

The RPT-34PB3F is a silicon planar phototransistor.

It is particularly suited for use with a ROHM SIR-34ST3F infrared light emitting diode.

### ●Applications

- Optical control equipment

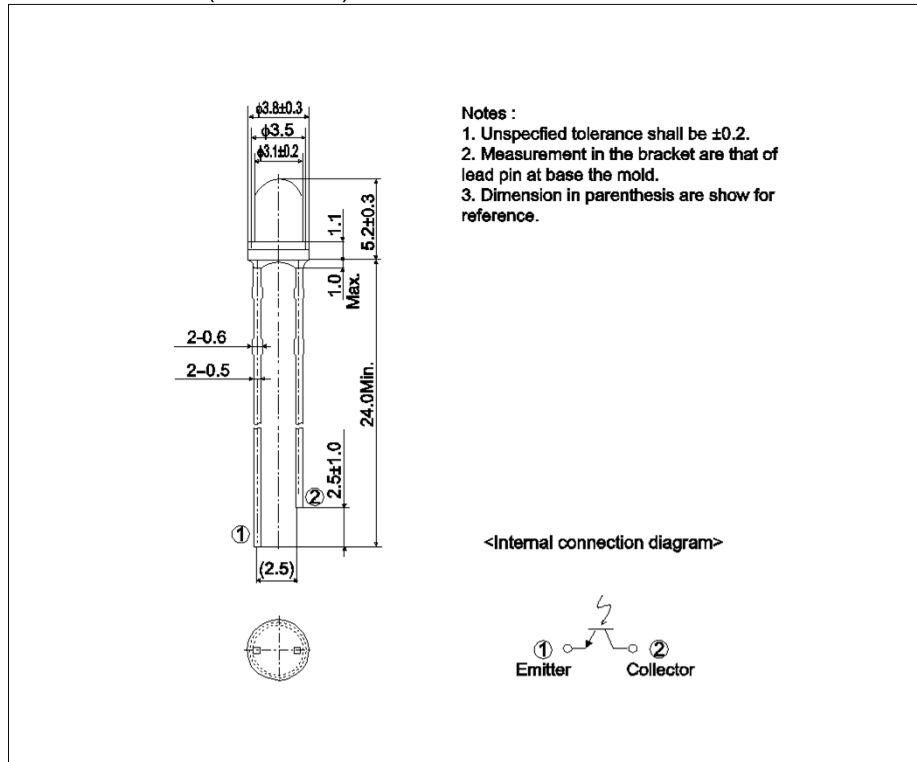
### ●Features

- 1) High sensitivity.

### ●Outline



### ●Dimensions (Unit : mm)



### ●Absolute maximum ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Collector-emitter voltage	$V_{CEO}$	32	V
Emitter-collector voltage	$V_{ECO}$	5	V
Collector current	$I_C$	30	mA
Collector power dissipation	$P_C$	150	mW
Operating temperature	$T_{opr}$	-25 to +85	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-30 to +85	$^\circ\text{C}$

**●Electrical and optical characteristics (T<sub>a</sub> = 25°C)**

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Light current	I <sub>C</sub>	V <sub>CE</sub> =5V, E=500Lx	2.0	-	-	mA
Dark current	I <sub>CEO</sub>	V <sub>CE</sub> =10V (Black box)	-	-	0.5	μA
Peak sensitivity wavelength	λ <sub>p</sub>	-	-	800	-	nm
Collector-emitter saturationvoltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =1mA, E=500Lx	-	-	0.4	V
Half-angle	θ <sub>1/2</sub>	-	-	±36	-	deg
Response time	tr·tf	V <sub>CC</sub> =5V, I <sub>C</sub> =1mA, R <sub>L</sub> =100Ω	-	10	-	μs

**●Classified table of rank**

Item	Light current : I <sub>C</sub>	Unit
L	2.0 to 5.0	mA
M	3.0 to 8.0	mA
N	5.5 to 13.0	mA

●Electrical and optical characteristics curves

Fig.1 Dark Current vs. Ambient Temperature

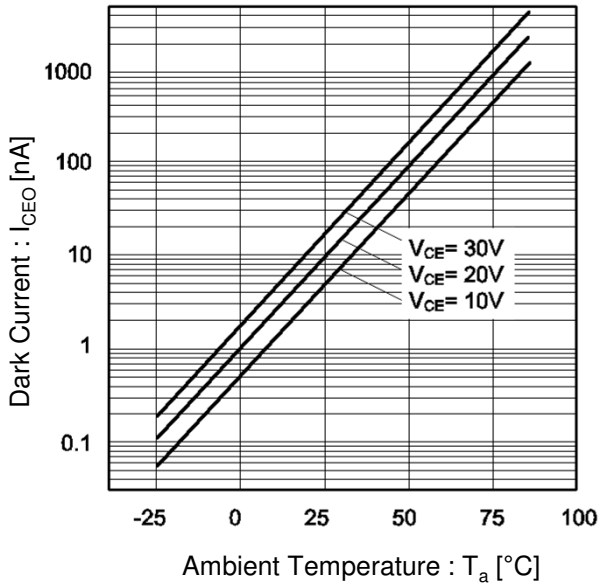


Fig.2 Relative Output vs. Ambient Temperature

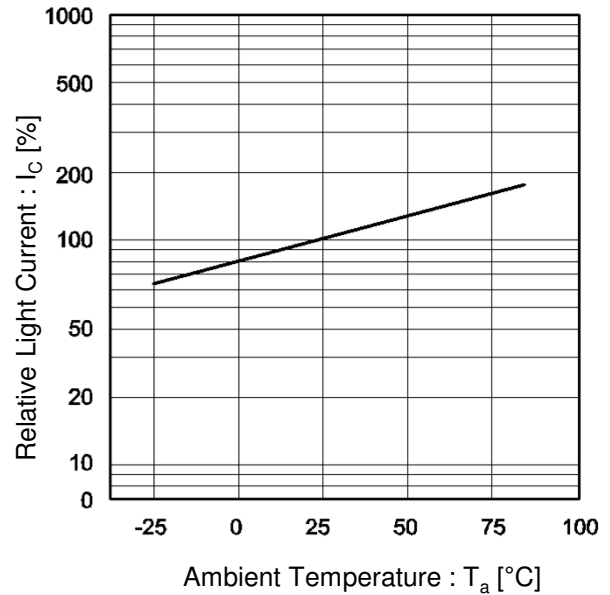


Fig.3 Light Current vs. Emitter Strength

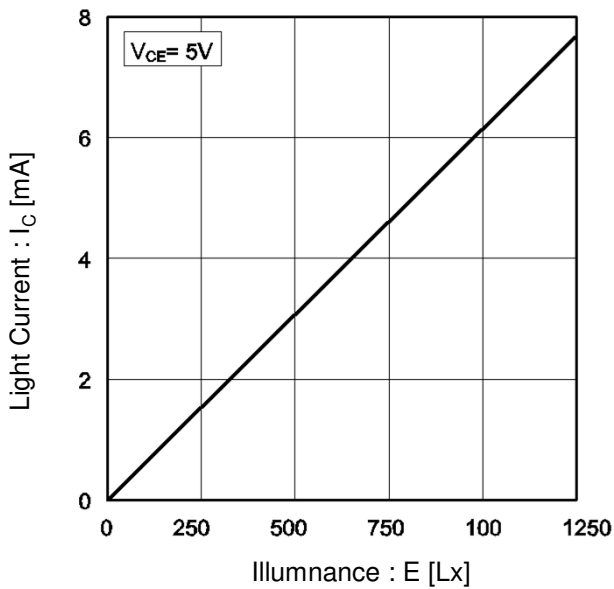
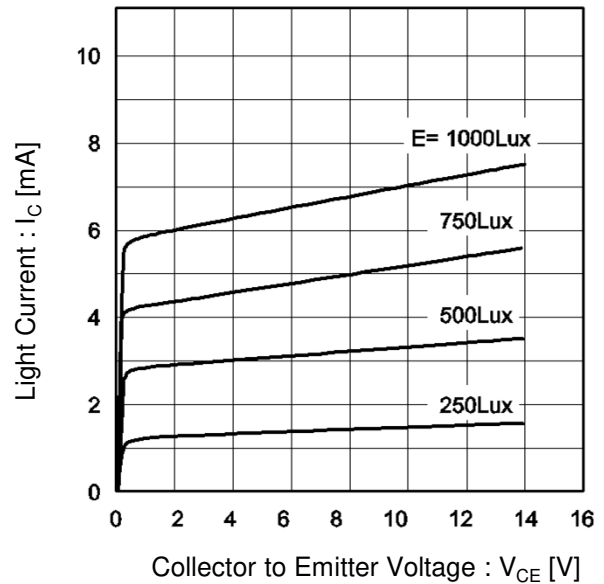


Fig.4 Output Characteristics



●Electrical and optical characteristics curves

Fig.5 Spectral Sensitivity

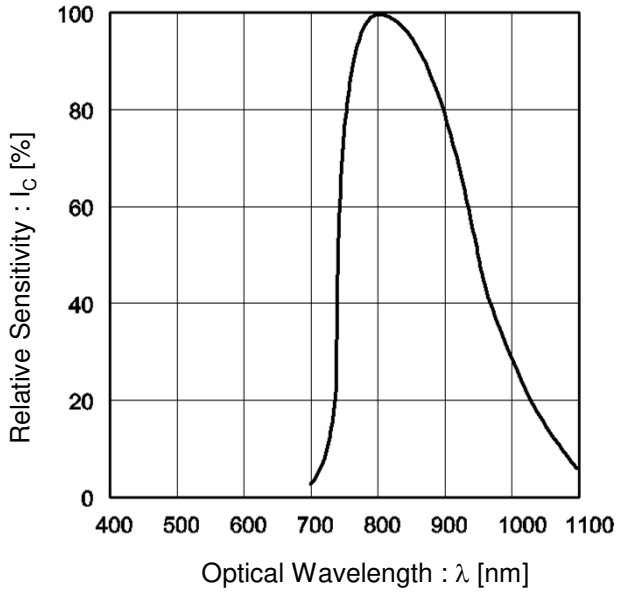


Fig.6 Collector Power Dissipation vs. Ambient Temperature

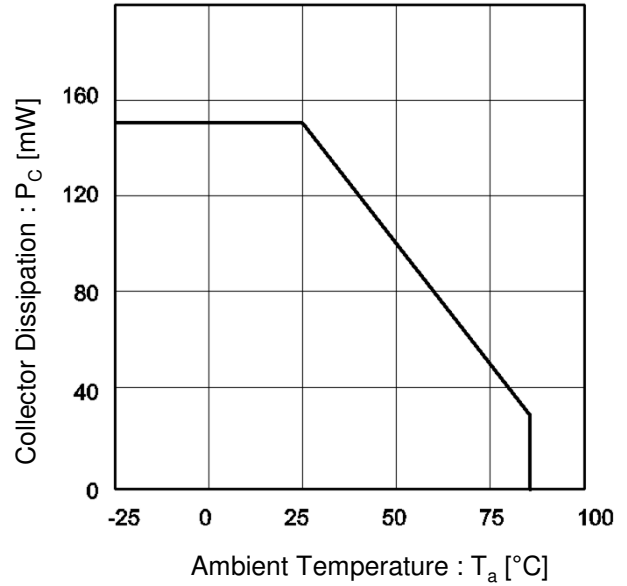
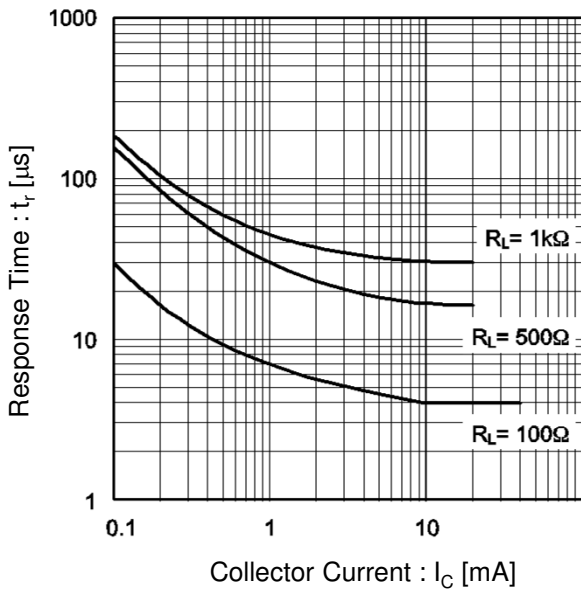
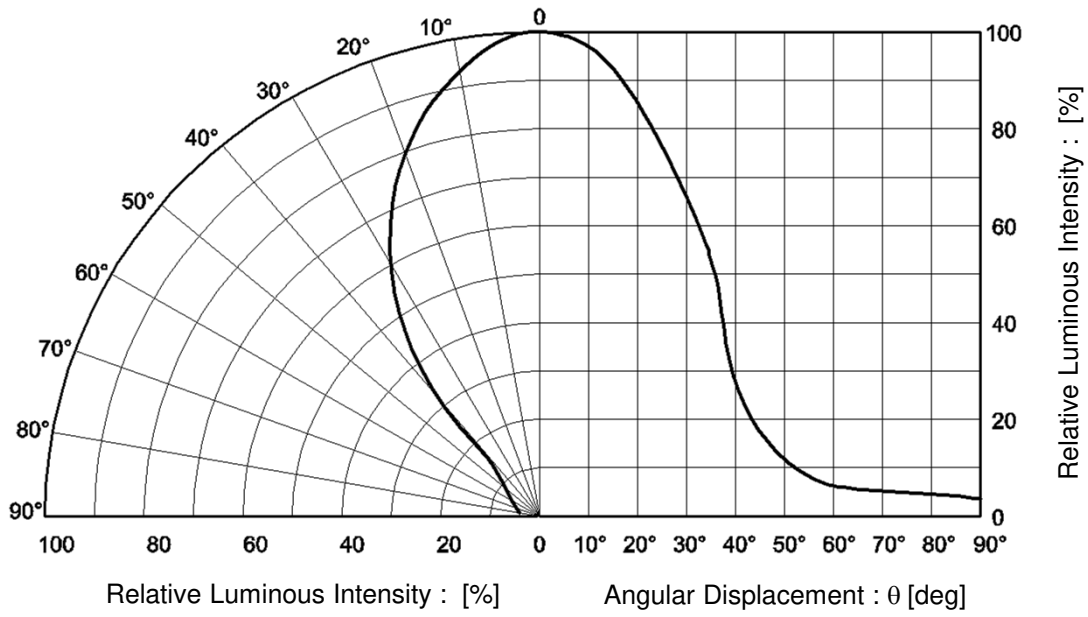


Fig.7 Response time vs. Collector Current



●Electrical and optical characteristics curves

Fig.8 Directional Pattern



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