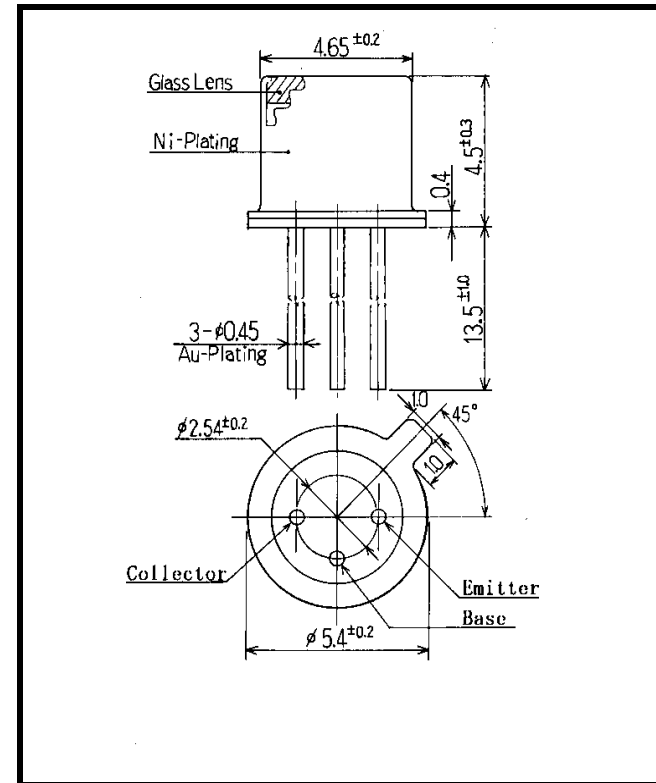
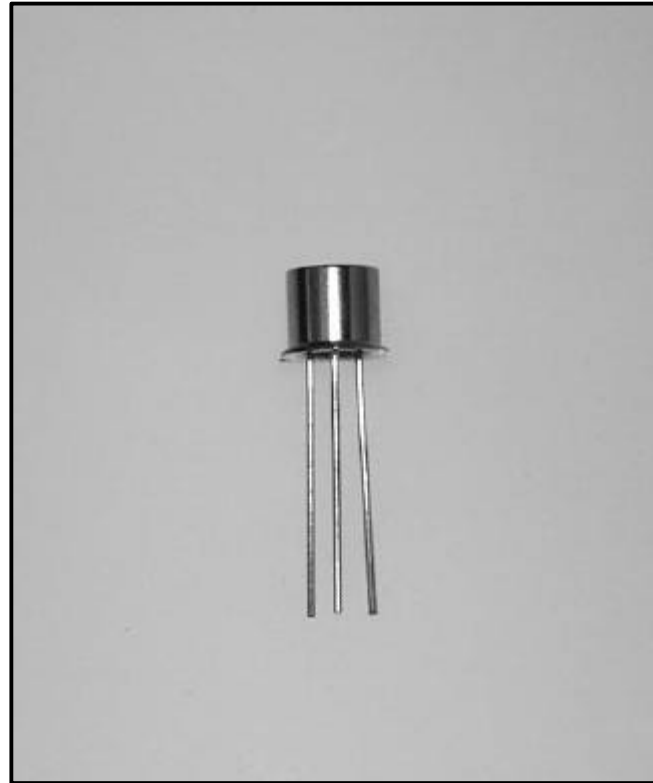


# PT086T4

# Photo Transistor



Dimensions (Unit:mm)

- FEATURES • High Reliability
- APPLICATIONS • Optical Switches  
• Optical Sensors  
• Optical Detectors  
• Fiber Optical Communications

## 1. ABSOLUTE MAXIMUM RATINGS (Ta=25 °C)

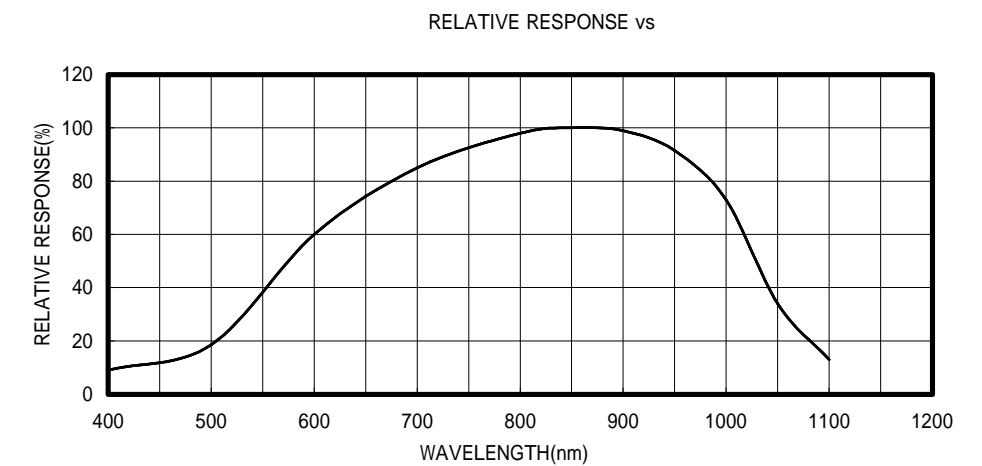
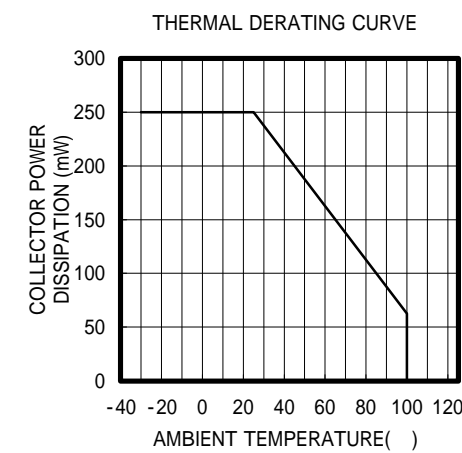
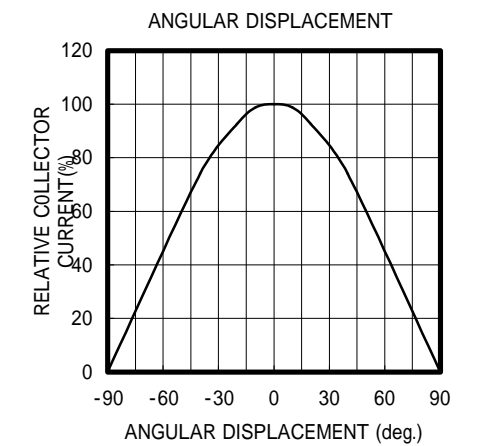
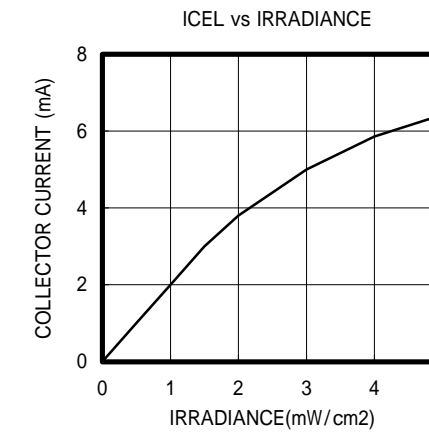
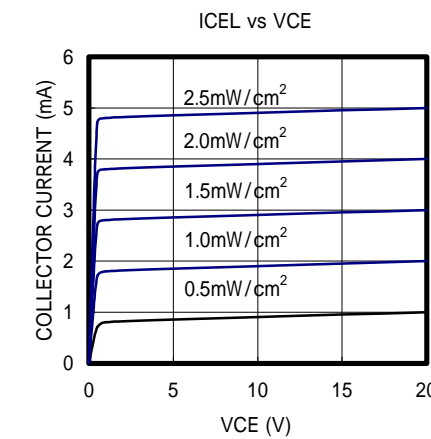
| ITEM                        | SYMBOL           | RATINGS    | UNIT |
|-----------------------------|------------------|------------|------|
| Collector-Emitter Voltage   | V <sub>ceo</sub> | 30         | V    |
| Collector-Base Voltage      | V <sub>cbo</sub> | 30         | V    |
| Emitter-Base Voltage        | V <sub>ebo</sub> | 5          | V    |
| Emitter-Collector Voltage   | V <sub>eco</sub> | 5          | V    |
| Collector Current           | I <sub>c</sub>   | 50         | mA   |
| Collector Power Dissipation | P <sub>c</sub>   | 250        | mW   |
| Operating Temp.             | T <sub>opr</sub> | -30 TO 100 |      |
| Storage Temp.               | T <sub>stg</sub> | -40 TO 125 |      |
| Junction Temp.              | T <sub>j</sub>   | 125        |      |
| Lead Soldering Temp.*       | T <sub>ls</sub>  | 260        |      |

\*Time 5 Sec max, Position: Up to 3mm from the body

## 2. ELECTRICAL & OPTICAL CHARACTERISTICS (Ta=25 °C)

| ITEM                         | SYMBOL               | CONDITIONS  | MIN | TYP        | MAX | UNIT |
|------------------------------|----------------------|---|-----|------------|-----|------|
| Collector Emitter Current    | I <sub>cel</sub>     | V <sub>ce</sub> =20V, E <sub>e</sub> =0.5mW/cm <sup>2</sup>       |     | 1.0        |     | mA   |
| Collector Dark Current       | I <sub>ceo</sub>     | V <sub>ce</sub> =20V, E <sub>e</sub> =0mW/cm <sup>2</sup>         |     |            | 100 | nA   |
| C-E Saturation Voltage       | V <sub>CE(sat)</sub> | I <sub>c</sub> =0.2mA, E <sub>e</sub> =5mW/cm <sup>2</sup>        |     | 0.2        |     | V    |
| Spectral sensitivity         |                      |   |     | 400 ~ 1100 |     | nm   |
| Peak Sensitivity Wave Length | λ <sub>p</sub>       |   |     | 880        |     | nm   |
| Switching time (Rise Time)   | T <sub>r</sub>       | R <sub>L</sub> =100 Ω, V <sub>ce</sub> =5V, I <sub>c</sub> =0.5mA |     | 10.0       |     | μs   |
| Switching time (Fall Time)   | T <sub>f</sub>       | R <sub>L</sub> =100 Ω, V <sub>ce</sub> =5V, I <sub>c</sub> =0.5mA |     | 10.0       |     | μs   |
| Angular Response             |                      |   |     | ±55        |     | deg  |

Color Temperature=2870°K Standard Tungsten Lump



OPTRANS

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