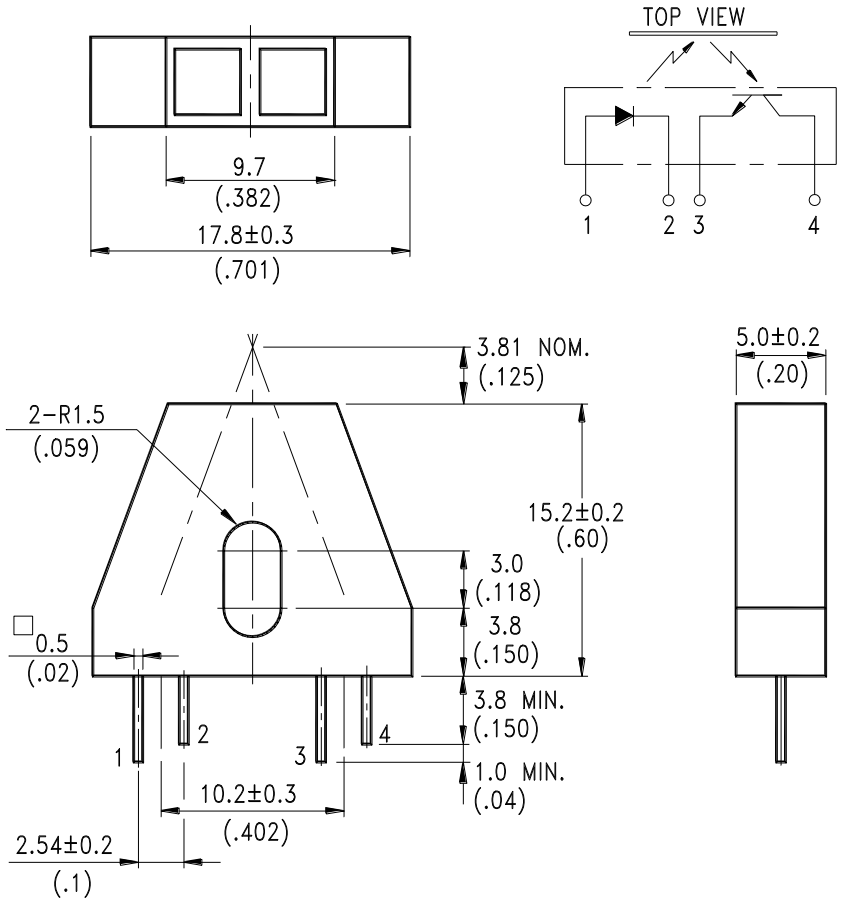
## FEATURES

* NON-CONTACT SWITCHING.
* FOR DIRECT PC BOARD OR DUAL-IN-LINE SOCKET MOUNTING.
* FAST SWITCHING SPEED.
* REFLECTIVE OBJECT SENSOR.

## PACKAGE DIMENSIONS




NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25mm(.010") unless otherwise noted.
3. Specification are subject to change without notice.

## ABSOLUTE MAXIMUM RATINGS AT TA=25℃

| PARAMETER | MAXIMUM RATING | UNIT |
|---|---|---|
| IR Diode Continuous Forward Current | 50 | mA |
| IR Diode Reverse Voltage | 5 | V |
| Transistor Collector Current | 20 | mA |
| Transistor Power Dissipation | 100 | mW (Note 1) |
| IR Diode Peak Power Current (Pulse Wide = 10 μS, 300 pps) | 3 | A |
| Diode Power Dissipation | 75 | mW (Note 1) |
| Phototransistor Collector-Emitter Voltage | 30 | V |
| Phototransistor Emitter-Collector Voltage | 5 | V |
| Operating Temperature Range | -35℃ to + 65℃ | |
| Storage Temperature Range | -40℃ to + 100℃ | |
| Lead Soldering Temperature [1.6mm(.063") From Case] | 260℃ for 5 Seconds | |

Note 1: Derate Linearly 1.33 mW /℃ from 25℃

## ELECTRICAL OPTICAL CHARACTERISTICS AT $T_A$=25℃

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | TEST CONDITION |
|---|---|---|---|---|---|---|
| INPUT LED | | | | | | |
| Forward Voltage | VF | | 1.2 | 1.6 | V | $I_F$ = 20mA |
| Reverse Current | IR | | | 100 | μA | VR=5V |
| OUTPUT PHOTOTRANSISTOR | | | | | | |
| Collector-Emitter Breakdown Voltage | V(BR)CEO | 30 | | | V | IC=1mA |
| Emitter-Collector Breakdown Voltage | V(BR)ECO | 5 | | | V | IE=0.1mA |
| Collector-Emitter Dark Current | ICEO | | | 100 | nA | VCE=10V |
| COUPLER | | | | | | |
| Collector-Emitter Saturation Voltage | VCE(SAT) | | | 0.4 | V | IC=0.08mA IF=20mA |
| On State Collector Current (Note 1) | Ic(ON) | 0.16 | | | mA | VCE=5V IF=20mA |

Note 1: Refiective surface is Eastman Kodak (or Equivalent) neutral white paper with 90% diffused refiectance placed 3.81 mm (0.15 inch) from read head.

## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25℃ Ambient Temperature Unless Otherwise Noted)

Fig.1 Power Dissipation vs. Ambient Temperature

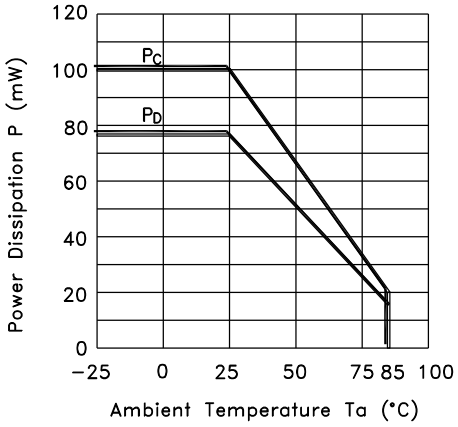



Fig.2 Forward Current vs. Forward Voltage

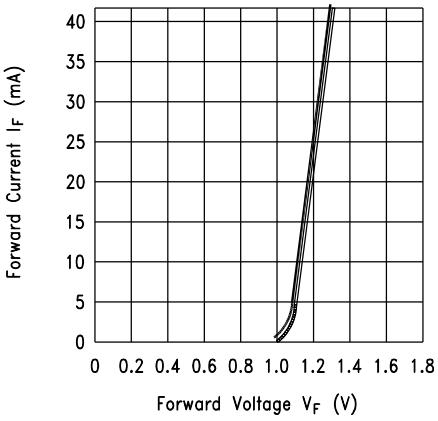



Fig.3 Cllector Current vs. Collector−emitter Voltage

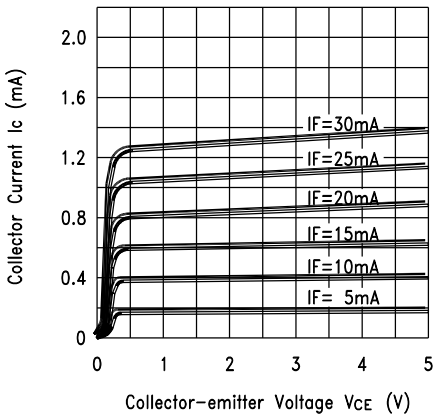
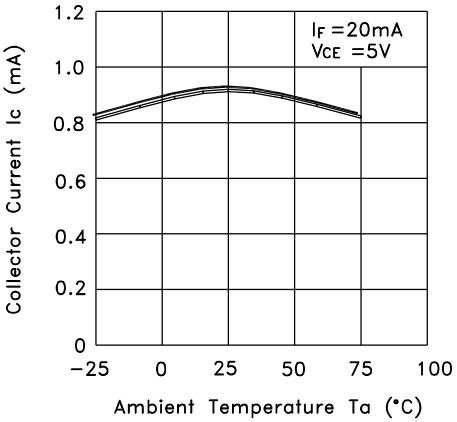



Fig.4 Collector Current vs. Ambient Temperature



## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25℃ Ambient Temperature Unless Otherwise Noted)

Fig.5 Collector-emtter Saturation vs. Voltage Ambient Temperature

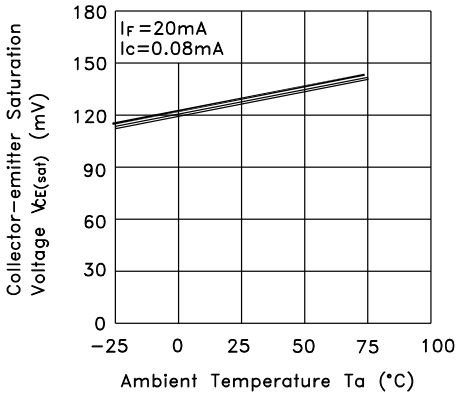



Fig.6 Relative Collector Current vs. Object Distance

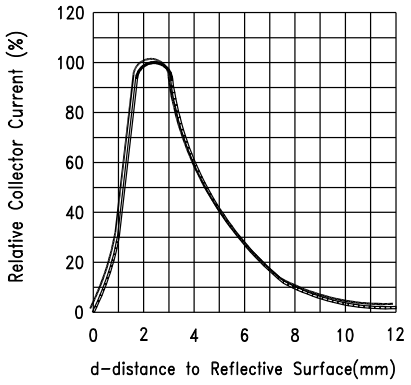
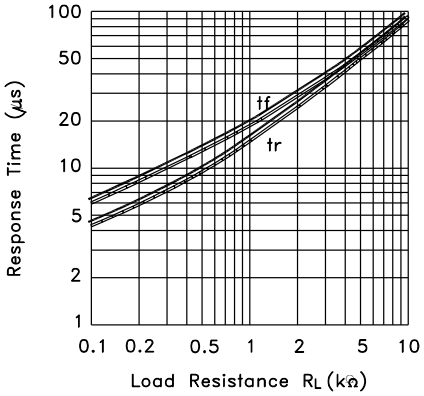



Fig.7 Response Time vs. Load Resistance




Test Circuit for Response Time