

Photointerrupter, Ultraminiature type



Absolute maximum ratings (Ta=25°C)

| Parameter                   | Symbol    | Limits      | Unit |
|-----------------------------|-----------|-------------|------|
| Forward current             | $I_f$     | 50          | mA   |
| Reverse voltage             | $V_R$     | 5           | V    |
| Power dissipation           | $P_D$     | 80          | mW   |
| Collector-emitter voltage   | $V_{CE0}$ | 30          | V    |
| Emitter-collector voltage   | $V_{ECO}$ | 4.5         | V    |
| Collector current           | $I_C$     | 30          | mA   |
| Collector power dissipation | $P_C$     | 80          | mW   |
| Operating temperature       | $T_{OP}$  | -25 to +85  | °C   |
| Storage temperature         | $T_{STG}$ | -40 to +100 | °C   |

Applications

- Optical control equipment
- Cameras
- Floppy disk drives

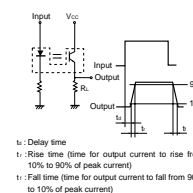
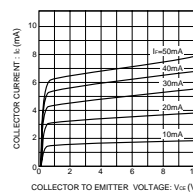
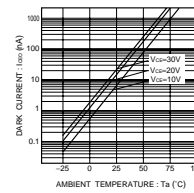
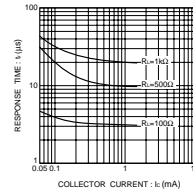
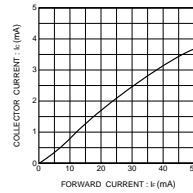
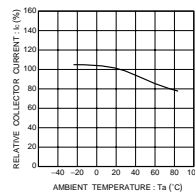
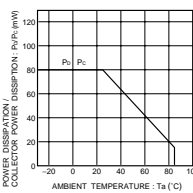
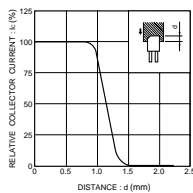
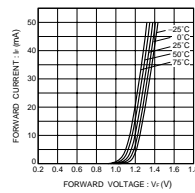
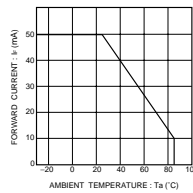
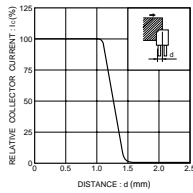
Features

- Ultra-small.
- Minimal influence from stray light.
- Low collector-emitter saturation voltage.

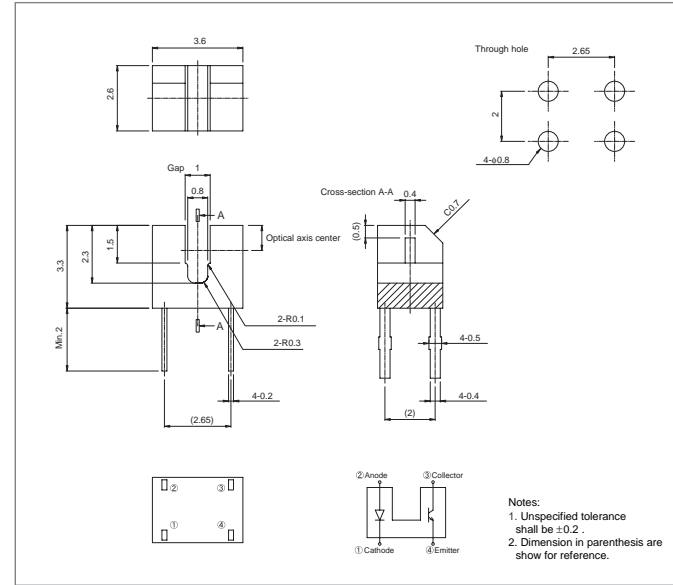
Electrical and optical characteristics (Ta=25°C)

| Parameter                            | Symbol        | Min. | Typ. | Max. | Unit          | Conditions  |
|--------------------------------------|---------------|------|------|------|---------------|---|
| Forward voltage                      | $V_f$         | -    | 1.3  | 1.6  | V             | $I_f=50\text{mA}$   |
| Reverse current                      | $I_R$         | -    | 10   | -    | $\mu\text{A}$ | $V_R=5\text{V}$   |
| Dark current                         | $I_{C0}$      | -    | 0.5  | -    | $\mu\text{A}$ | $V_{CE}=10\text{V}$   |
| Peak sensitivity wavelength          | $\lambda_p$   | -    | 800  | -    | nm            | -   |
| Collector current                    | $I_{C1}$      | 0.7  | -    | -    | mA            | $V_{CE}=5\text{V}, I_f=20\text{mA}$   |
|                                      | $I_{C2}$      | 0.2  | -    | -    | mA            | $V_{CE}=5\text{V}, I_f=5\text{mA}$  |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | -    | 0.3  | -    | V             | $I_f=20\text{mA}, I_C=0.3\text{mA}$   |
| Response time                        | $t_r + t_f$   | -    | 10   | -    | $\mu\text{s}$ | $V_{CE}=5\text{V}, I_f=20\text{mA}, R_L=100\Omega$  |
| Cut-off frequency                    | $f_c$         | -    | 1    | -    | MHz           | $I_f=50\text{mA}$   |
| Peak light emitting wavelength       | $\lambda_p$   | -    | 950  | -    | nm            | Non-coherent infrared light emitting diode used.  |
| Response time                        | $t_r + t_f$   | -    | 10   | -    | $\mu\text{s}$ | $V_{CE}=5\text{V}, I_C=1\text{mA}, R_L=100\Omega$<br>* This product is not designed to be protected against electromagnetic wave. |
| Maximum sensitivity wavelength       | $\lambda_p$   | -    | 800  | -    | nm            | -   |

Electrical and optical characteristics curves



External dimensions (Unit : mm)



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