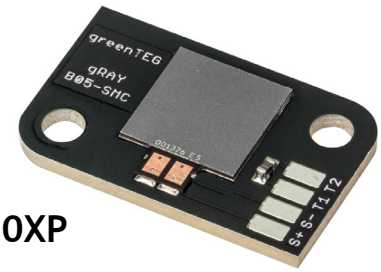
# PCB-Mounted Thermal Detector




**TD10XP**

## Description

The TD10XP features the compact TD10X thermopile-based detector mounted on a metal-core PCB and includes an integrated thermistor. The TD10XP measures optical power levels between 100 µW and 5 W. Its active sensing area of 100.0 mm$^2$ possesses a nearly flat broadband spectral absorption ranging from the UV through the MIR, has negligible dependency on angle of incidence, and a homogeneous response over the full sensing area. The copper solder pads on the PCB facilitate electrical connection to the voltmeter and the thermistor, and two mounting holes allow for integration of the TD10XP with other components.

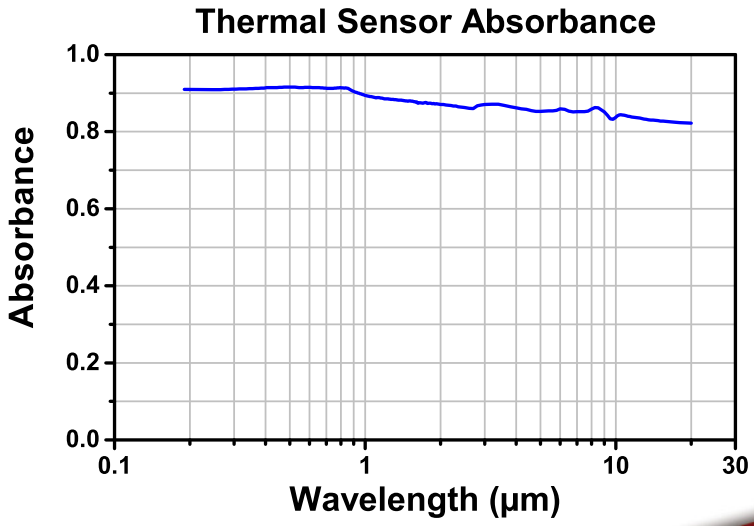
Please read the *Handling Instructions* document for information on mounting the thermal detector, making electrical connections, maintenance, and safety.

The *Handling Instructions* document can be downloaded at www.thorlabs.com/manuals.cfm.

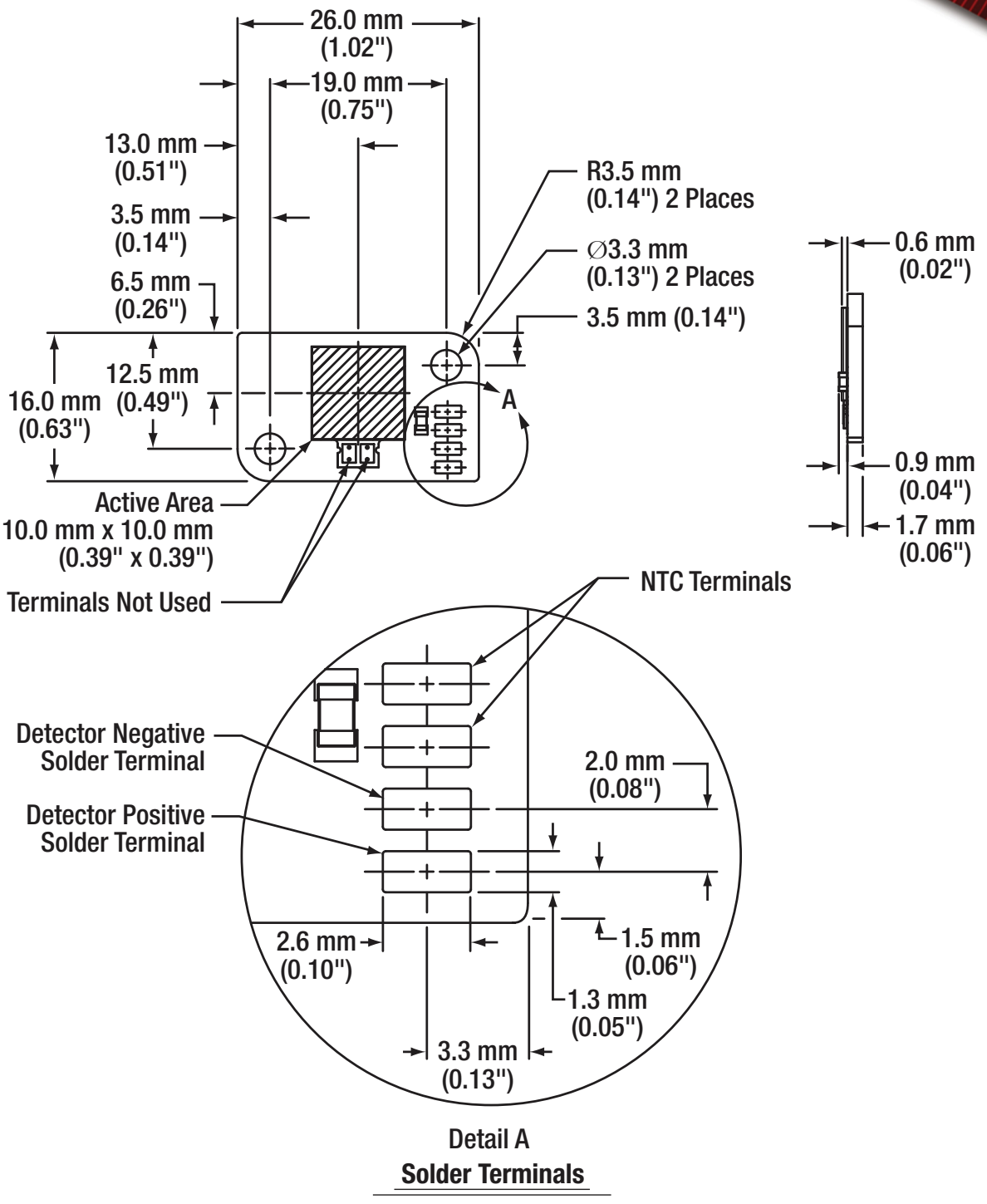
## Specifications

| TD10XP | |
|---|---|
| **Detector Type** | Thermopile |
| **Wavelength Range** | 190 nm - 20 µm |
| **Optical Power Working Range**[a] | 100 µW - 5 W |
| **Max Average Power Density**[b] | 1.5 kW/cm$^2$ |
| **Max Pulse Energy Density** | 0.3 J/cm$^2$ (1 ns Pulse), 5 J/cm$^2$ (1 ms Pulse) |
| **Typical Responsivity** | >100 mV/W |
| **Linearity with Optical Power** | ±0.2% |
| **Rise Time**[c] | 1.1 s |
| **Active Senor Area** | 10.0 mm x 10.0 mm (0.39" x 0.39") |
| **Active Area Uniformity** | ±1% (>1 mm Beam Diameter) |
| **Temperature Sensor** | NTC Thermistor, 10 kΩ |
| **Detector Dimensions** | 26.0 mm x 16.0 mm x 2.6 mm (1.02" x 0.63" x 0.10") |
| **Mounting** | Two Ø3.3 mm (Ø0.13") Mounting Holes |
| **Connection** | Wire |

a. Mounting on appropriate heat sink is required.
b. Damage Threshold
c. Typical Natural Response Time (0 - 95%)



## Drawing




Detail A

**Solder Terminals**