

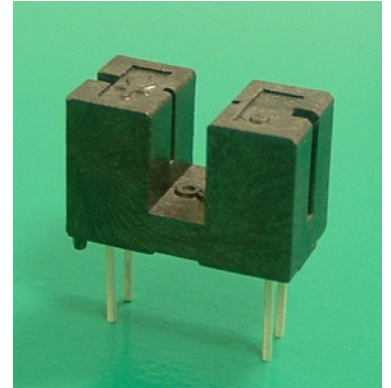
## PHOTO INTERRUPTER (Transmission)

### General Description

The FI-220S is Photo-Interrupter high-performance standard type, combines high-output GaAs IRED with high sensitive Photo-transistor.

### Features

- PWB direct mount type
- GAP:3.0mm
- High resolution (slit 0.25mm)
- Meet RoHS



### Applications

- CD changers
- Printers
- Scanners
- Encoders

### MAXIMUM RATINGS

(Ta=25°C)

Item		Symbol	Rating	Unit
Input	Power dissipation	PD	100	mW
	Forward current	IF	60	mA
	Reverse voltage	VR	5	V
	Pulse forward current *1	IFP	1	A
Output	Collector power dissipation	PC	100	mW
	Collector current	IC	40	mA
	Collector-Emitter voltage	VCEO	30	V
	Emitter-Collector voltage	VECO	5	V
Operating temp.		Topr.	-20 ~ +85	°C
Storage temp.		Tstg.	-40 ~ +100	°C
Soldering temp. *2		Tsol.	260	°C

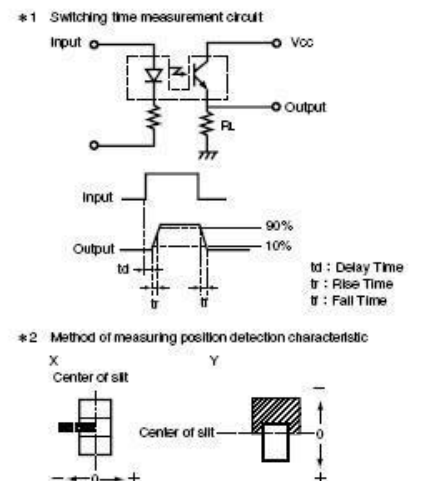
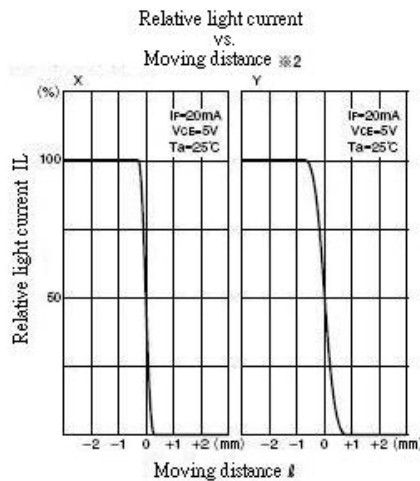
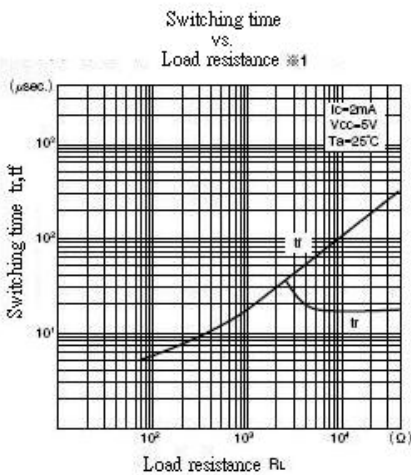
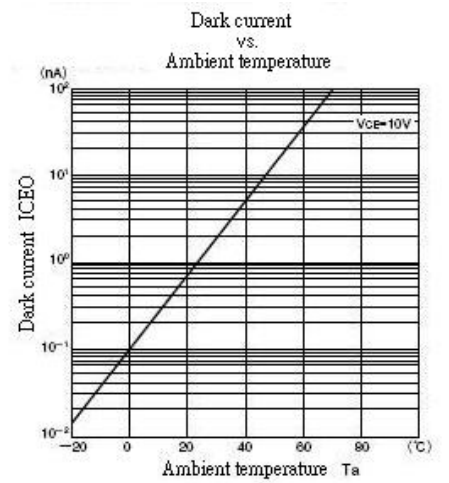
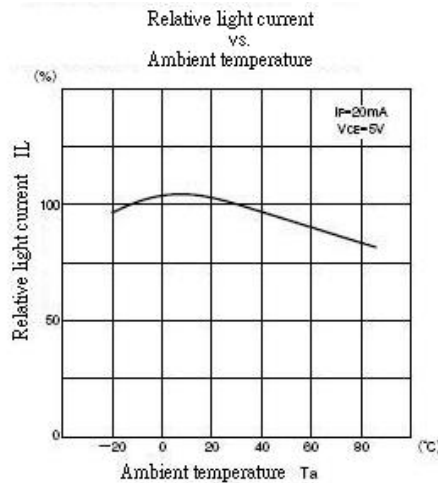
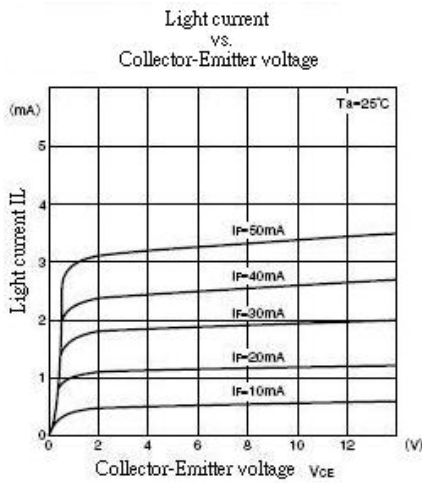
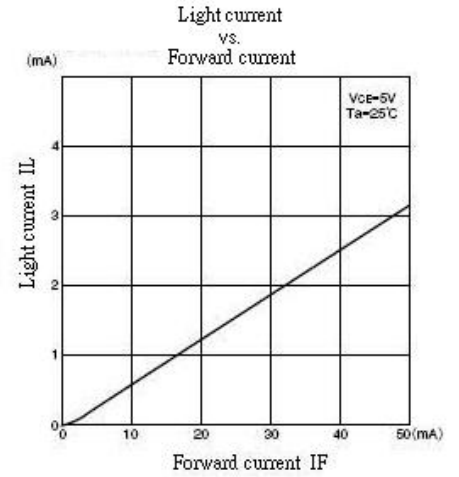
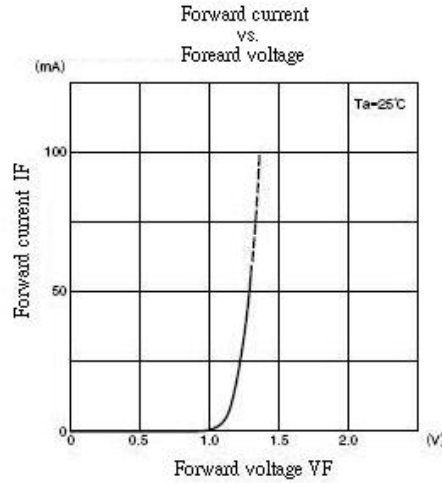
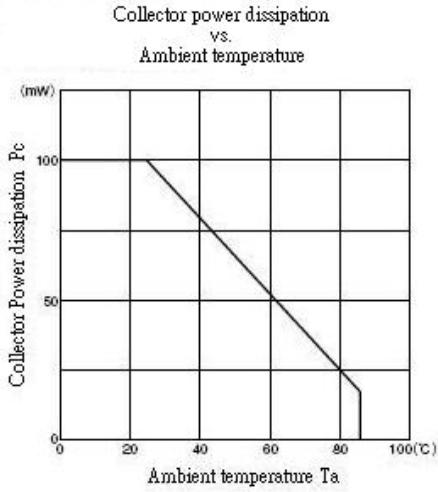
\*1. pulse width :  $t_w \leq 100\mu\text{sec}$ . Period :  $t = 10\text{msec}$

\*2. For MAX. 5seconds at the position of 2mm from the resin edge

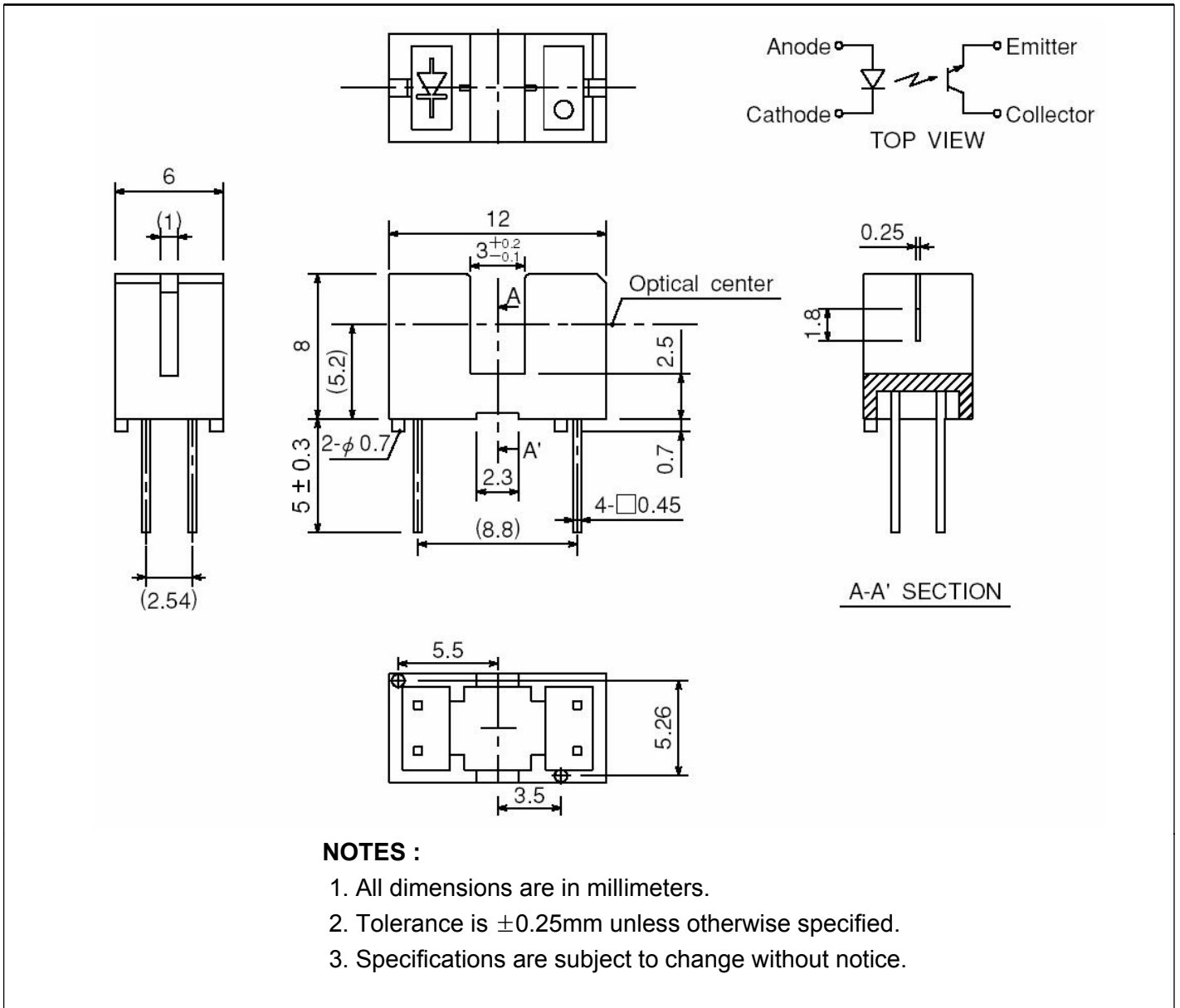
### ELECTRO-OPTICAL CHARACTERISTICS

(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 <sub>p</sub>	I <sub>F</sub> =20mA	-	940	-	nm
Output	Collector dark current	I <sub>CEO</sub>	V <sub>CE</sub> =10V	-	1	100	nA
Transmission	Light current	I <sub>C</sub>	I <sub>F</sub> =20mA, V <sub>CE</sub> =5V (Non-shading)	0.1	-	2.5	mA
	Leakage current	I <sub>CEOD</sub>	I <sub>F</sub> =20mA, V <sub>CE</sub> =5V (Shading)	-	0.2	2	μA
	C-E saturation voltage	V <sub>CE(sat)</sub>	I <sub>F</sub> =30mA, I <sub>C</sub> =0.05mA	-	0.15	0.4	V
Switching Speeds	Rise time	t <sub>r</sub>	V <sub>CC</sub> =2V, I <sub>C</sub> =0.5mA	-	25	-	μsec
	Fall time	t <sub>f</sub>	R <sub>L</sub> =1000Ω	-	30	-	μsec



## DIMENSIONS



## APPLICATION CIRCUIT

