

# SG23FT

The SG23FT Photointerrupter high-performance standard type, combines high-output GaAs IRED with high sensitive phototransistor.

### Features

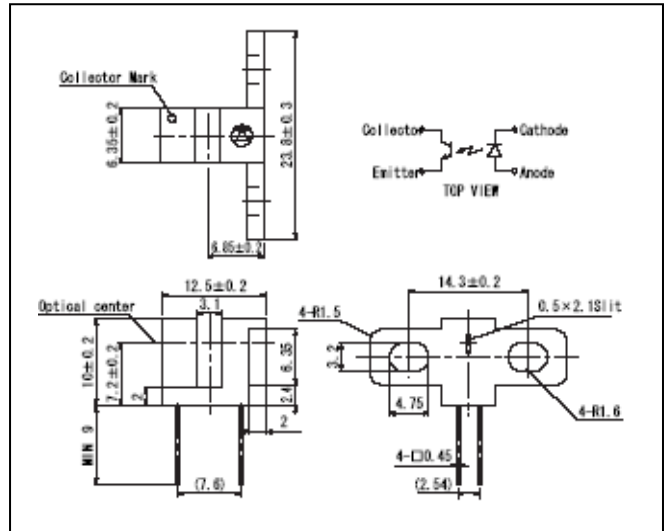
- PWB direct mount type
- GAP : 3.1mm
- Double-sided screw-mount

### Applications

- Printers
- Plotters
- Robots

### 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

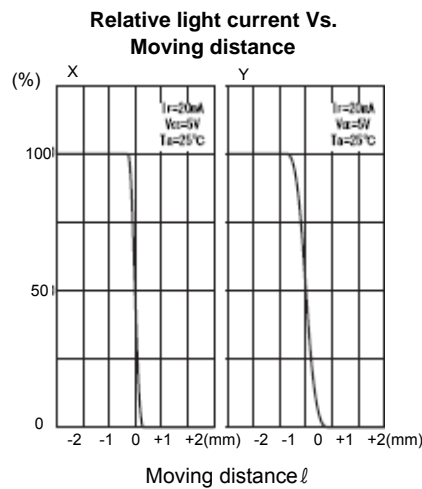
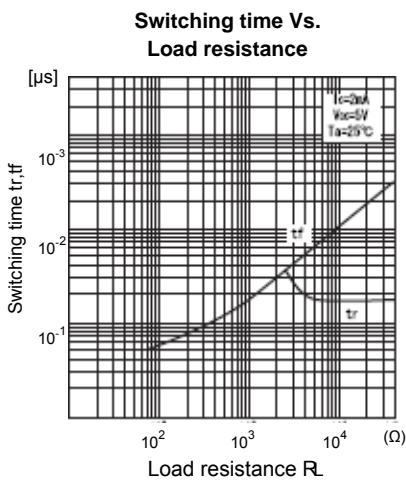
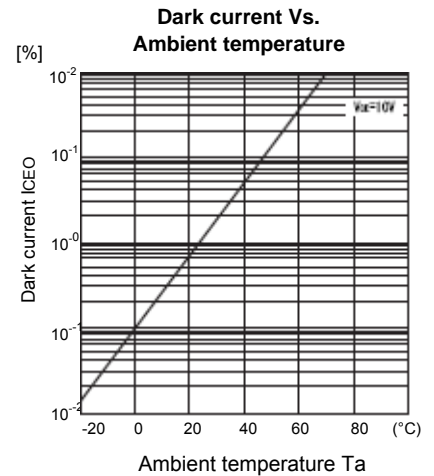
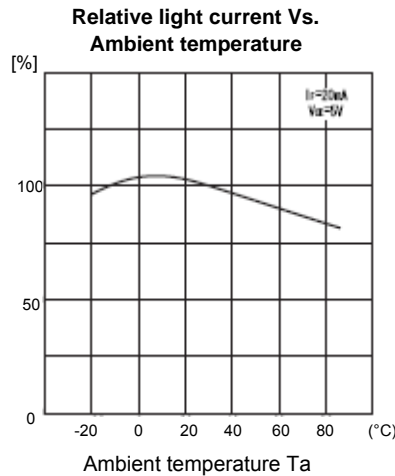
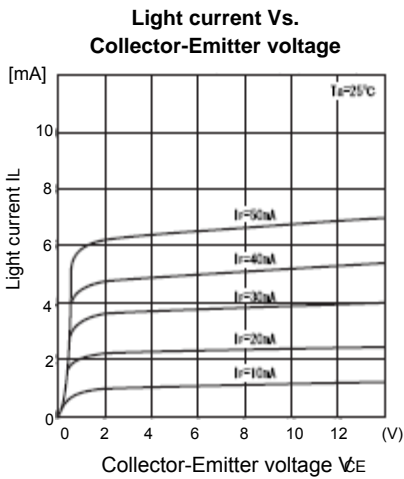
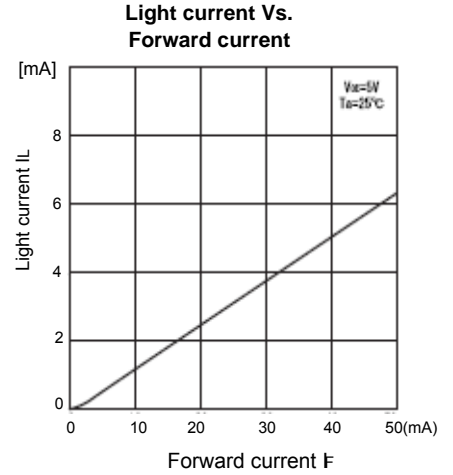
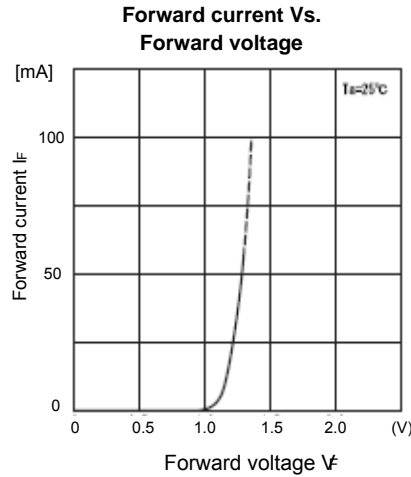
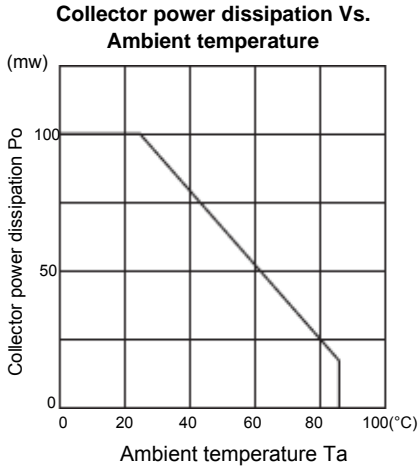
\*3. For MAX 5 seconds at the position of 1mm from the resin edge

### Electro-Optical Characteristics

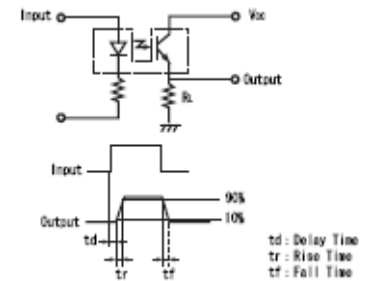
[Vcc= 5V, Ta = 25°C]

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	$\mu A$
	Peak wavelength	$\lambda_p$	$I_F=20mA$	-	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	0.3	-	10	mA
	Leakage current	$I_{CEO D}$	$I_F=20mA, V_{CE}=5V,$ shading	-	-	10	$\mu A$
	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	-	$\mu s$
	Fall time	$t_f$		-	5	-	$\mu s$

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Switching time measurement circuit



Method of measuring position characteristic

