

Photointerrupters(Transmissive)

SG - 211V

The SG – 211V photointerrupter high – performance standard type, combines high – output GaAs IRED with high sensitive phototransistor. Compact size.

FEATURES

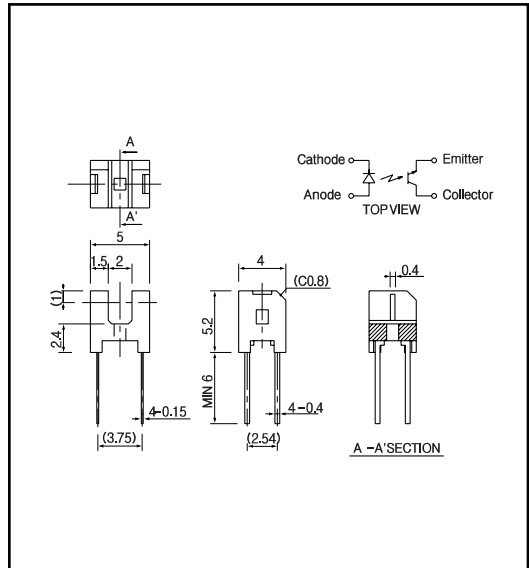
- PWB direct mount type
- GAP : 2.0mm
- Compact
- Low cost

APPLICATIONS

- Floppy disk drives
- CD – ROM drives
- Printers
- Facsimiles
- Cameras

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_{CE0}	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	

*1. t w 100 μ sec. period : T=10msec. *2. No icebound or dew

*3. For MAX. 5 seconds at the position of 2mm from the package

ELECTRO-OPTICAL CHARACTERISTICS

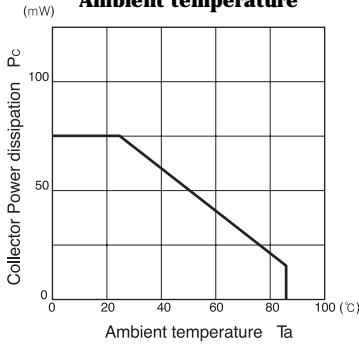
(Ta=25)

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_{CE0}	$V_{CE}=10V$	1	100	nA
	Light current	I_C	$I_F=10mA, V_E=5V, (Nonshading)$	0.25		1.2
Transmissi	leakage current	I_{CE0D}	$I_F=10mA, V_E=5V, (shading)$	0.5	10	μA
	C - E saturation voltage	$V_{CE(sat)}$	$I_F=10mA, I_C=0.03mA$	0.15	0.4	V
	Rise time	t_r	$V_{CC}=5V, I_C=0.1mA, R=1k$		50	150
	Fall time	t_f		50	150	μ sec.

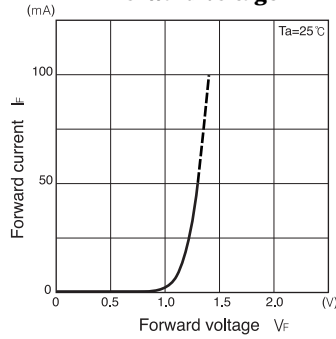
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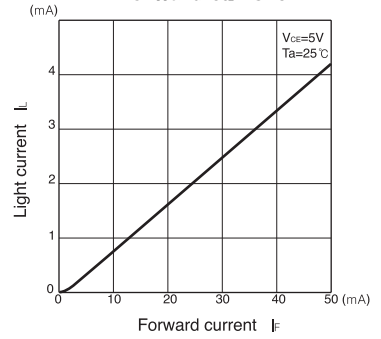
Collector power dissipation Vs. Ambient temperature



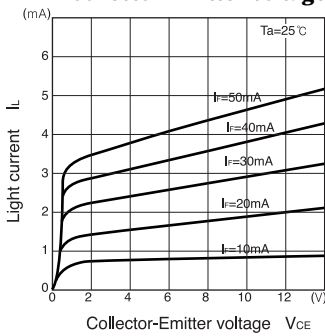
Forward current Vs. Forward voltage



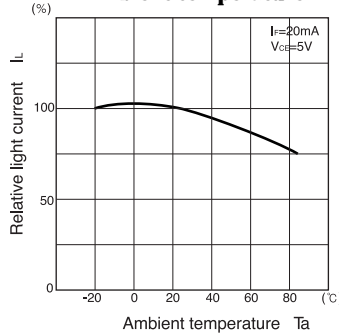
Light current Vs. Forward current



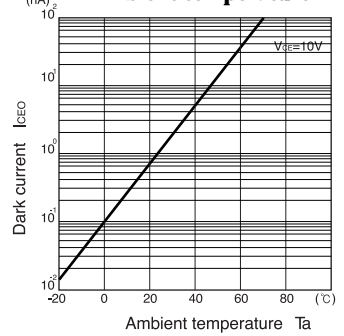
Light current Vs. Collector-Emitter voltage



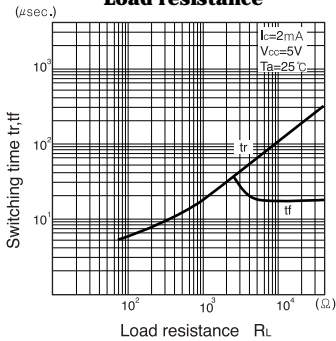
Relative light current Vs. Ambient temperature



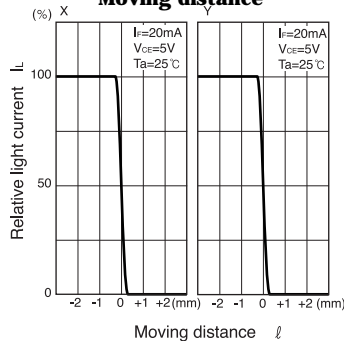
Dark current Vs. Ambient temperature



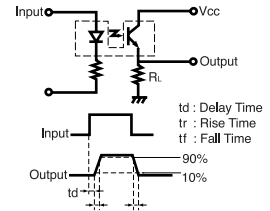
Switching time Vs. Load resistance



Relative light current Vs. Moving distance



Switching time measurement circuit



Method of measuring position detection characteristic

