

RPI-579N1

Photointerrupter, General type



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 to +85	°C
Storage temperature	T _{stg}	-40 to +85	°C
Soldering temperature	T _{sol}	260 / 3 *	°C / s

* 1mm from the body bottom.

Electrical and optical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions	
Input characteristics	Forward voltage	V _F	1.3	1.6	V	I _F =50mA	
	Reverse current	I _R	-	-	10	μA	V _R =10V
Output characteristics	Dark current	I _{CE0}	-	-	0.5	μA	V _{CE} =10V
	Peak sensitivity wavelength	λ _P	-	800	-	nm	-
Transfer characteristics	Collector current	I _C	0.5	-	-	mA	V _{CE} =5V, I _F =20mA
	Collector-emitter saturation voltage	V _{CE(sat)}	-	0.1	0.5	V	I _F =20mA, I _C =0.1mA
	Response time	Rise time	t _r	-	10	μs	V _{CC} =5V, I _F =20mA, R _L =100Ω
Fall time		t _f	-	10	μs		
Infrared light emitter diode	Cut-off frequency	f _c	-	1	MHz	I _F =50mA	
	Peak light emitting wavelength	λ _P	-	950	-	nm	* Non-coherent Infrared light emitting diode used.
Photo transistor	Response time	t _r ·t _f	-	10	μs	V _{CC} =5V, I _C =1mA, R _L =100Ω * This product is not designed to be protected against electromagnetic wave.	
	Maximum sensitivity wavelength	λ _P	-	800	-	nm	-

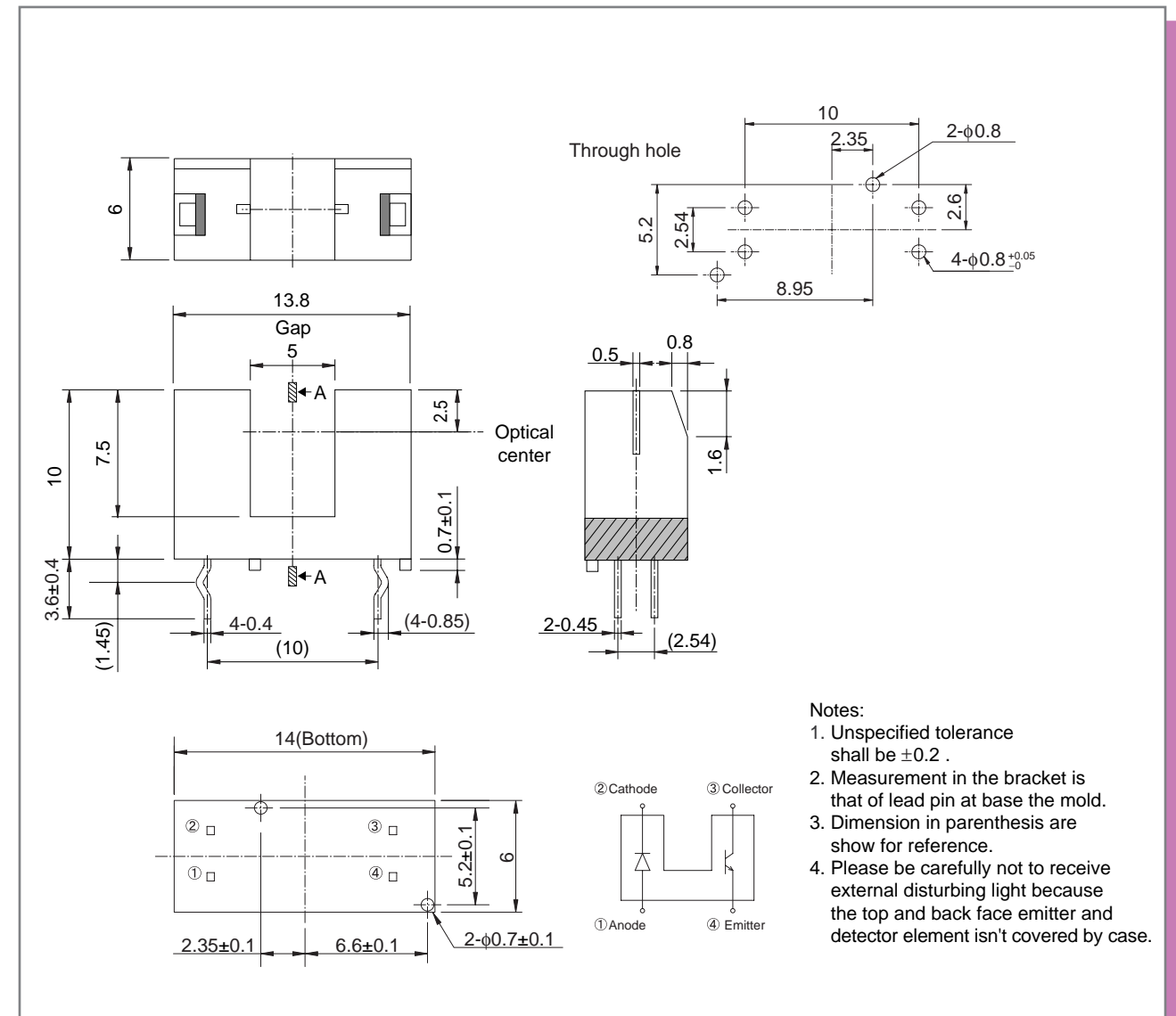
Applications

Printers
Facsimiles
AV equipment

Features

- 1) Heat resistance (170°C).
- 2) Small gap (0.5mm) and good accuracy.
- 3) Quick response time.
- 4) Filter against visible ray is built-in.
- 5) Kinked forming.

External dimensions (Unit : mm)



Electrical and optical characteristics curves

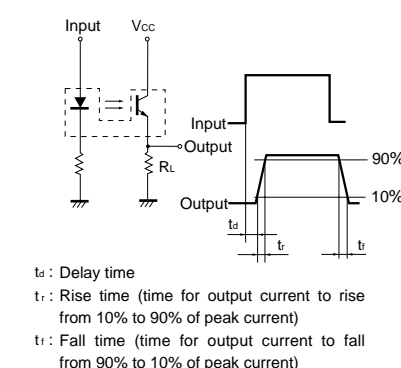
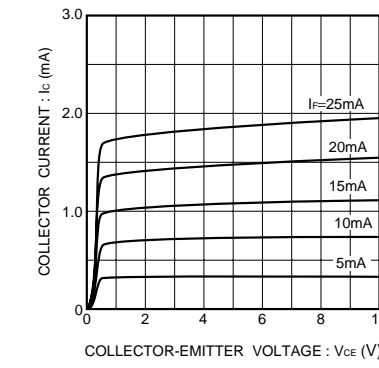
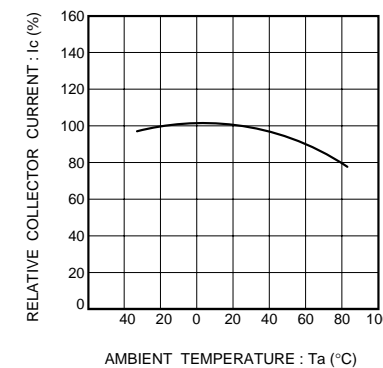
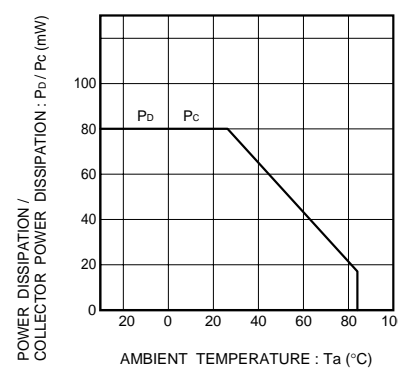
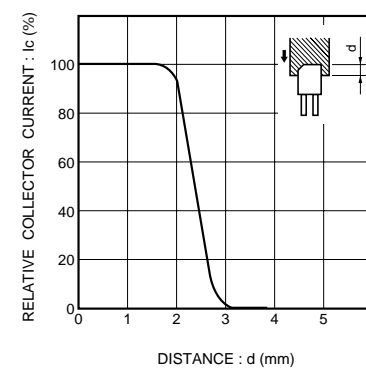
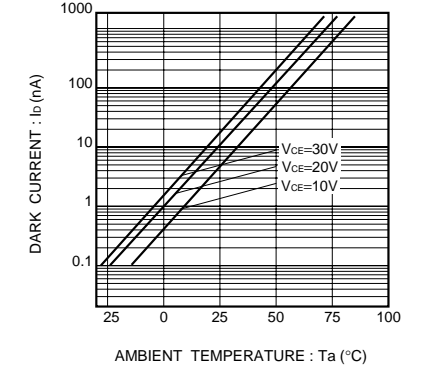
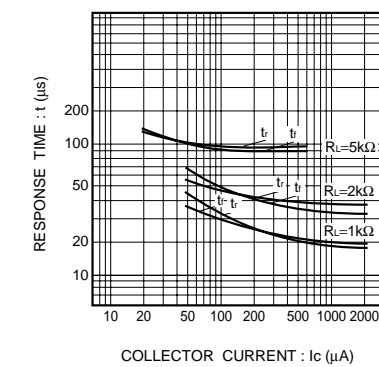
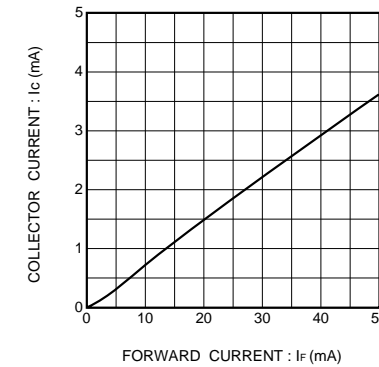
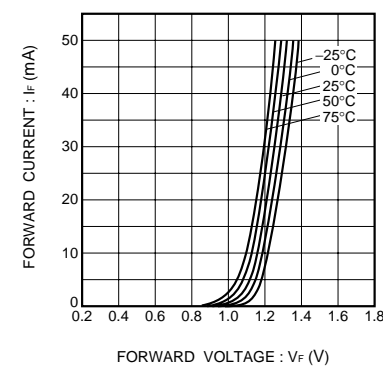
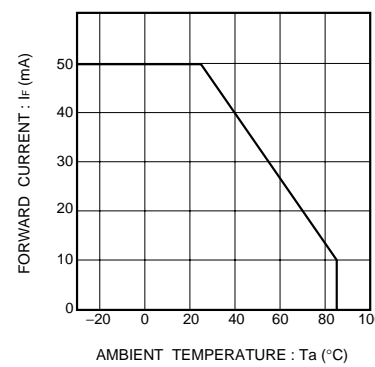
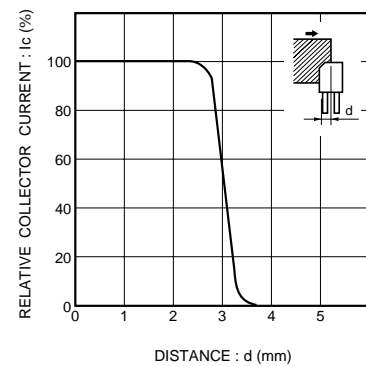


Fig.4 Relative output vs. distance (II)

Fig.5 Power dissipation / collector power dissipation vs. ambient temperature

Fig.6 Relative output vs. ambient temperature

Fig.10 Output characteristics

Fig.11 Response time measurement circuit

Notes

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