

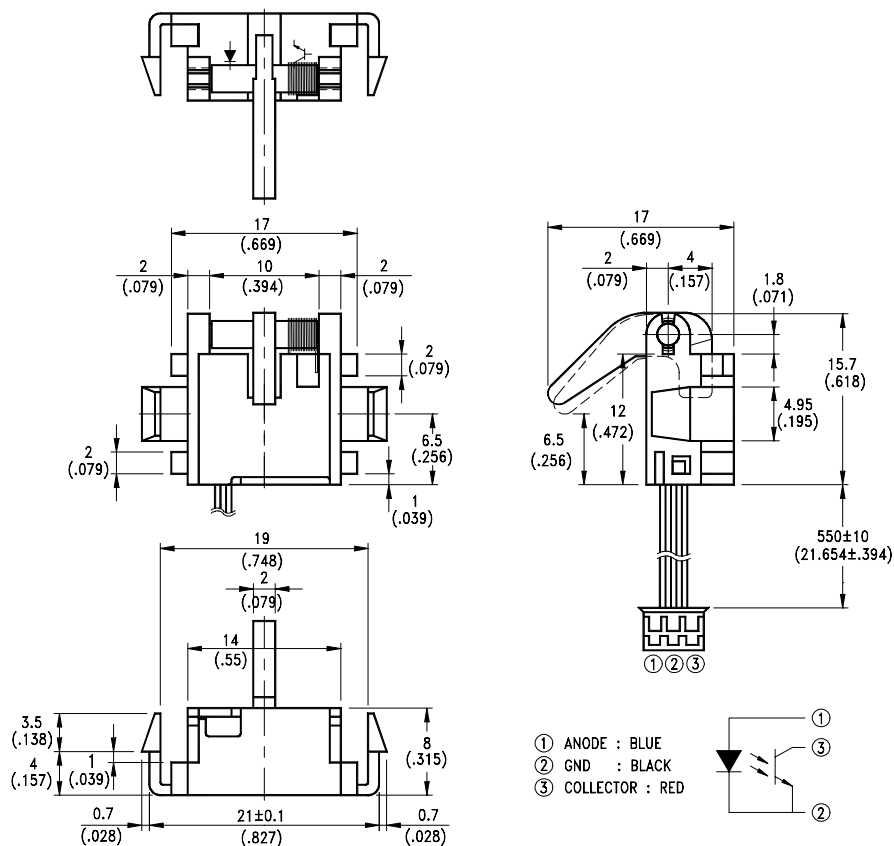
# LITEON LITE-ON TECHNOLOGY CORPORATION

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## FEATURES

- \* SNAP MOUNTING.
- \* MECHANICAL SWITCH REPLACEMENT.
- \* THREE WIRES FOR ELECTRICAL CONNECTION.
- \* CUSTOMIZED LEVER ARM CAN BE DESIGNED FOR SPECIFIC APPLICATION.

## PACKAGE DIMENSIONS



## NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25\text{mm}$  (.010") unless otherwise noted.
3. Specifications 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 Currant                                        | 20                | mA   |
| Transistor Power Dissipation                                        | 75                | mW   |
| IR Diode Peak Forward Current<br>(Pulse Wide = 10 $\mu$ S, 300 pps) | 1                 | A    |
| Diode Power Dissipation                                             | 60                | mW   |
| Phototransistor Collector-Emitter Voltage                           | 30                | V    |
| Phototransistor Emitter-Collector Voltage                           | 5                 | V    |
| Operating Temperature Range                                         | -25 to + 85       |      |
| Storage Temperature Range                                           | -55 to + 100      |      |
| Lead Soldering Temperature<br>[ 1.6mm (.063") Form Case ]           | 260 for 5 Seconds |      |

## ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25

| PARAMETER                               | SYMBOL               | MIN. | TYP. | MAX. | UNIT | TEST CONDITION                                |
|-----------------------------------------|----------------------|------|------|------|------|-----------------------------------------------|
| INPUT LED                               |                      |      |      |      |      |                                               |
| Forward Voltage                         | V <sub>F</sub>       |      | 1.2  | 1.6  | V    | I <sub>F</sub> = 20mA                         |
| Reverse Current                         | I <sub>R</sub>       |      |      | 100  | μ A  | V <sub>R</sub> =5V                            |
| OUTPUT PHOTOTRANSISTOR                  |                      |      |      |      |      |                                               |
| Collector-Emitter<br>Breakdown Voltage  | V <sub>(BR)CEO</sub> | 30   |      |      | V    | I <sub>C</sub> =1mA                           |
| Emitter-Collector<br>Breakdown Voltage  | V <sub>(BR)ECO</sub> | 5    |      |      | V    | I <sub>E</sub> =100 μ A                       |
| Collector-Emitter<br>Dark Current       | I <sub>CEO</sub>     |      |      | 100  | nA   | V <sub>CE</sub> =10V                          |
| COUPLER                                 |                      |      |      |      |      |                                               |
| Collector-Emitter<br>Saturation Voltage | V <sub>CE(SAT)</sub> |      |      | 0.4  | V    | I <sub>C</sub> =0.2mA<br>I <sub>F</sub> =20mA |
| On State Collector Current              | I <sub>c(ON)</sub>   | 0.5  | 2    |      | mA   | V <sub>CE</sub> =5V<br>I <sub>F</sub> =20mA   |

## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25 Ambient Temperature Unless Otherwise Noted)

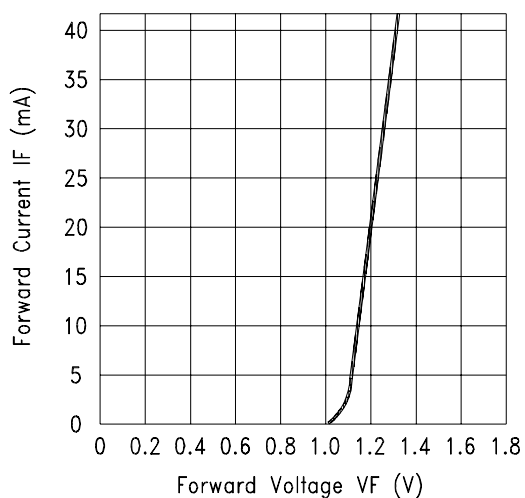


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

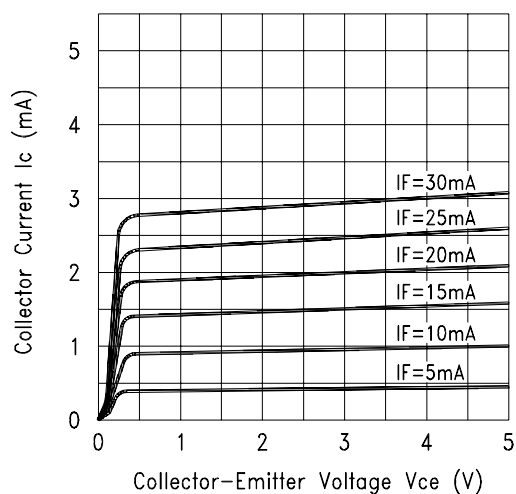


Fig.2 COLLECTOR CURRENT VS. COLLECTOR VOLTAGE

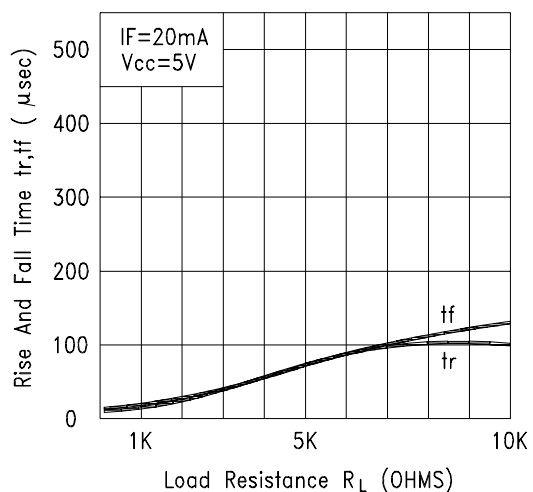


Fig.3 RISE AND FALL TIME VS. LOAD RESISTANCE

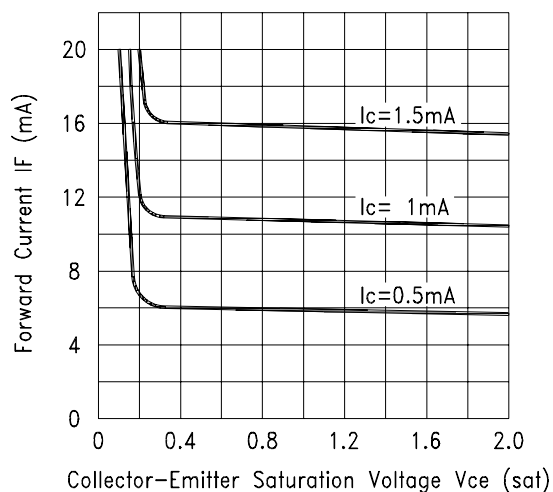


Fig.4 FORWARD CURRENT VS. Collector-Emitter Saturation Voltage