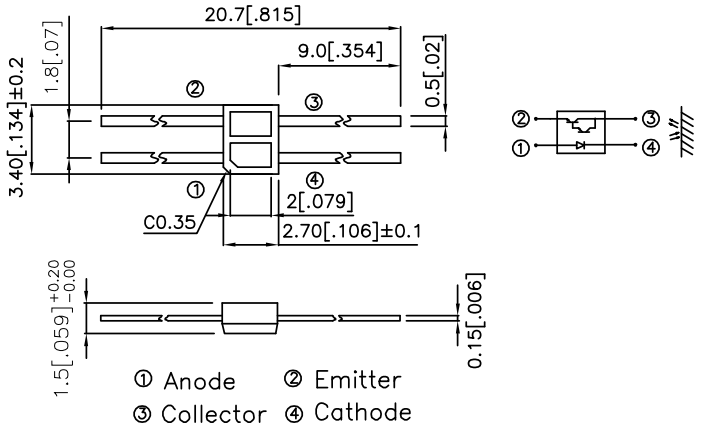
SUBMINIATURE, HIGH SENSITIVITY PHOTOINTERRUPTER

Features

- Compact and thin
- Visible light cut-off type
- High sensitivity
- RoHS Compliant.



Applications

- Cassette tape recorders,VCRs.
- Floppy disk drives.
- Various microcomputerized control equipment.

UNIT : MM[INCH]
TOLERANCE : ±0.25[±0.01] UNLESS OTHERWISE NOTED.

*Absolute Maximum Ratings (T_A=25°C)

Parameter		Symbol	Rating	Unit
Input	Forward current	I_F	50	mA
	Reverse voltage	V_R	6	V
	Power dissipation	P	75	mW
Output	Collector power dissipation	P_C	75	mW
	Collector current	I_C	50	mA
	Collector-emitter voltage	V_{CEO}	35	V
	Emitter-collector voltage	V_{ECO}	6	V
Operating temperature		Topr	-25~+85	°C
Storage temperature		Tstg	-40~+100	°C
Soldering temperature (1/16 inch from body for 5 seconds)		Tsol	260	°C

Electrical / Optical Characteristics at T_A=25°C

Parameter			Symbol	Conditions	Min.	Typ.	Max.	Unit
Input	Forward voltage		V_F	I_F=20mA	1.0	1.2	1.5	V
	Reverse current		I_R	V_R=6V	_	_	10	μA
Output	Collector dark current		I_{CEO}	V_{CE} =10V,I_F=0mA	_	_	10^{-6}	A
Transfer Charac-teristics	*1 Collector Current		I_C	V_{CE}=2V, I_F=4mA	_	3	_	mA
	*2 Leak Current		I_{LEAK}	V_{CE}=5V, I_F=4mA	_	_	5	μA
	Response time	Rise time	tr	V_{CE}=2V,I_C=10mA R_L=1KΩ,d=1mm	_	80	400	μSec
		Fall time	tf		_	70	400	μSec

*1 The condition and arrangement of the reflective object are shown below.
*2 Without reflective object.

Test Condition and Arrangement for Collector Current

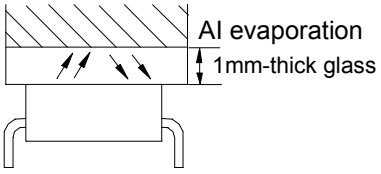


Fig. 1 Forward Current vs. Forward Voltage

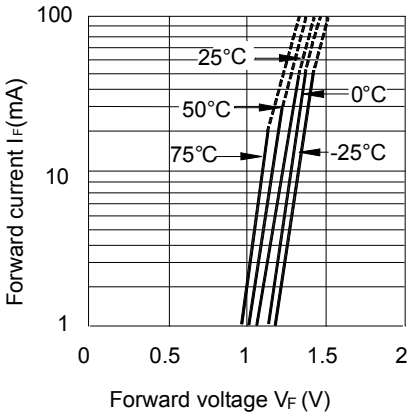


Fig. 2 Collector Current vs. Forward Current

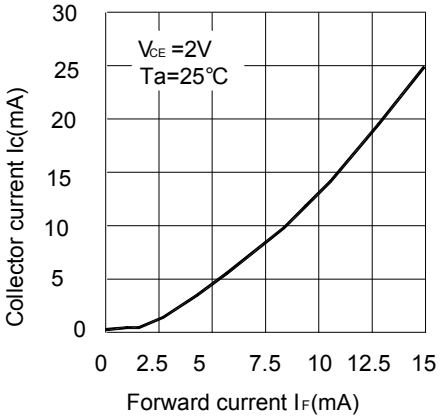


Fig. 3 Collector Current vs. Collector-emitter Voltage

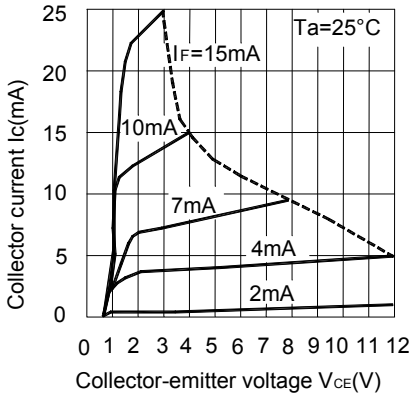


Fig. 4 Relative Collector Current vs. Ambient Temperature

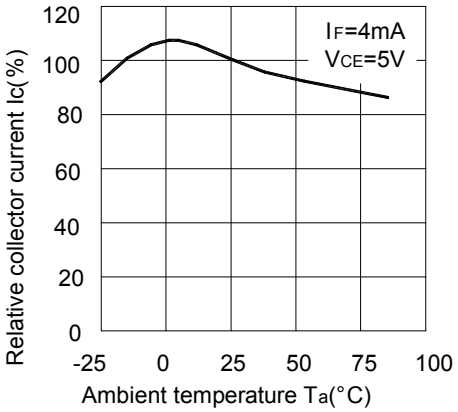
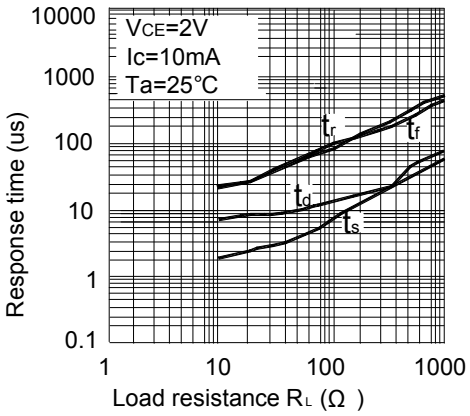


Fig. 5 Response Time vs. Load Resistance



Test Circuit for Response Time

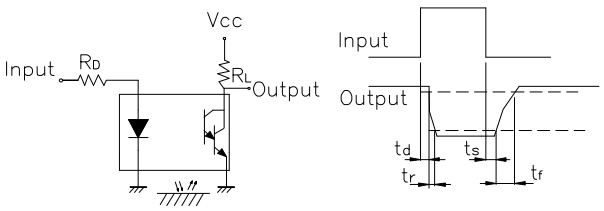


Fig. 6 Collector Dark Current vs. Ambient Temperature

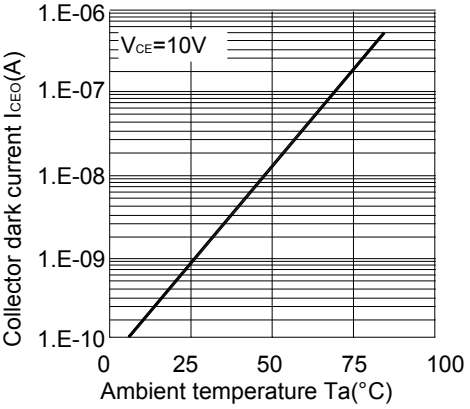


Fig. 7 Relative Collector Current vs. Distance between Sensor and Al Evaporation Glass

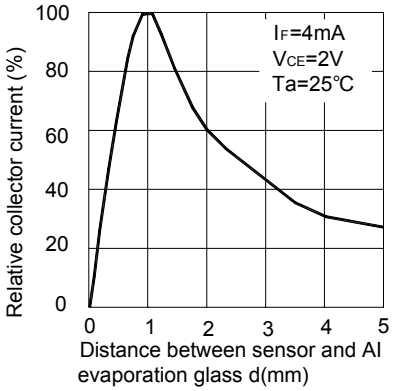


Fig. 8 Relative Collector Current vs. Card Moving Distance (1)

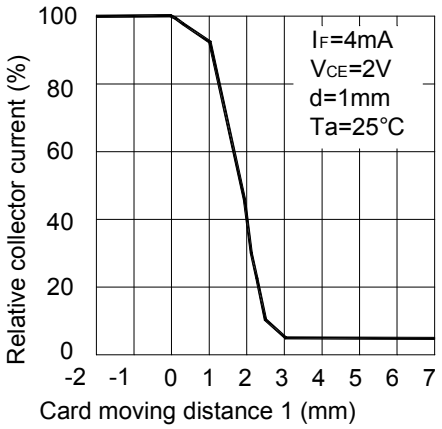
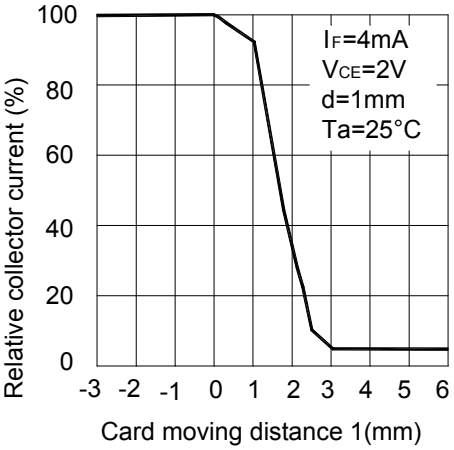
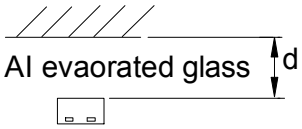


Fig. 9 Relative Collector Current vs. Card Moving Distance (2)



Test Condition for Distance & Detecting Position Characteristics

Correpond to Fig. 7



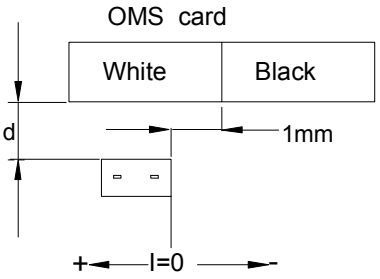
Correpond to Fig. 8

Test condition

I_F=4mA

V_{CE}=2V

d=1mm



Correpond to Fig. 9

Test condition

I_F=4mA

V_{CE}=2V

d=1mm