

Sensitivity Wavelength Range: 350nm ~ 1100nm

The MT03-092 is ideally suited for nulling or beam centering applications.

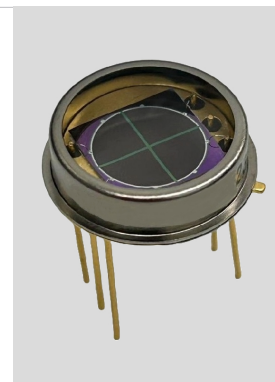
Custom packaging options for this die are also available.

FEATURES

- > Peak Sensitivity: 950nm
- > TO-8, 6 pin Hermetic Package
- > Active Area: 8.0mm Diameter
- > 50mm² Active Area w/200um Gaps

APPLICATIONS

- > Optical Tweezers
- > Beam Centering
- > Beam Nulling
- > Position Centering
- > Atomic Force Microscopes (AFM)



Absolute Maximum Ratings

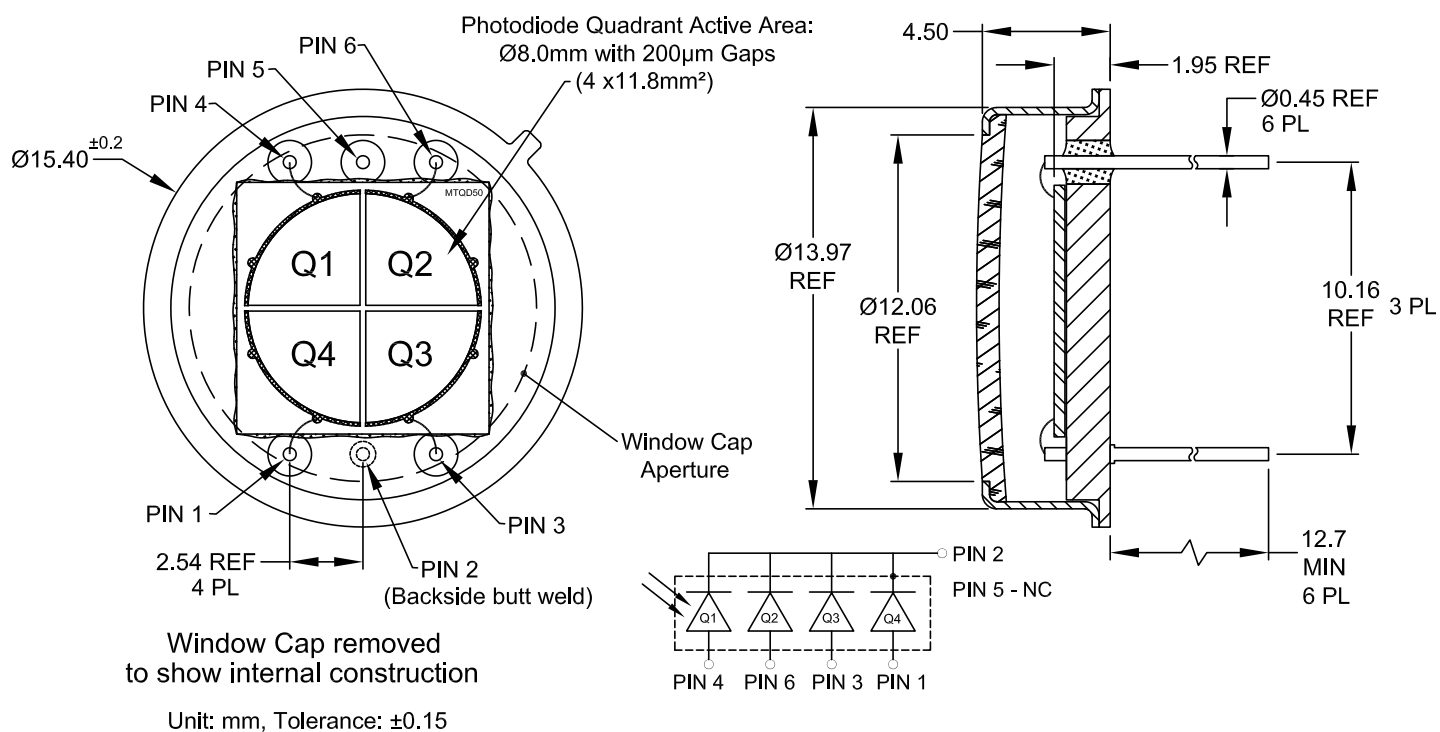
| ITEMS | SYMBOL | RATINGS | UNIT |
|------------------------------|--------|-------------|------|
| Active Area | Φ | 8.0 | mm |
| Operating Temperature Range | Topr | -40 to +85 | °C |
| Storage Temperature Range | Tstg | -40 to +125 | °C |
| Lead Soldering Temperature*1 | Tls | 260 | °C |

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

Electrical & Optical Characteristics (Per Quadrant; Ta = 22°C)

| ITEMS | SYMBOL | CONDITIONS | MIN | TYP | MAX | UNIT |
|-------------------|-----------------|----------------|-----|---------------------|------|---------------------|
| Breakdown Voltage | V _{BR} | IR=10uA | 50 | -- | -- | V |
| Sensitivity Range | λ | VR=0V | 350 | -- | 1100 | nm |
| Dark Current | I _d | VR=10V | -- | 0.5 | 5 | nA |
| NEP @ 880nm | | VR=10V; RL=50Ω | -- | 2x10 ⁻¹⁴ | -- | W/Hz ^{1/2} |
| Capacitance | C _j | VR=0V; 1MHz | -- | 140 | -- | pF |
| Capacitance | C _j | VR=10V; 1MHz | -- | 25 | 35 | pF |
| Responsivity | R | λ=633nm | .40 | .45 | -- | A/W |
| Responsivity | R | λ=950nm | .60 | .64 | -- | A/W |
| Forward Voltage | V _f | IF=2mA | -- | -- | 0.6 | V |
| Shunt Resistance | R _{sh} | VR=+/-10mV | -- | 500 | -- | MΩ |
| Crosstalk | C _t | VR=0V; λ=880nm | -- | 2 | 5 | % |

Package Dimensions



Spectral Responsivity

