

## UP19K-50W-W5-D0

Thermal detector for laser power measurement up to 50 W.



### KEY FEATURES

#### MODULAR CONCEPT

Increase the power capability of your detector: 5 different cooling modules

#### VERY HIGH DAMAGE THRESHOLD

100 kW/cm<sup>2</sup> in average power density

#### COMPACT DESIGN

Only 21 mm thick (15S model)

#### ENERGY MODE

Measure single shot energy up to 200 J

#### SMART INTERFACE

Containing all the calibration data

#### COMPATIBLE STAND

[STAND-S-233](#)

## SPECIFICATIONS

### MEASUREMENT CAPABILITIES

Maximum average power (continuous) <sup>1</sup>	50 W
Maximum average power (1 minute) <sup>2</sup>	85 W
Noise equivalent power <sup>3</sup>	1 mW
Spectral range <sup>4</sup>	0.193 - 10 μm
Typical rise time <sup>5</sup>	1.4 sec
Typical power sensitivity <sup>6</sup>	0.65 mV/W
Power calibration uncertainty <sup>7</sup>	±2.5 %
Repeatability	±0.5 %

1. Minimum cooling flow 0.5 liters/min, water temperature ≤ 22°C, 1/8 NPT compression fittings for 1/4 inch semi-rigid tube. Contact Gentec-EO for clean deionized water cooling module option.

2. Minimum cooling flow 0.5 liters/min, water temperature ≤ 22°C, 1/8 NPT compression fittings for 1/4 inch semi-rigid tube. Contact Gentec-EO for clean deionized water cooling module option.

3. Nominal value, actual value depends on electrical noise in the measurement system.

4. For the calibrated spectral range, see the user manual.

5. With anticipation.

6. Into 100 kΩ load. Maximum output voltage = sensitivity x maximum power.

7. Including linearity with power.

### MEASUREMENT CAPABILITIES (ENERGY MODE)

Typical energy sensitivity	0.33 mV/J
Maximum measurable energy <sup>1</sup>	200 J
Noise equivalent energy <sup>2</sup>	0.02 J
Minimum repetition period	5 s
Maximum pulse width	133 ms
Energy calibration uncertainty <sup>3</sup>	±5 %

1. For 360 μs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).

2. Nominal value, actual value depends on electrical noise in the measurement system.

3. When single-shot energy calibration is purchased

### DAMAGE THRESHOLDS

Maximum average power density <sup>1</sup>	100 kW/cm <sup>2</sup>
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Maximum energy density<sup>2</sup>

1.1 J/cm<sup>2</sup>

1. At 1064 nm, 10 W CW.
2. At 1064 nm, 7 ns, 10 Hz.

## PHYSICAL CHARACTERISTICS

Aperture diameter	19 mm
Absorber	W
Dimensions	76.5H x 50W x 35.5D mm
Weight	0.24 kg

## ORDERING INFORMATION

UP19K-50W-W5-D0	200337
UP19K-50W-W5-BLU-D0	203661
UP19K-50W-W5-INT-D0	203049
UP19K-50W-W5-IDR-D0	203357

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