

# Photointerrupter, encased type

## RPI-574

A positioning pin is provided on the external case to allow precise mounting.

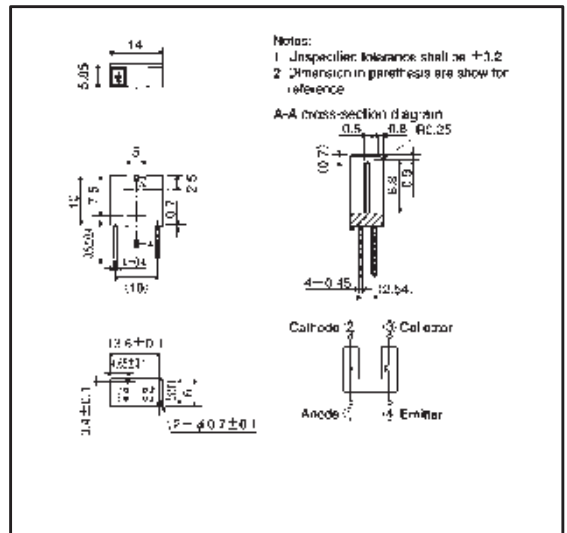
### ● Applications

Optical control equipment

### ● Features

- 1) Small slit width (0.5 mm) for high precision.
- 2) Fast response.
- 3) Built-in visible light filter.

### ● External dimensions (Units: mm)



### ● Absolute maximum ratings (Ta = 25°C)

	Parameter	Symbol	Limits	Unit
Input(LED)	Forward current	$I_F$	50	mA
	Reverse voltage	$V_R$	5	V
	Power dissipation	$P_D$	80	mW
Output (photo-transistor)	Collector-emitter voltage	$V_{CE0}$	30	V
	Emitter-collector voltage	$V_{EC0}$	4.5	V
	Collector current	$I_C$	30	mA
	Collector power dissipation	$P_C$	80	mW
	Operating temperature	$T_{opr}$	-25 ~ +85	°C
	Storage temperature	$T_{stg}$	-40 ~ +85	°C

## ●Electrical and optical characteristics (Ta = 25°C)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Conditions
Input characteristics	Forward voltage	$V_F$	—	1.3	1.6	mV	$I_F=50\text{mA}$
	Reverse current	$I_R$	—	—	10	$\mu\text{A}$	$V_R=5\text{V}$
Output characteristics	Dark current	$I_{CO}$	—	—	0.5	$\mu\text{A}$	$V_{CC}=10\text{V}$
	Peak sensitivity wavelength	$\lambda_P$	—	800	—	nm	—
Transfer characteristics	Collector current	$I_C$	0.5	—	—	mA	$V_{CE}=5\text{V}, I_F=20\text{mA}$
	Collector-emitter saturation voltage	$V_{CE(sat)}$	—	0.1	0.5	V	$I_F=20\text{mA}, I_C=0.5\text{mA}$
	Response time	$t_r \cdot t_f$	—	10	—	$\mu\text{s}$	$V_{CC}=5\text{V}, I_F=20\text{mA}, R_L=100\Omega$

## ●Electrical and optical characteristic curves

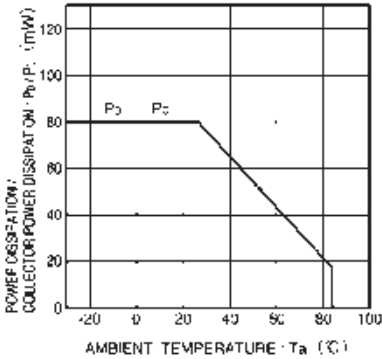


Fig. 1 Power dissipation collector vs. ambient temperature

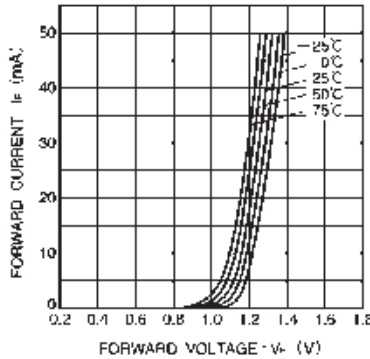


Fig. 2 Forward current vs. forward voltage

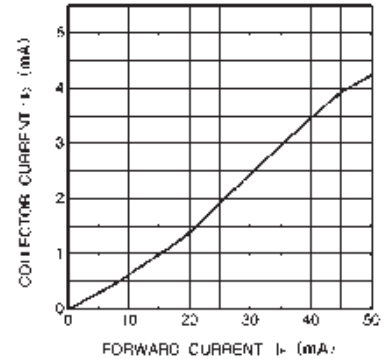


Fig. 3 Collector current vs. forward current

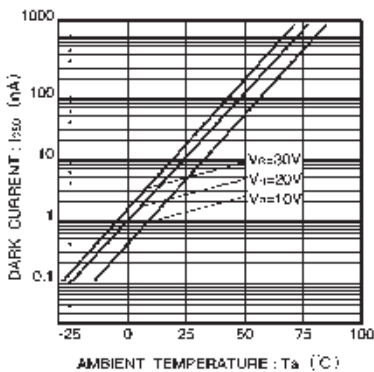


Fig. 4 Dark current vs. ambient temperature

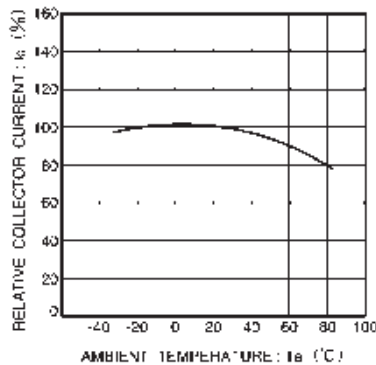


Fig. 5 Relative output vs. ambient temperature

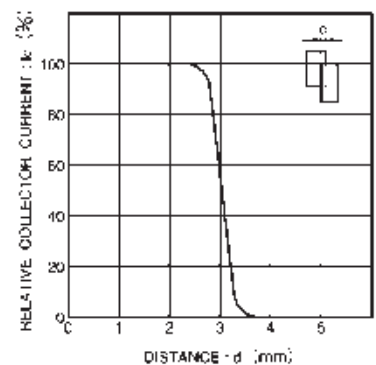


Fig. 6 Relative output vs. distance characteristics