

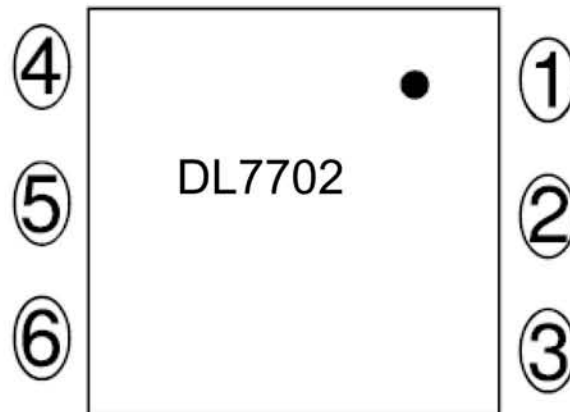
**Applications**

- DSC(Digital steal cameras)
- Camcorders
- Mobile phone
- PDA
- Projector

**Features**

- Subminiature SMD Type
- 4-phase output type
- Able to detect the full rotation(360°) by non-contact structure.

**Top view:**



**Pin name:**

|      |             |      |             |
|------|-------------|------|-------------|
| PIN1 | Emitter 1   | PIN4 | Emitter 2   |
| PIN2 | Collector 1 | PIN5 | Collector 2 |
| PIN3 | Cathode     | PIN6 | Anode       |

**Device Selection Guide**

| Input Current (mA) | Output operating voltage (V) |
|--------------------|------------------------------|
| 3                  | 2.8                          |

**Absolute Maximum Ratings( Ta = 25°C)**

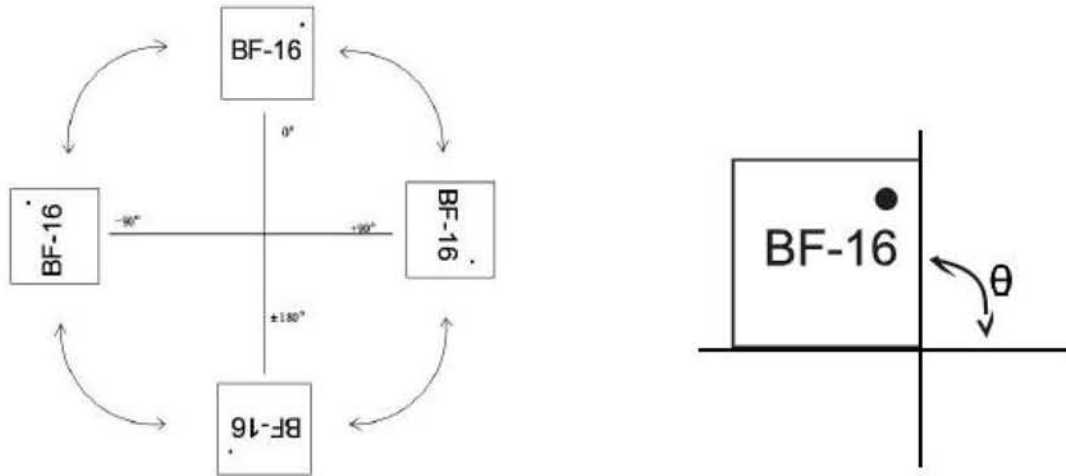
| Parameter             |                             | Symbol | Rating    | Unit |
|-----------------------|-----------------------------|--------|-----------|------|
| Input                 | Reverse voltage             | VR     | 5         | V    |
|                       | Forward current             | IF     | 50        | mA   |
|                       | Power dissipation           | PO     | 70        | mW   |
| Output                | Collector-emitter voltage   | VCE    | 70        | V    |
|                       | Emitter-collector voltage   | VCE    | 7         | V    |
|                       | Collector current           | IC     | 20        | mA   |
|                       | Collector Power dissipation | PC     | 80        | mW   |
| Operating Temperature |                             | Topr   | -25 to 85 | °C   |
| Storage Temperature   |                             | Tstg   | -30 to 85 | °C   |

\*Soldering time ≤ 10 s.

**Electro-Optical Characteristics**

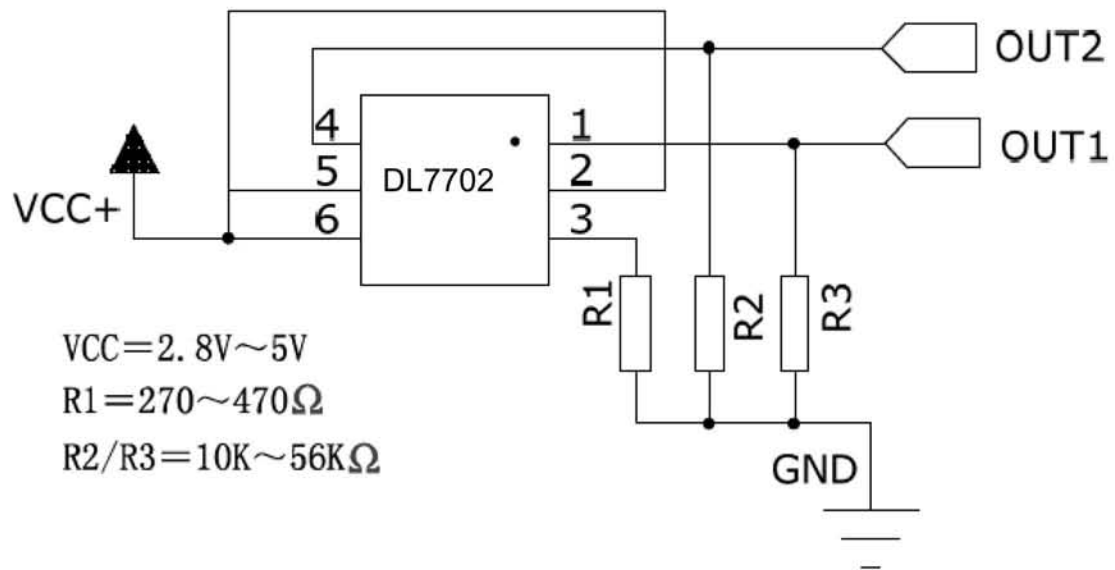
| Parameter                            |                         | Symbol   | Rating                     | MIN | TYP  | MAX  | Unit |
|--------------------------------------|-------------------------|----------|----------------------------|-----|------|------|------|
| Input                                | Forward voltage         | VF       | IF=20mA                    | -   | 1.30 | 1.45 | V    |
|                                      | Reverse current         | IR       | VR=5V                      | -   | -    | 10   | uA   |
| *1Output                             | Collector dark c urrent | ICE      | VCE=20V                    | -   | -    | 50   | nA   |
| *1 Coupling Characteristics          | Collector current       | IC       | VCE=5V, IF=5mA             | 100 | -    | -    | uA   |
|                                      | *2 Leak current         | ILEAK    | VCE=5V, IF=5mA             | -   | -    | 17   | uA   |
|                                      | Response time           | tf/tr    | VCE=5V, IC=1mA<br>RL=1000Ω | -   | 15   | -    | us   |
|                                      |                         |          |                            | -   | 15   | -    | us   |
| Collector-emitter saturation voltage |                         | VCE(sat) | IF =2mA, IC=100uA          | -   | -    | 0.2  | V    |

**Detecting Rotation Characteristics:**

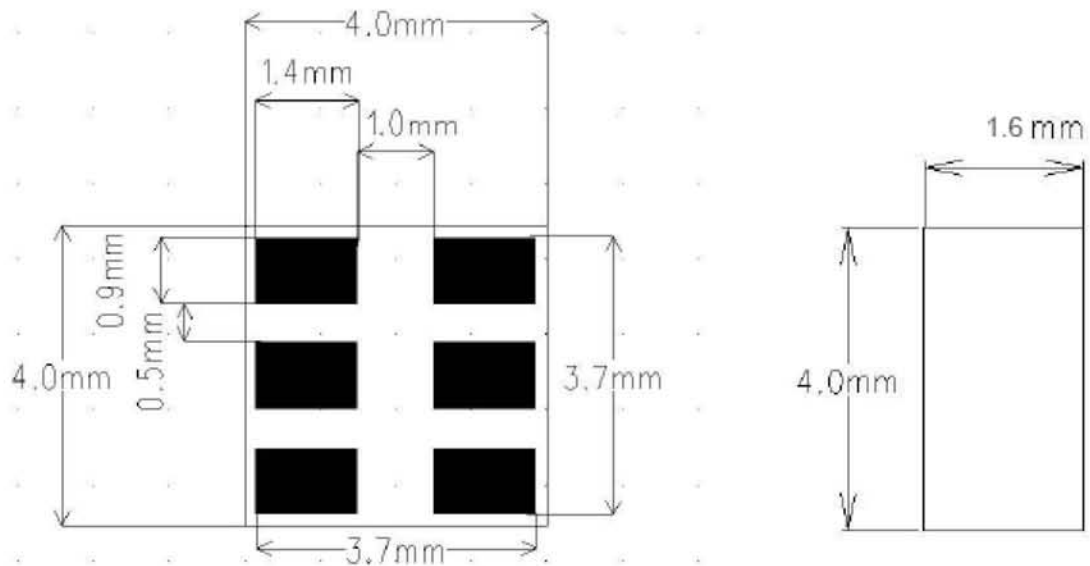


| Detection Angle | OUT1       | OUT2       |
|-----------------|------------|------------|
| 0°              | low ICleak | low ICleak |
| 90°             | low ICleak | high IC    |
| 180°            | high IC    | high IC    |
| -90°            | high IC    | low ICleak |

## Application Circuit



## Package dementions



## Notes:

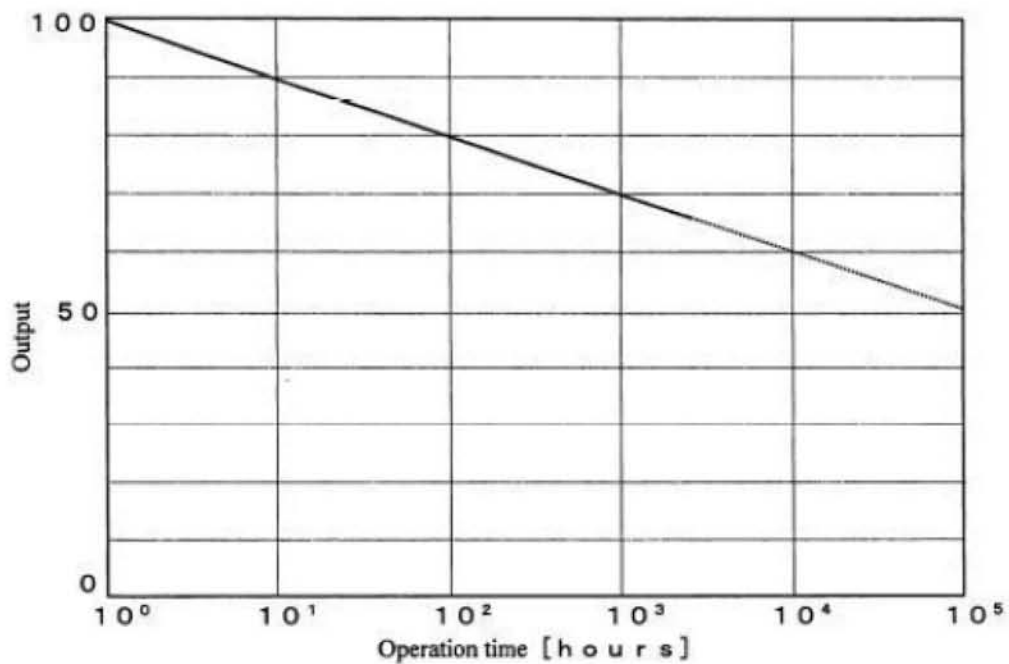
1,Unit mm

2,Unspecified tolerance : ±0.2mm

**IR reflow reference curve**

The following reflow soldering profiles are provided for reference. It is recommended that users follow the recommended soldering profile provided by the manufacturer of the solder paste used.

|             |  |
|-------------|--|
| Part number | DL7702   |
| Data        | Operation life   |
| Condition   | $I_F = 20 \text{ mA}$<br>$V_{CE} = 5 \text{ V}$<br>$T_a = 25 \text{ }^\circ\text{C}$ |



This curve is maximum degradation. In circuit designing, make allowance for the degradation of the light emitting diode output.

# DL7702

# 传感器

## Package

| Item | Quantity | Total  | Dimensions(mm)          |
|------|----------|--------|-------------------------|
| Reel | 750pcs   | 750pcs | Diameter=178 ; width=12 |

