

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

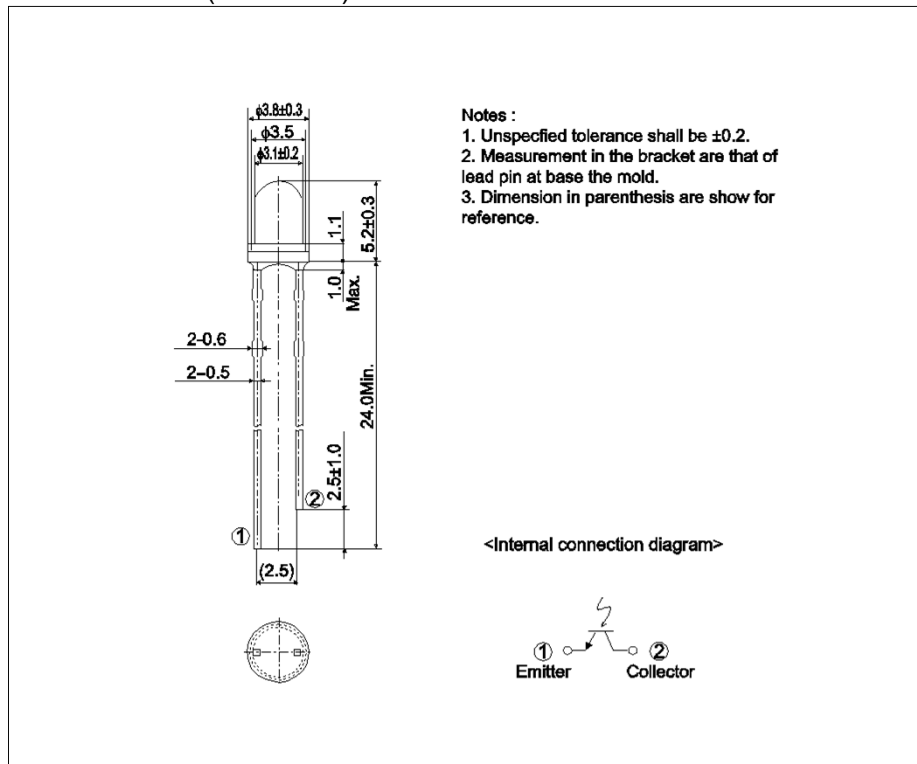
●Features

- 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 ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Conditions | Values | | | Unit |
|--------------------------------------|----------------|--|--------|----------|------|---------|
| | | | Min. | Typ. | Max. | |
| Light current | I_C | $V_{CE} = 5V, E = 500Lx$ | 2.0 | - | - | mA |
| Dark current | I_{CEO} | $V_{CE} = 10V$ (Black box) | - | - | 0.5 | μA |
| Peak sensitivity wavelength | λ_p | - | - | 800 | - | nm |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 1mA, E = 500Lx$ | - | - | 0.4 | V |
| Half-angle | $\theta_{1/2}$ | - | - | ± 36 | - | deg |
| Response time | tr·tf | $V_{CC} = 5V, I_C = 1mA,$ $R_L = 100\Omega$ | - | 10 | - | μs |

●Electrical and optical characteristics curves

Fig.1 Dark Current vs. Ambient Temperature

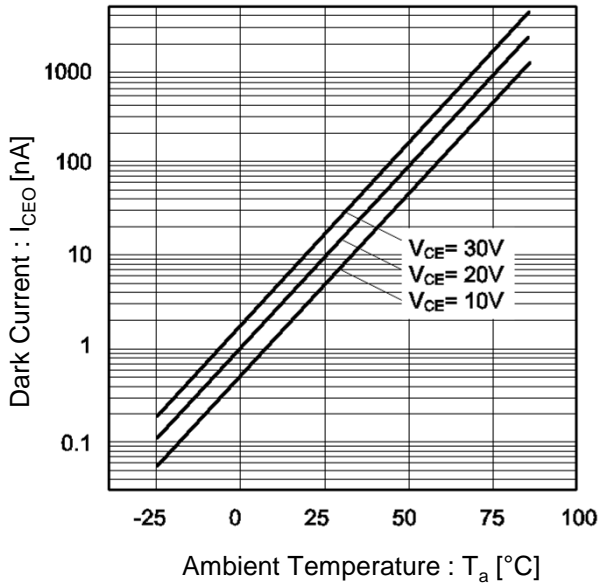


Fig.2 Relative Output vs. Ambient Temperature

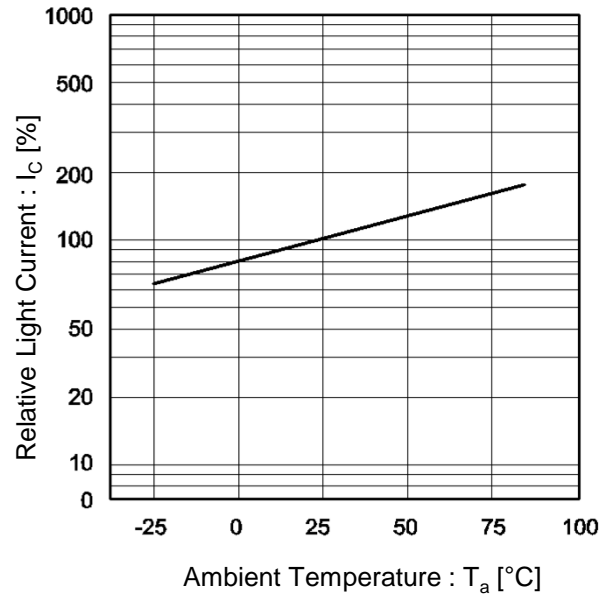


Fig.3 Light Current vs. Emitter Strength

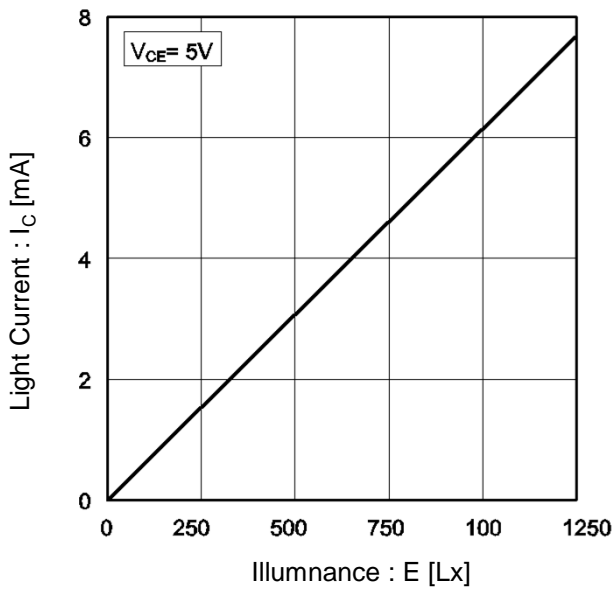
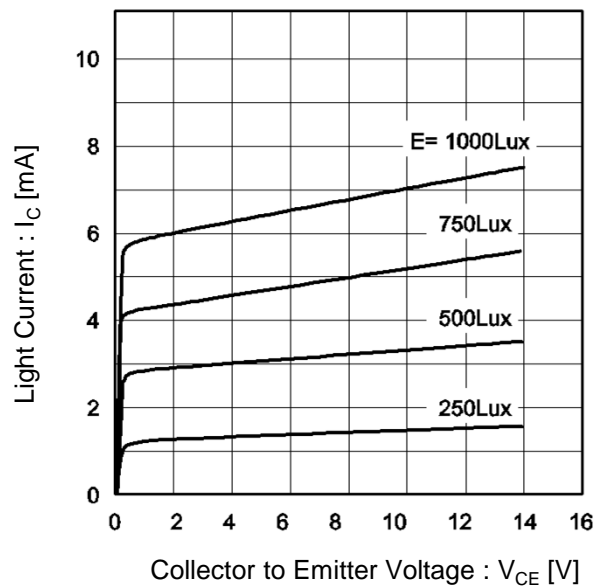


Fig.4 Output Characteristics



●Electrical and optical characteristics curves

Fig.5 Spectral Sensitivity

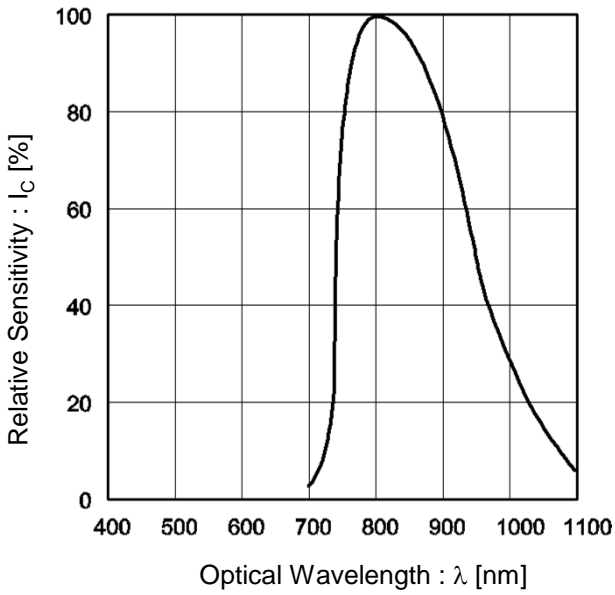


Fig.6 Collector Power Dissipation vs. Ambient Temperature

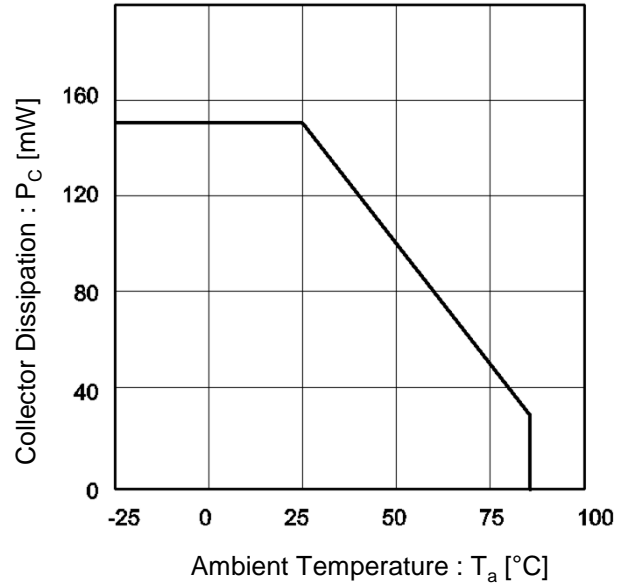
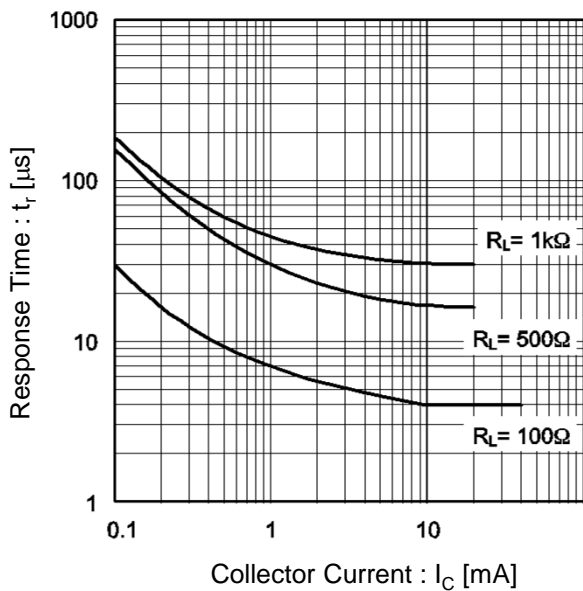
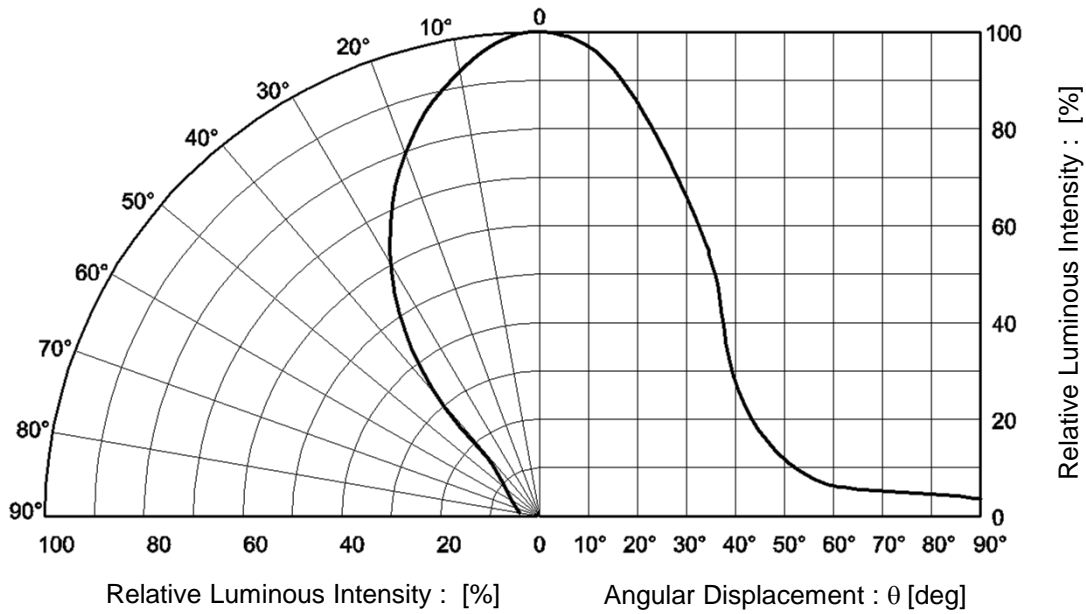


Fig.7 Response time vs. Collector Current



●Electrical and optical characteristics curves

Fig.8 Directional Pattern



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