

UP55M-700W-HD-DO

P/N 201908

Thermal detector for laser power measurement up to 700 W.



KEY FEATURES

HIGH DENSITY ABSORBER

The HD absorber is the strongest on the market for use at high powers, presenting both high average power handling and high power density capabilities.

FAST AND COMPACT

A very compact detector that measures up to 700 W of continuous power.

SMART INTERFACE

Containing all the calibration data

COMPATIBLE STAND

[STAND-S-443](#)

COMPATIBLE DISPLAYS & PC INTERFACES

[MIRO ALTITUDE](#)

[MAESTRO](#)

[U-LINK \(USB\)](#)

[U-LINK \(RS-232\)](#)

[INTEGRA](#)

[BLU](#)

[TUNER](#)

[UNO](#)

[P-LINK \(USB\)](#)

[P-LINK \(RS-232\)](#)

[S-LINK-1 \(Ethernet\)](#)

[S-LINK-2 \(Ethernet\)](#)

[M-LINK](#)

[S-LINK-1](#)

[S-LINK-2](#)

[P-LINK-4 \(USB\)](#)

MEASUREMENT CAPABILITIES

Maximum average power (continuous) ¹	700 W
Maximum average power (1 minute) ²	700 W
Noise equivalent power ³	45 mW
Spectral range ⁴	0.193 - 20 μm
Typical rise time ⁵	2.8 s
Typical power sensitivity ⁶	0.03 mV/W
Power calibration uncertainty ⁷	$\pm 2.5\%$
Repeatability	$\pm 0.5\%$

1. Minimum cooling flow 1.5 liters/min, water temperature $\leq 22^\circ\text{C}$, 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 1.5 liters/min, water temperature $\leq 22^\circ\text{C}$, 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 k Ω load. Maximum output voltage = sensitivity x maximum power.

7. Including linearity with power.

MEASUREMENT CAPABILITIES (ENERGY MODE)

Typical energy sensitivity	0.008 mV/J
Maximum measurable energy ¹	200 J
Noise equivalent energy ²	0.25 J
Minimum repetition period	12 s
Maximum pulse width	430 ms
Energy calibration uncertainty ³	$\pm 5\%$

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 ¹	45 kW/cm ²
Maximum energy density ²	1 J/cm ²

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	55 mm
Absorber	HD
Dimensions	119H x 89W x 43D mm
Weight	0.9 kg