

KIT-1001A

DESCRIPTION

The photointerrupter high-performance standard type KIT-1001A combines a high-output GaAs IRED with a high sensitivity phototransistor.

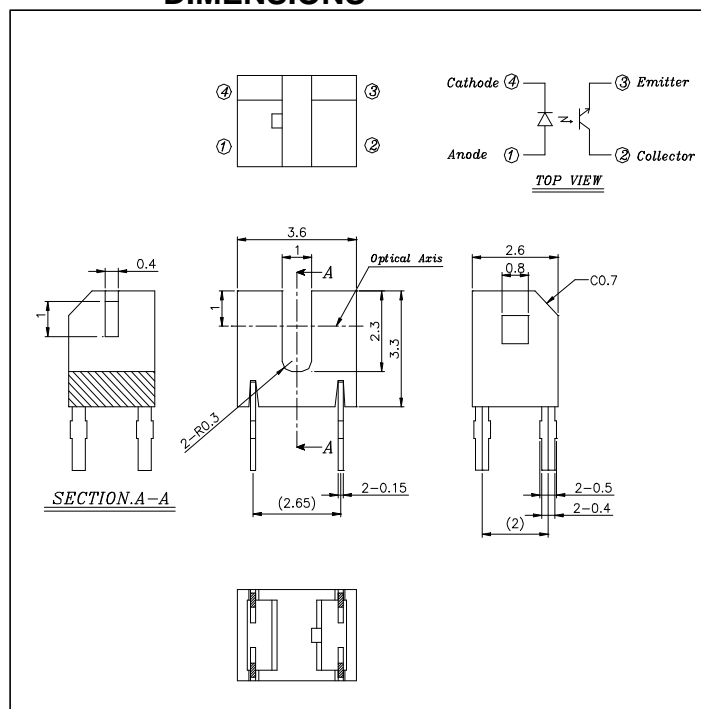
FEATURES

- PWB direct mount type
- GAP : 1.0mm
- Ultra - compact

APPLICATIONS

- Cameras
- Floppy disk drives
- Encoders

DIMENSIONS



ABSOLUTE MAXIMUM RATINGS

(Ta=25)

| Parameter | Symbol | Rating | Unit |
|-------------------------------------|-------------------------------------|------------|------|
| Input | Forward Current | I_F | 50 |
| | Pulse Forward Current ^{*1} | I_{FP} | 0.5 |
| | Reverse Voltage | V_R | 5 |
| | Power Dissipation | P_D | 75 |
| Output | Collector Emitter Voltage | V_{CEO} | 30 |
| | Emitter Collector Voltage | V_{ECO} | 5 |
| | Collector Current | I_C | 20 |
| | Collector Power Dissipation | P_C | 75 |
| Operating Temperature ^{*2} | T_{OPR} | -20 ~ +85 | |
| Storage Temperature ^{*2} | T_{STG} | -30 ~ +100 | |
| Soldering Temperature ^{*3} | T_{SOL} | 260 | |

*1. Pulse width : tw 100 μ sec, period : T=10msec

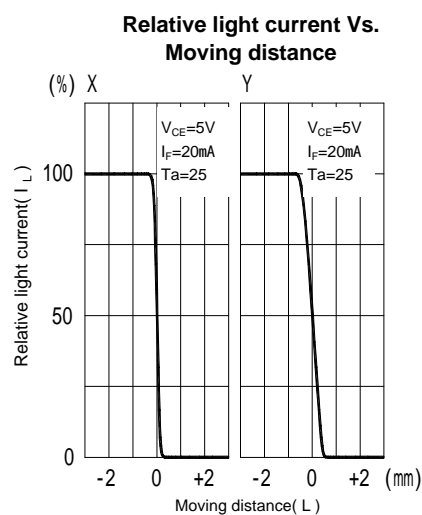
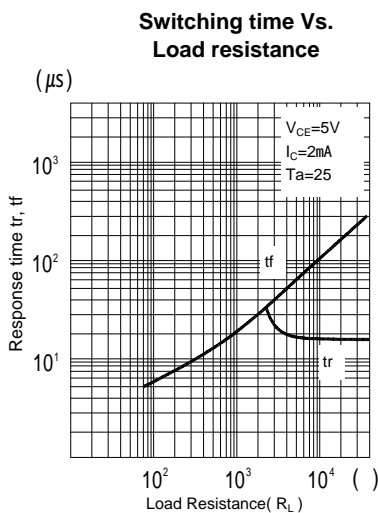
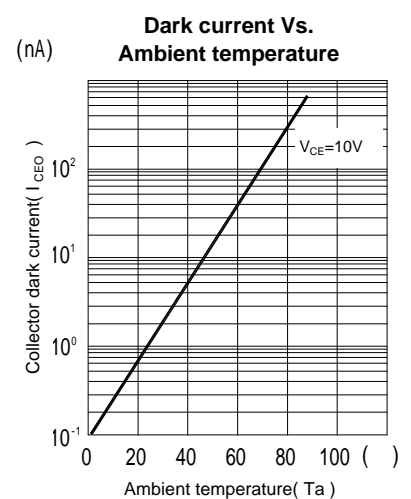
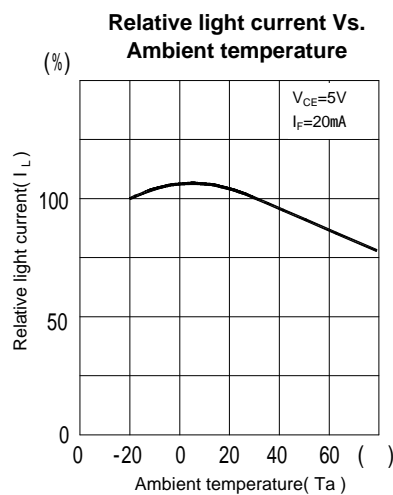
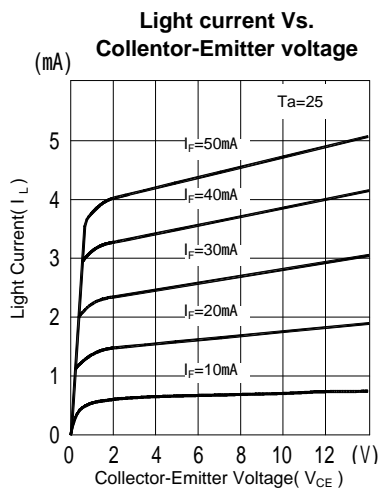
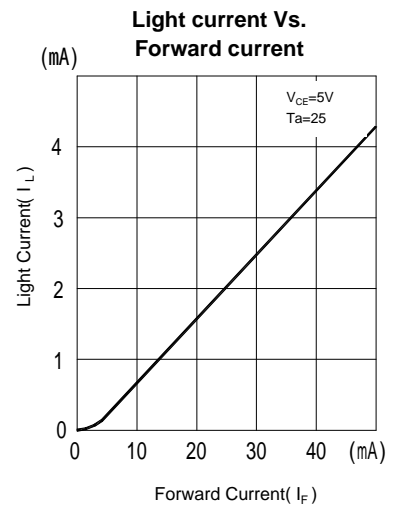
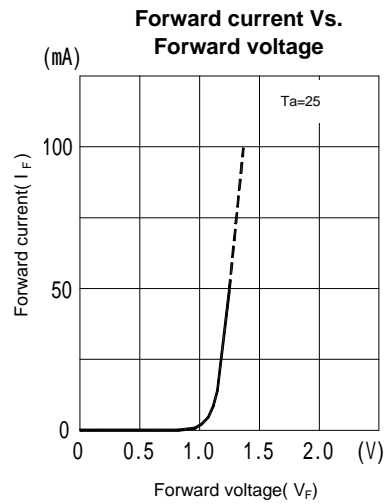
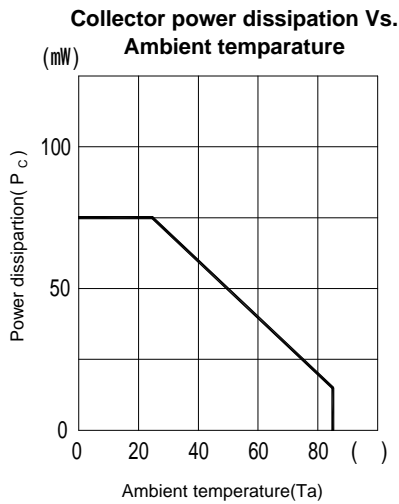
*2. No icebound or dew

*3. For MAX. 5 seconds at the position of 1mm from the package

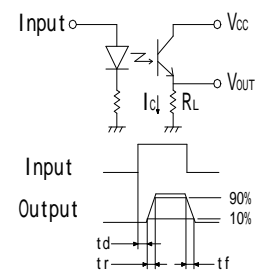
ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25)

| Parameter | Symbol | Conditions | MIN. | TYP. | MAX. | Unit |
|-----------|--------------------------------------|---------------|-------------------------------------|------|------|------|
| Input | Forward Voltage | V_F | $I_F=20mA$ | - | 1.2 | 1.4 |
| | Reverse Current | I_R | $V_R=5V$ | - | - | 10 |
| | Peak Wavelength | λ_P | $I_F=20mA$ | - | 940 | - |
| Output | Dark Current | I_{CEO} | $V_{CE}=10V, 0lx$ | - | 1 | 100 |
| Coupled | Light Current (Collect Current) | I_{L1} | $V_{CE}=5V, I_F=10mA$ (Non-shading) | 0.5 | - | - |
| | | I_{L2} | $V_{CE}=5V, I_F=5mA$ (Non-shading) | 0.2 | - | - |
| | Leakage Current | I_{CEOD} | $V_{CE}=5V, I_F=10mA$ (shading) | - | 0.5 | 10 |
| | Collector Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_F=10mA, I_C=0.3mA$ | - | 0.15 | 0.4 |
| | Response Time | Rise Time | $V_{CE}=5V, I_C=1mA, R_L=100$ | - | 10 | - |
| | | Fall Time | | - | 10 | - |



Response time measurement circuit



Method of measuring position detection characteristic

