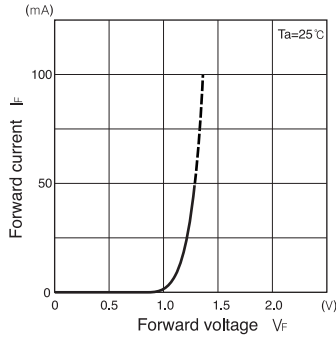
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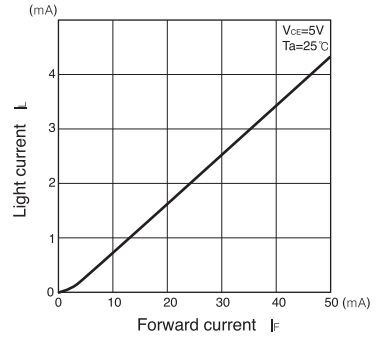
Collector power dissipation Vs. Ambient temperature



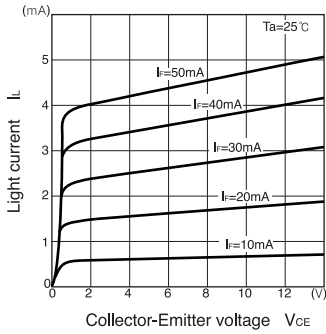
Forward current Vs. Forward voltage



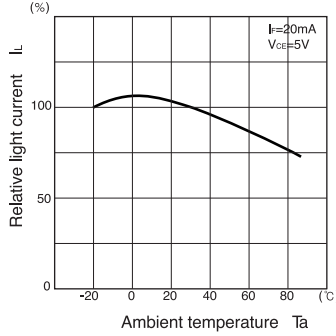
Light current Vs. Forward current



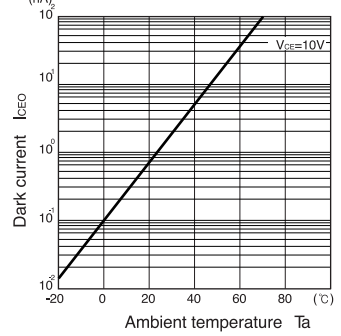
Light current Vs. Collector-Emitter voltage



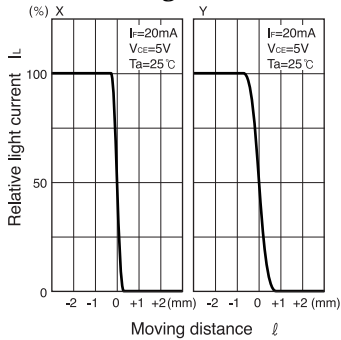
Relative light current Vs. Ambient temperature



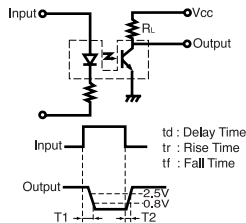
Dark current Vs. Ambient temperature



Relative light current Vs. Moving distance



Switching time measurement circuit



Method of measuring position detection characteristic

