

## UP50M-50W-W9-D0

Thermal detector for laser power measurement up to 50 W.



### PRODUCT FAMILY KEY FEATURES

#### MODULAR CONCEPT

Increase the power capability of your detector: 4 different cooling modules

#### VERY HIGH DAMAGE THRESHOLD

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

#### VERY LARGE APERTURE

50 mm effective aperture diameter, perfect for the largest beams

#### HIGHEST ENERGY READINGS IN THE SERIES

Measure single shot energy up to 500 J

#### SMART INTERFACE

Containing all the calibration data

#### COMPATIBLE STAND

[STAND-S-443](#)

## 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>	5 mW
Spectral range <sup>4</sup>	0.193 - 10 μm
Typical rise time <sup>5</sup>	3.5 s
Typical power sensitivity <sup>6</sup>	0.12 mV/W
Power calibration uncertainty <sup>7</sup>	±2.5 %
Repeatability	±0.5 %

1. Minimum cooling flow 1 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 1 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)

Maximum measurable energy <sup>1</sup>	500 J
Noise equivalent energy <sup>2</sup>	0.25 J
Minimum repetition period	11.1 s
Maximum pulse width	467 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>
Maximum energy density <sup>2</sup>	1.1 J/cm <sup>2</sup>

1. At 1064 nm, 10 W CW. May vary with wavelength and average power.  
2. At 1064 nm, 7 ns, 10 Hz. May vary with wavelength and pulse width.

## PHYSICAL CHARACTERISTICS

Cooling	Water
Aperture diameter	50 mm
Absorber	W
Dimensions	119H x 89W x 46D mm
Weight	0.81 kg

## ORDERING INFORMATION

UP50M-50W-W9-D0	201886
UP50M-50W-W9-IDR-D0	203367
UP50M-50W-W9-BLU-D0	203682
UP50M-50W-W9-INT-D0	203065

Specifications are subject to change without notice. Refer to the user manual for complete specifications.

## INTERESTED IN THIS PRODUCT?

GET A QUOTE

Find your local sales representative at [gentec-eo.com/contact-us](http://gentec-eo.com/contact-us)