

## 0.19 - 10 $\mu$ m, 50W, Thermopile Power & Energy Detector



#89-591

Stock **#89-591** [CONTACT US](#)

⊖ 1 ⊕ €2.245<sup>00</sup>

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### Volume Pricing

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ⓘ Prices shown are exclusive of VAT/local taxes

### Product Downloads

### General

Heatsink **Cooling Method:**

1.1 **Maximum Incident Energy Density (J/cm<sup>2</sup>):**

**Compatible Meters:**  
Premier ([#89-306](#))  
Deluxe ([#89-305](#))  
USB ([#89-307](#))

## Physical & Mechanical Properties

76.2 x 76.2 x 74.7      **Dimensions (mm):**

160      **Weight (g):**

0.16      **Weight (kg):**

17      **Active Area (mm):**

## Optical Properties

190 - 20000      **Wavelength Range (nm):**

0.19 - 10      **Wavelength Range (µm):**

## Sensor

Thermopile      **Type of Sensor:**

## Electrical

50,000      **Maximum Incident Beam Power (mW):**

50      **Maximum Incident Beam Power (W):**

100,000      **Maximum Incident Power Density (W/cm<sup>2</sup>):**

100      **Maximum Incident Power Density (kW/cm<sup>2</sup>):**

1 mW      **Noise Level:**

## Regulatory Compliance

[Compliant](#)      **RoHS 2015:**

[View](#)      **Certificate of Conformance:**

[Compliant](#)      **Reach 242:**

## Product Details

- Photodetectors, Thermopiles, and Pyroelectric Detectors
- Various Sizes Across Wide Range of Sensitivities
- Compatible with [Edmund Optics Laser Power and Energy Meters](#)
- [Wireless Power and Energy Detectors](#) Also Available

Edmund Optics® Power and Energy Detectors provide fast response times and accurate measurements for beam analysis. Versatile pyroelectric energy detectors with broadband coatings are optimized for low to high power densities. Photodetectors, thermopile detectors and volume absorbers can be used with a variety of laser powers ranging from the nanowatts to multi-kilowatts.

Edmund Optics® Power and Energy Detectors feature high-performance pyroelectric infrared sensors and other detector technologies designed for accurate laser power and energy measurements across UV, visible, and IR spectra. These detectors are ideal for applications requiring precise monitoring of continuous-wave (CW), pulsed, or modulated laser output. These energy and power detectors have fast response times, are plug-and-play ready, and provide reliable readings across different wavelength bands and power ranges.

This detector family includes three core sensor types—**silicon**, **thermopile**, and **pyroelectric**—each optimized for specific measurement needs. **Silicon detectors** offer high sensitivity and fast response for low-power, visible to NIR CW lasers. **Thermopile detectors** provide a broadband, flat spectral response ideal for measuring average power from CW and high-power lasers, including in the mid-IR range. **Pyroelectric detectors** are designed for pulsed laser measurements, detecting rapid thermal changes for accurate energy readings. Choosing the right detector depends on your laser source and measurement goals, and Edmund Optics provides technical guidance and support to help you make the best selection.