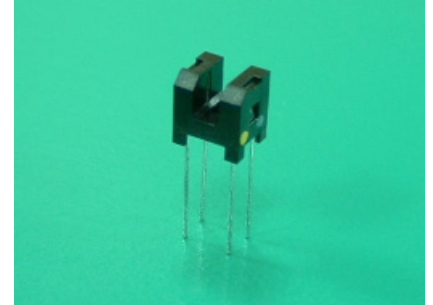


PHOTO INTERRUPTER (Transmission)

General Description

The FI-211 is Photo-Interrupter high-performance standard type. combines high-output GaAs IRED with high sensitive Photo-transistor.



Features

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

Applications

- Facsimiles
- Printers
- Scanner
- Cameras
- CD-ROM drives

MAXIMUM RATINGS

(Ta=25)

Item		Symbol	Rating	Unit
Input	Power dissipation	PD	75	mW
	Forward current	IF	50	mA
	Reverse voltage	VR	5	V
	Pulse forward current *1	IFP	0.5	A
Output	Collector power dissipation	PC	75	mW
	Collector current	IC	20	mA
	Collector-Emitter voltage	VCEO	30	V
	Emitter-Collector voltage	VECO	5	V
Operating temp.		Topr.	-20 ~ +85	
Storage temp.		Tstg.	-30 ~ +100	
Soldering temp. *2		Tsol.	260	

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

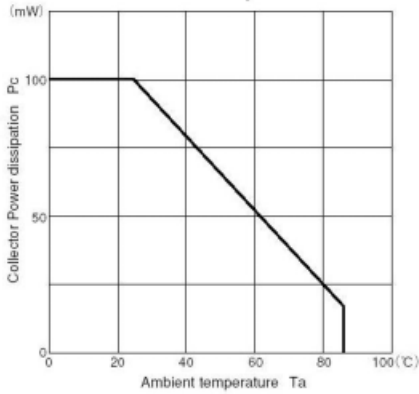
*2. For MAX. 5seconds at the position of 1mm from the resin edge

ELECTRO-OPTICAL CHARACTERISTICS

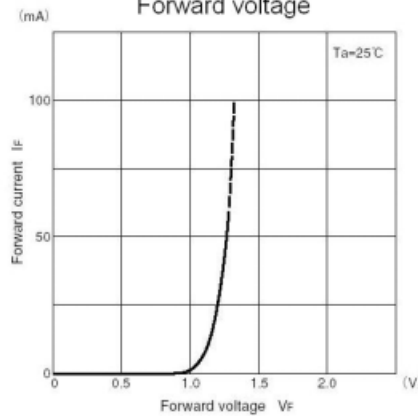
(Ta=25)

Item		Symbol	Conditions	Min.	Typ.	Max.	Unit
Input	Forward voltage	VF	IF=20mA	-	1.2	1.4	V
	Reverse current	IR	VR=5V	-	-	10	uA
	Peak wavelength	λ_p	IF=20mA	-	940	-	nm
Output	Collector dark current	ICEO	VCE=10V	-	1	100	nA
Transmission	Light current	IC	IF=10mA, VCE=5V (Non-shading)	0.25	-	1.2	mA
	Leakage current	ICEOD	IF=10mA, VCE=5V (Shading)	-	0.5	10	uA
	C-E saturation voltage	VCE(sat)	IF=10mA, IC=0.03mA	-	0.15	0.4	V
Switching Speeds	Rise time	tr	Vcc=5V, Ic=0.1mA RL=1k	-	50	150	usec
	Fall time	tf		-	50	150	usec

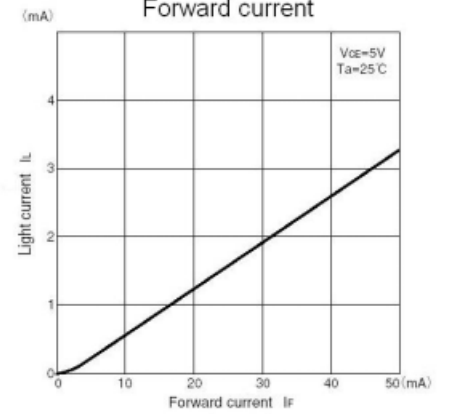
Collector power dissipation
vs.
Ambient temperature



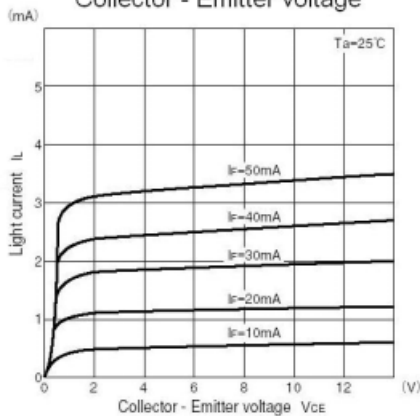
Forward current
vs.
Forward voltage



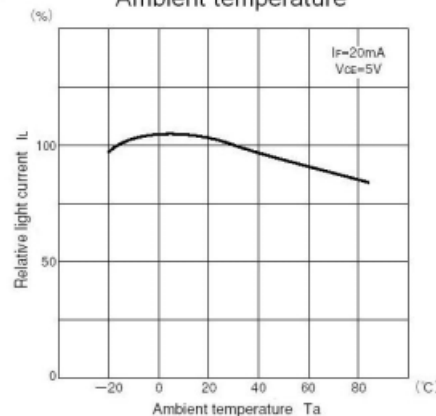
Light current
vs.
Forward current



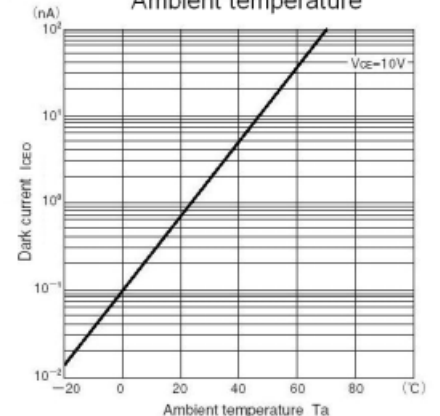
Light current
vs.
Collector - Emitter voltage



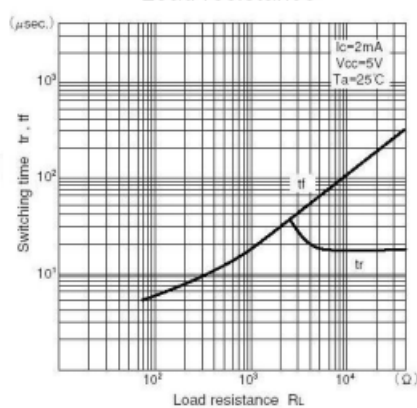
Relative light current
vs.
Ambient temperature



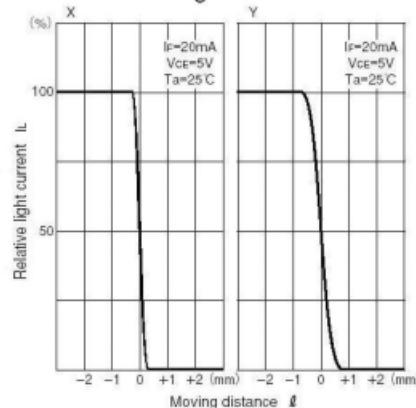
Dark current
vs.
Ambient temperature



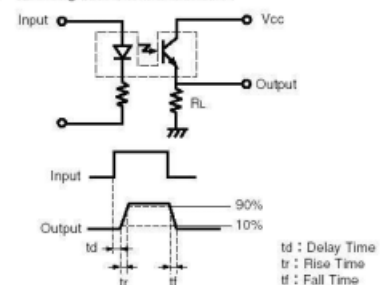
Switching time
vs.
Load resistance



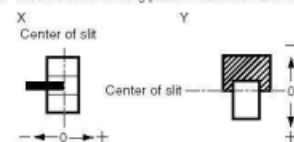
Relative light current
vs.
Moving distance



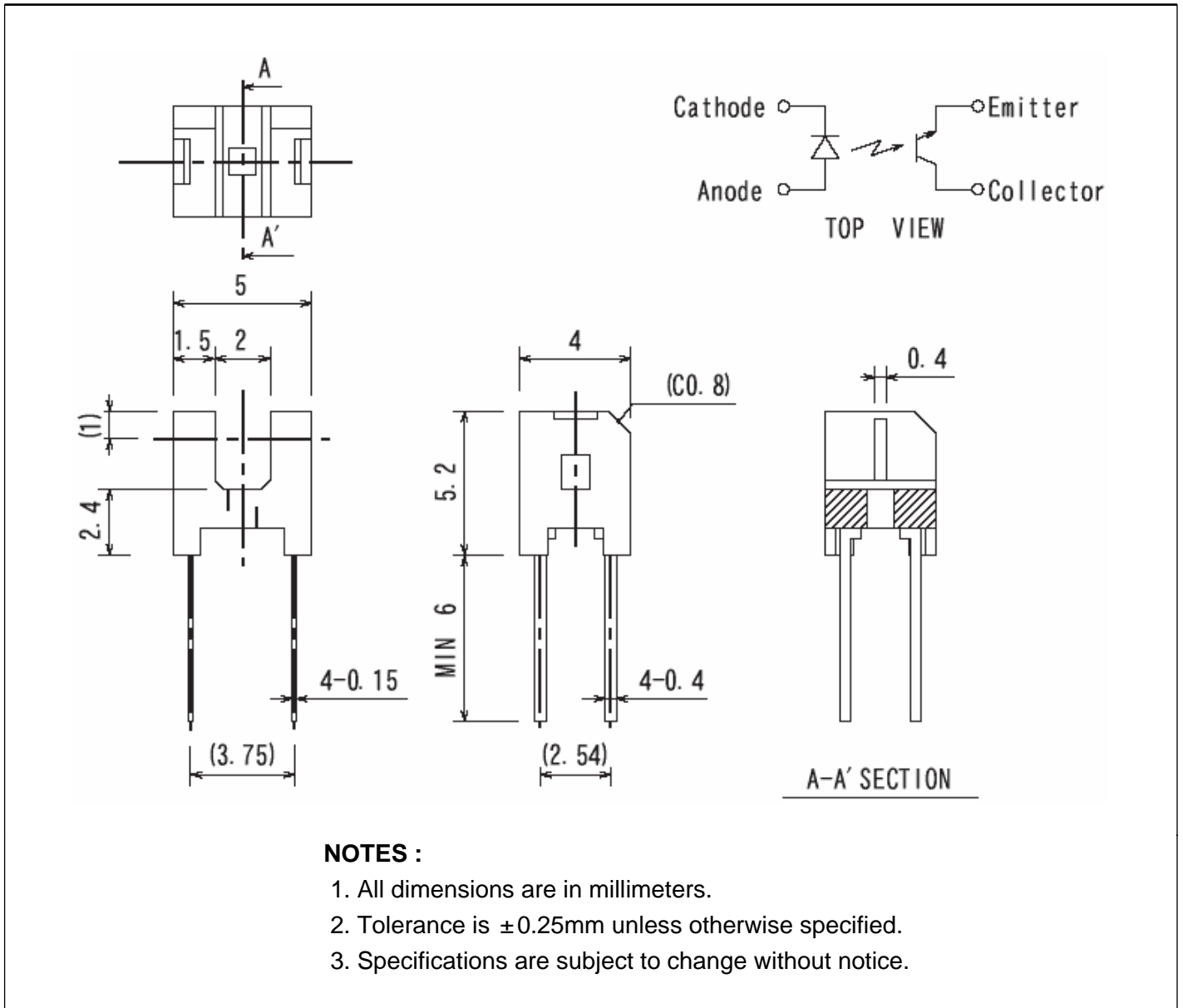
*1 Switching time measurement circuit



*2 Method of measuring position detection characteristic



DIMENSIONS



APPLICATION CIRCUIT

