OPTO-SENSOR

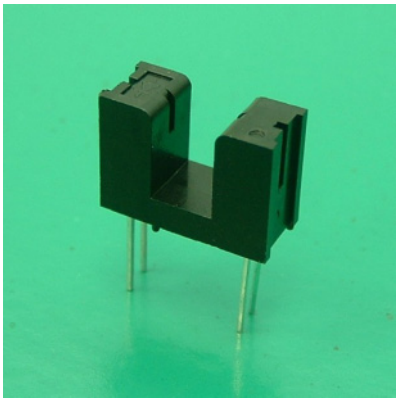
RoHS COMPLIANT

Pb-Free

PHOTO INTERRUPTER (Transmission)

General Description

The FI-206L is Photo-Interrupter high-performance standard type. combines high-output GaAs IRED with high sensitive Photo-transistor.



Features

- PWB direct mount type
- GAP:5.0mm
- With the installation positioning boss
- Low cost
- Meet RoHS

Applications

- Facsimiles
- Printers
- Scanner
- Copies
- Amusement machines

MAXIMUM RATINGS

(Ta=25℃)

Item		Symbol	Rating	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.		Topr.	-20 ~ +85	℃
Storage temp.		Tstg.	-30 ~ +85	℃
Soldering temp. *2		Tsol.	260	℃

*1. pulse width : tw ≦100usec. Period : t = 10msec

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

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	uA
	Peak wavelength	λp	I_F=20mA	-	940	-	nm
Output	Collector dark current	I_{CEO}	V_{CE}=10V	-	1	100	nA
Transmission	Light current	I_C	I_F=20mA,V_{CE}=5V (Non-shading)	0.5	1.5	10	mA
	Leakage current	I_{CEOD}	I_F=20mA,V_{CE}=5V (Shading)	-	0.5	10	uA
	C-E saturation voltage	V_{CE}(sat)	I_F=20mA,I_C=0.1mA	-	0.15	0.4	V
Swithching Speeds	Rise time	tr	Vcc=5V,Ic=2mA	-	4	-	usec
	Fall time	tf	R_L=100Ω	-	5	-	usec

RoHS COMPLIANT

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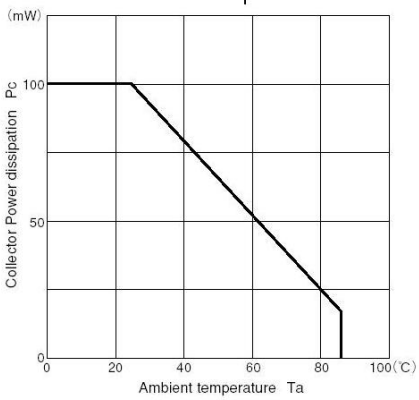
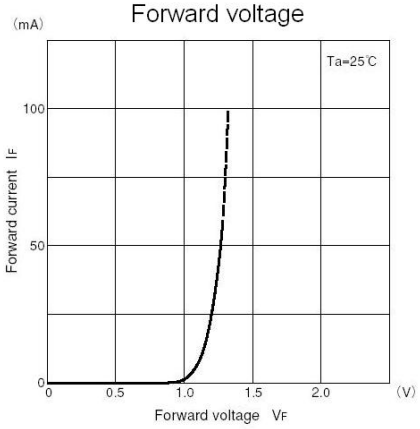
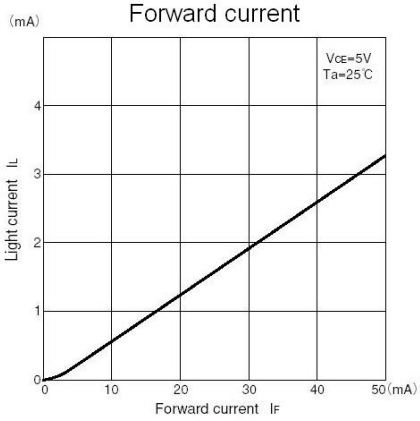
Collector power dissipation
vs.
Ambient temperature



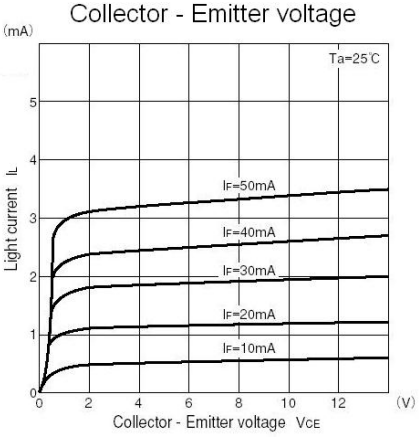
Forward current
vs.
Forward voltage



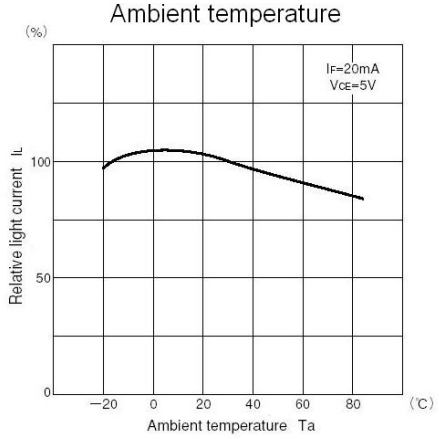
Light current
vs.
Forward current



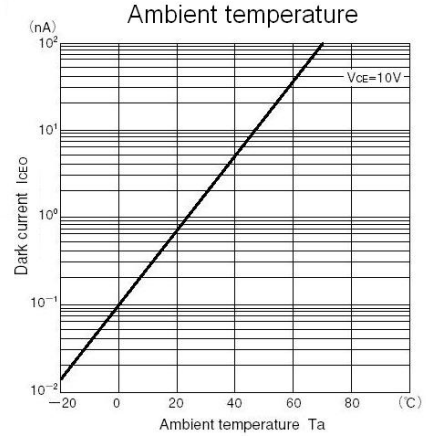
Light current
vs.
Collector - Emitter voltage



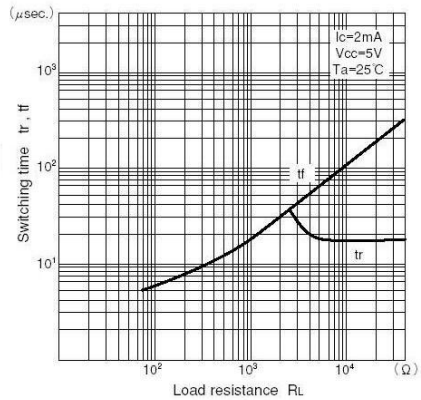
Relative light current
vs.
Ambient temperature



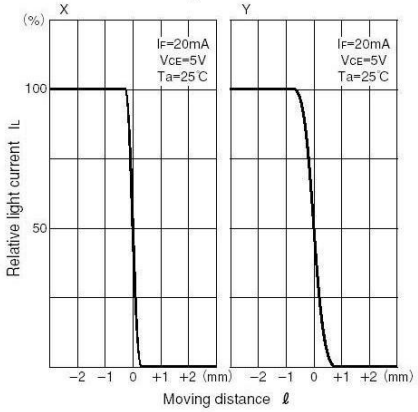
Dark current
vs.
Ambient temperature



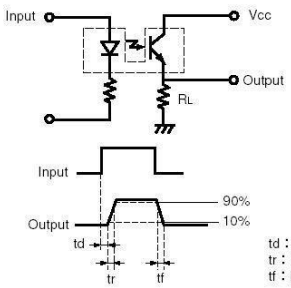
Switching time
vs.
Load resistance



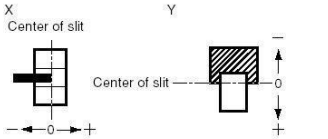
Relative light current
vs.
Moving distance



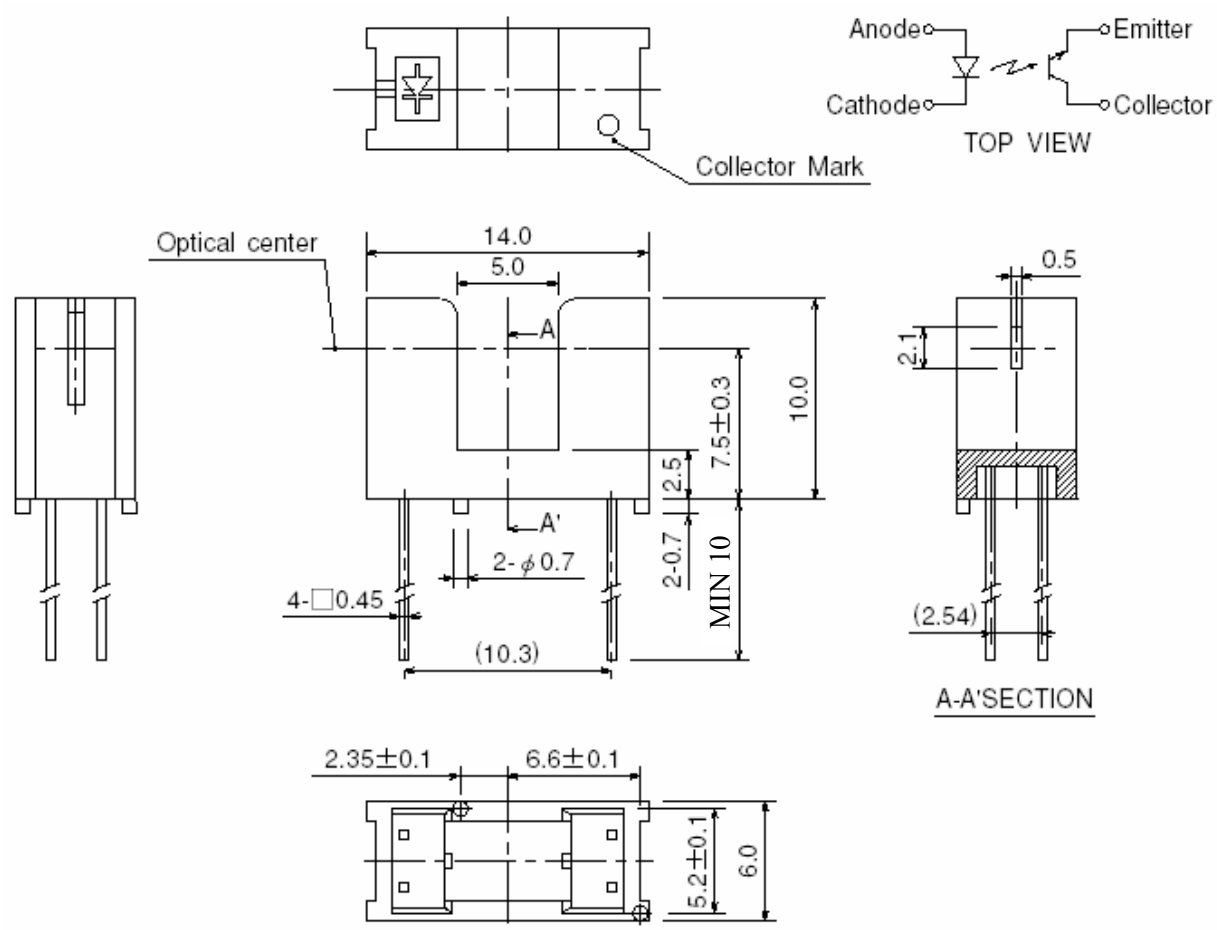
＊1 Switching time measurement circuit



＊2 Method of measuring position detection characteristic



DIMEMSIONS



NOTES :

1. All dimensions are in millimeters.
2. Tolerance is ±0.25mm unless otherwise specified.
3. Specifications are subject to change without notice.

APPLICATION CIRCUIT