

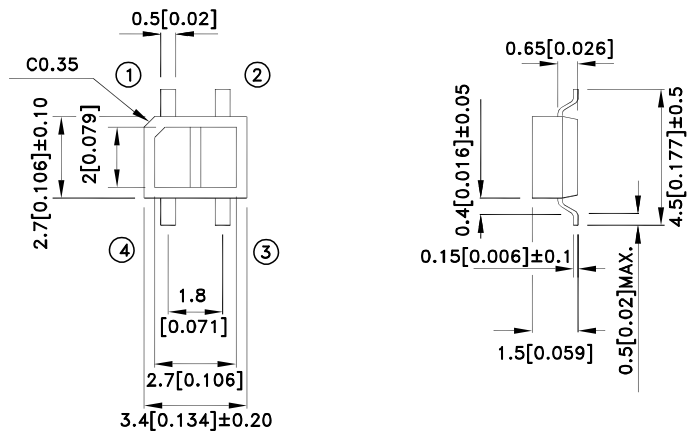
SUBMINIATURE, HIGH SENSITIVITY PHOTOINTERRUPTER

*Features

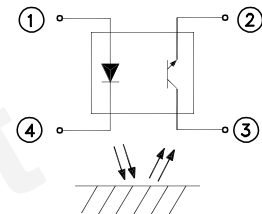
- Compact and thin.
- Visible light cut-off type.
- High sensitivity.
- Package: 1000pcs/Reel.
- Moisture sensitivity level : level 4.
- RoHS Compliant.

*Applications

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



- ① Anode ② Emitter
③ Collector ④ Cathode



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25(0.01")$ unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. The specifications, characteristics and technical data described in the data-sheet are subject to change without prior notice.

*Absolute Maximum Ratings

Parameter		Symbol	Rating	Unit
Input	Forward current	I_F	50	mA
	Reverse voltage	V_R	6	V
	Power dissipation	P_D	75	mW
	Peak Forward Current (Pulse Width $\leq 100\mu\text{s}$, Duty Cycle =1%)	I_{FP}	1	A
Output	Collector-emitter voltage	V_{CEO}	35	V
	Emitter-collector voltage	V_{ECO}	6	V
	Collector current	I_C	20	mA
	Collector power dissipation	P_C	75	mW
Operating temperature		T_{opr}	-25~+85	°C
Storage temperature		T_{stg}	-40~+100	°C

Note:

1. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



Electro-optical Characteristics

Parameter		Symbol	Conditions	Min.	TYP.	Max.	Unit	
Input	Forward Voltage	V_F	$I_F=20\text{mA}$	1.0	1.2	1.5	V	
	Reverse Current	I_R	$V_R=6\text{V}$	-	-	10	μA	
	Peak Wavelength	λ_P	$I_F=20\text{mA}$	-	940	-	nm	
Output	Collector Dark Current	I_{CE0}	$V_{CE}=20\text{V}$	-	10^{-9}	10^{-7}	A	
Transfer characteristics	*1 Collector Current	I_C	$V_{CE}=2\text{V}$ $I_F=4\text{mA}$	10	-	400	μA	
	*2 Leak Current	I_{LEAK}	$V_{CE}=2\text{V}$ $I_F=4\text{mA}$	-	-	0.1	μA	
	Response time	Rise time	t_r	$V_{CE}=2\text{V}$ $I_C=100\mu\text{A}$ $R_L=1\text{K}\Omega, d=1\text{mm}$	-	20	100	μsec
		Fall time	t_f		-	20	100	μsec

*1 The condition and arrangement of the reflective object are shown below.

*2 Without reflective object.

*3 Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Classification table of radiant flux

BIN CODE	E	F	G
I_C (μA)	10~120	100~250	200~400

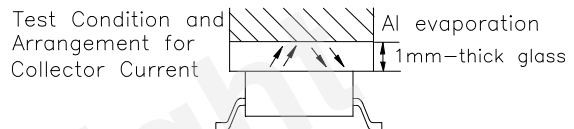


Fig. 1 Forward Current vs. Forward Voltage

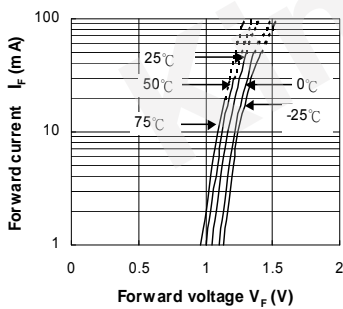


Fig. 2 Collector Current vs. Forward Current

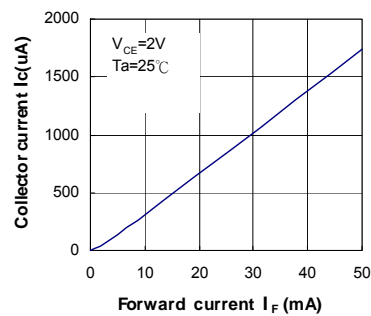


Fig. 3 Collector Current vs. Collector-emitter Voltage

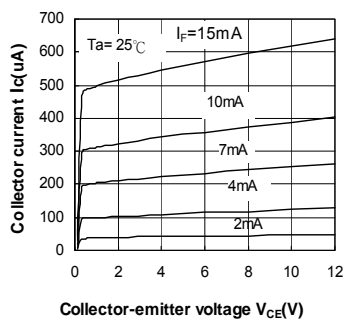


Fig. 4 Relative Collector Current vs. Ambient Temperature

