

SG23FI(2)

The SG23FI(2) Photointerrupter high-performance standard type, combines high-output GaAs IRED with high sensitive phototransistor.

Features

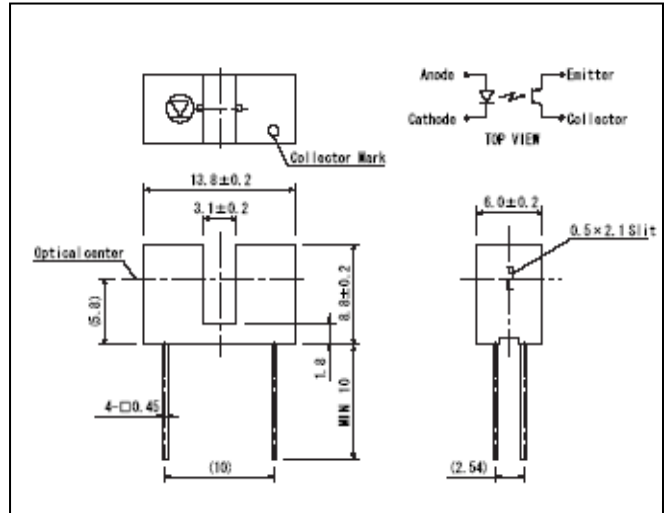
- PWB direct mount type
- GAP : 3.1mm
- Widely applicable

Applications

- Printers
- Facsimiles
- Scanners

Dimensions

(Unit : mm)



Absolute Maximum Ratings

[Ta = 25°C]

Description		Symbol	Ratings	Unit
Input	Power dissipation	P_D	100	mW
	Forward current	I_F	60	mA
	Reverse voltage	V_R	5	V
	Pulse forward current *1	I_{FP}	1	A
Output	Collector power dissipation	P_C	100	mW
	Collector current	I_C	40	mA
	Collector-Emitter voltage	V_{CEO}	30	V
	Emitter-Collector voltage	V_{ECO}	5	V
Operating temp. *2		T_{opr}	-20~+85	°C
Storage temp. *2		T_{stg}	-30~+85	°C
Soldering temp. *3		T_{sol}	260	°C

*1. Pulse width $t_w \leq 100\mu s$ period $T = 10ms$

*2. No icebound or dew

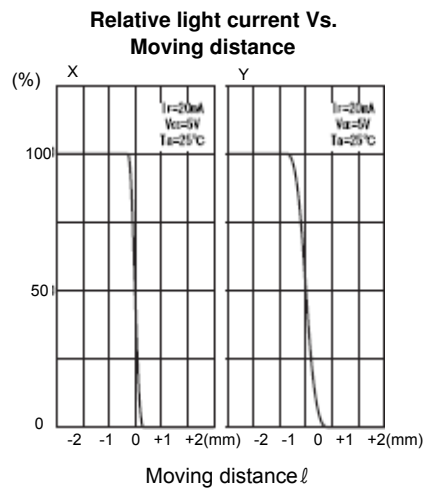
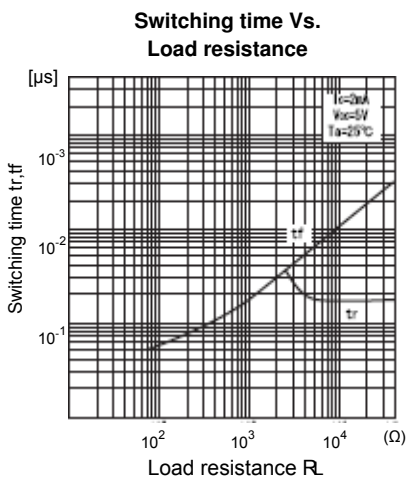
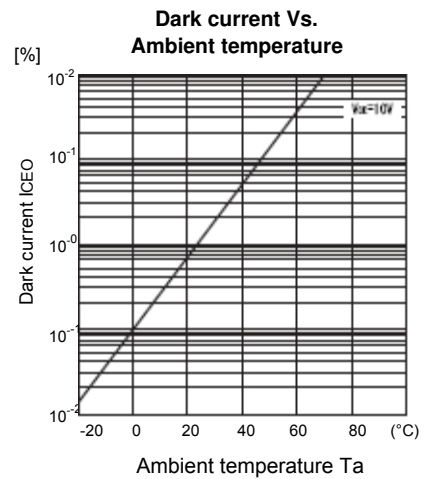
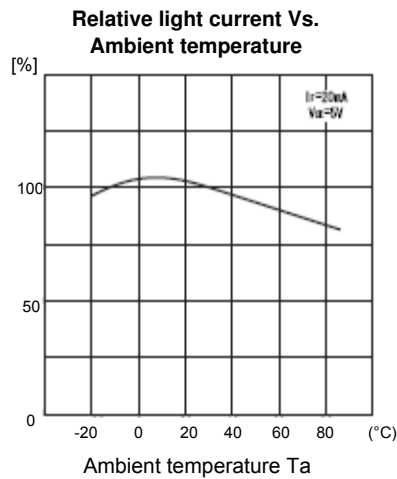
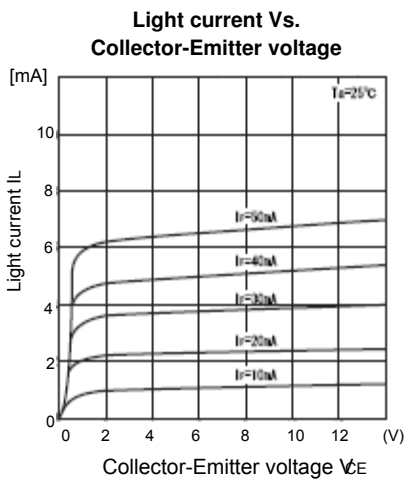
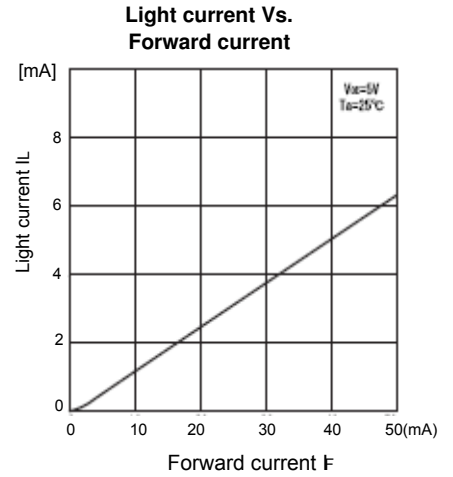
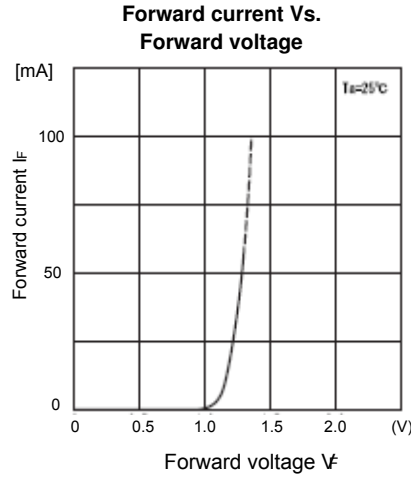
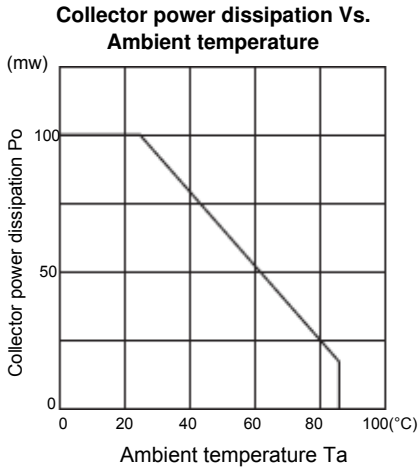
*3. For MAX 5 seconds at the position of 1mm from the resin edge

Electro-Optical Characteristics

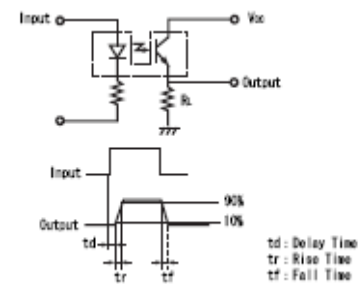
[Vcc= 5V, Ta = 25°C]

Parameter		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}	$V_{CE} = 10V, 0 lx$	-	-	100	nA
Transmission	Light current	I_C	$I_F = 20mA, V_{CE} = 5V, Non-shading$	0.1	-	10	mA
	C-E saturation Voltage	$I_{CE(sat)}$	$I_F = 20mA, I_C = 0.1mA$	-	0.15	0.4	V
	Rise time	t_r	$V_{CC} = 5V, I_C = 2mA, R_L = 100\Omega$	-	4	-	μs
	Fall time	t_f		-	5	-	μs

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Switching time measurement circuit



Method of measuring position characteristic

