

Peak Sensitivity Wavelength: 850nm

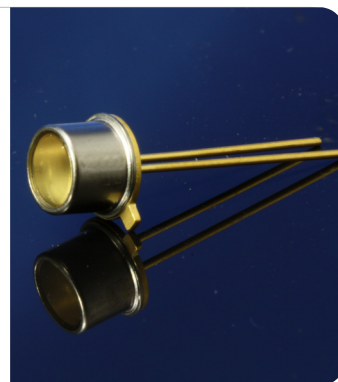
The MTD5010W is a photo diode in a TO-18 metal can flat top package. It is well suited for high reliability and high speed applications.

FEATURES

- > Ultra High Speed
- > Low Dark Current / Metal Can Package
- > Wide Angular Response
- > High Reliability in Demanding Environments

APPLICATIONS

- > Optical Switches
- > Edge Sensing
- > Fiber Optical Communications
- > Smoke Detectors



Absolute Maximum Ratings (Ta=25°C)



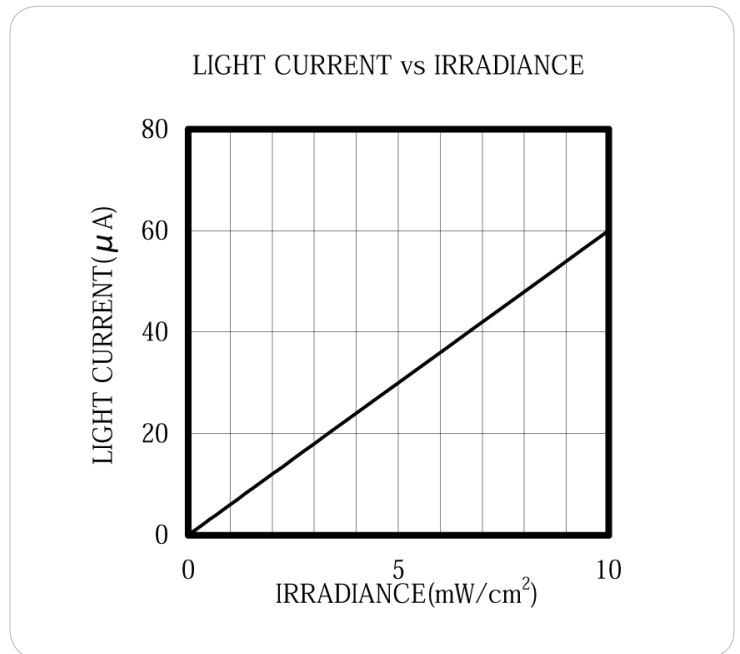
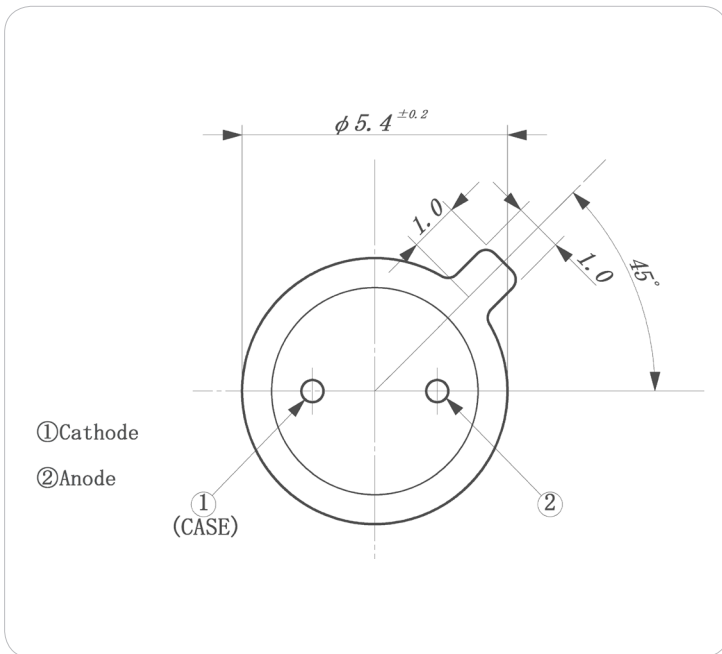
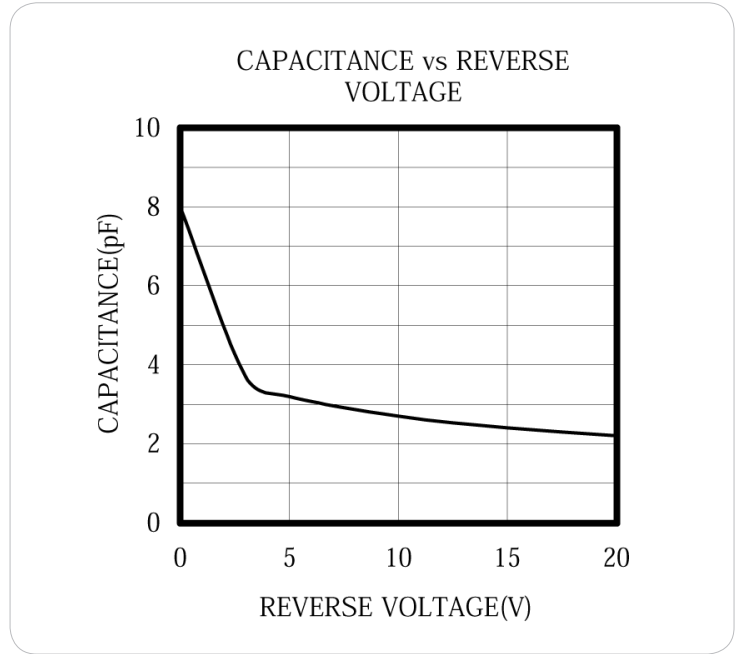
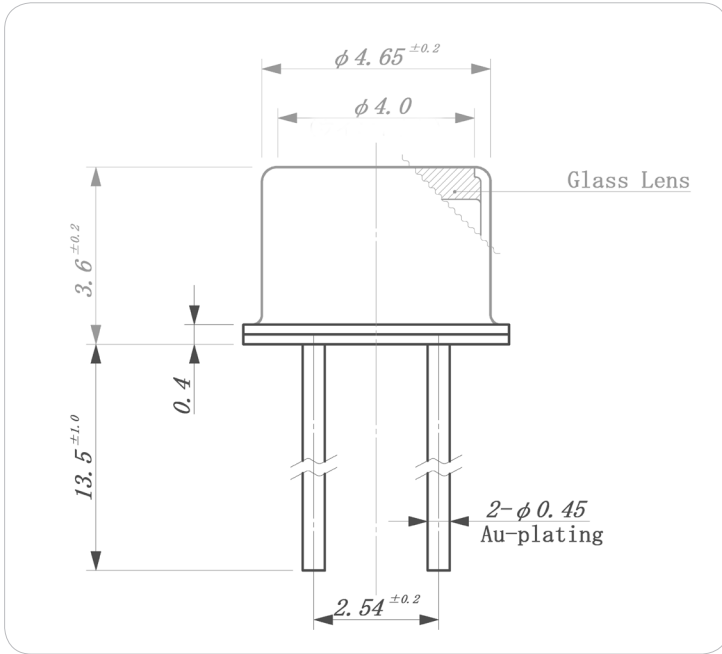
| ITEMS | SYMBOL | RATINGS | UNIT |
|------------------------------|--------|------------|------|
| Reverse Voltage | VR | 30 | V |
| Power Dissipation | PD | 100 | mW |
| Operating Temperature Range | Topr | -30 ~ +100 | °C |
| Storage Temperature Range | Tstg | -40 ~ +125 | °C |
| Junction Temperature | Tj | 100 | °C |
| Lead Soldering Temperature*1 | Tls | 260 | °C |

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

Electrical & Optical Characteristics (Ta = 25°C)

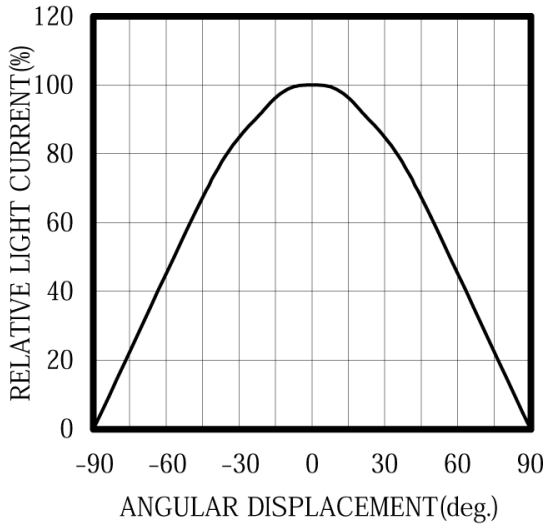
| ITEMS | SYMBOL | CONDITIONS | MIN | TYP | MAX | UNIT |
|-----------------------------|--------|---------------------------|------|----------|-----|------|
| Light Current | IL | *1, *2 | -- | 30 | -- | μA |
| Dark Current | ID | VR=10V | -- | -- | 5 | nA |
| Curve Factor | CF | Ee=5mW/cm ² *1 | 0.55 | -- | -- | -- |
| Spectral Sensitivity | λ | -- | -- | 400~1100 | -- | nm |
| Peak Sensitivity Wavelength | λp | -- | -- | 850 | -- | nm |
| Responsivity | Rt | VR=0V, λ=450nm | -- | 0.20 | -- | A/W |
| Responsivity | Rt | VR=0V, λ=900nm | -- | 0.55 | -- | A/W |
| Angular Response | θ | -- | -- | ±55 | -- | deg |
| Response Time | -- | RL=50Ω, Vr=20V | -- | 3.5 | -- | nS |
| Junction Capacitance | Cj | at 1MHz, V=0V | -- | 8 | 15 | pF |

*1: Color Temperature=2870°K Standard Tungsten Lamp, *2: VR=10V, Ee=5mW/cm².

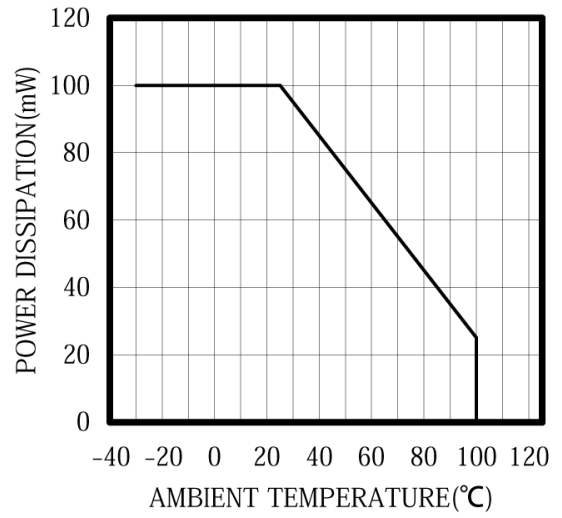


Unit: mm, Tolerance: ± 0.2

ANGULAR DISPLACEMENT



THERMAL DERATING CURVE



RESPONSIVITY

