

## HP100A-4KW-HE-TUBE-IMP-D0

High power detector for laser power measurement up to 4000 W. Includes extension tube to reduce back reflections.



### PRODUCT FAMILY KEY FEATURES

#### HIGH POWER HANDLING

Handles up to 30 kW of continuous power with our standard models. Custom models are available for higher powers ([See SUPER HP](#)).

#### STABLE READING

Less sensitive to variations in water cooling temperature than any other high-power water-cooled meter on the market

#### LARGE APERTURE

Our standard HP models (4KW, 12KW, 15KW and 30KW) have a very large effective aperture of up to 280 mm to accommodate even the largest laser beams. Larger apertures with various shapes are available upon request ([See SUPER HP](#)).

#### AVAILABLE WITH YAG AND CO<sub>2</sub> CALIBRATION

All HP Models can be calibrated at YAG and CO<sub>2</sub> wavelengths with a calibration uncertainty of +/- 5%

#### DIRECT USB CONNECTION TO A PC

Each head comes with both a DB-15 connector (for use with a Gentec-EO monitor) and a USB2.0 output for direct connection to a PC.

#### AWARD-WINNING TECHNOLOGY

The HP-BLU series wireless detectors for high-power lasers were recognized among the best by an esteemed and experienced panel of judges from the optics and photonics community at the [2020 Laser Focus World Innovators Awards](#).



#### COMPATIBLE STAND

[STAND-S-443-C](#)

## SPECIFICATIONS

### MEASUREMENT CAPABILITIES

Maximum average power (continuous)	4000 W
Minimum average power <sup>1</sup>	100 W
Noise equivalent power <sup>2</sup>	3 W
Spectral range	0.193 - 20 μm
Typical rise time	7 s
Power calibration uncertainty	±5 %
Repeatability	±2 %
Back reflections	< 4 %
Linearity with power	±1.5 %
Linearity vs beam diameter	±1 %
Linearity vs beam position <sup>3</sup>	±1.7 %

1. For lower powers, call your Gentec-EO representative.

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

3. For a beam size of 20% of the aperture area, moved across 80% of the aperture area.

### WATER REQUIREMENTS

Required cooling flow <sup>1</sup>	(4 - 6) LPM $\pm$ 1 LPM/min
Temperature range	15 – 25 °C
Rate of temperature change	< $\pm$ 3°C/min
Maximum water pressure	413 kPa (60 psi)

1. Contact Gentec-EO for clean deionized water cooling module option.

#### DAMAGE THRESHOLDS

Maximum average power density <sup>1</sup>	10 kW/cm <sup>2</sup>
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1. At 1064 nm, 1.07-1.08  $\mu$ m and 10.6  $\mu$ m, 500 W CW. Refer to user manual for damage threshold at other powers. May vary with wavelength and average power.

#### CONTROLLER AND GUI SPECIFICATIONS

Data display	Real time, scope, needle, averaging, histogram and statistics
Analog output <sup>1</sup>	0-2 Volts
Serial commands via	USB
External power supply <sup>2</sup>	Through USB or Gentec-EO displays & PC interfaces
Display type	None

1. 12 V maximum output signal available upon request.

2. A USB power adaptor will be necessary if the HP is used with a DB-15 extension cable.

#### PHYSICAL CHARACTERISTICS

Cooling	Water
Aperture diameter	70 mm
Absorber	HE
Dimensions	127H x 127W x 234D mm
Weight	6 kg

#### ORDERING INFORMATION

HP100A-4KW-HE-TUBE-IMP-D0	2031511
HP100A-4KW-HE-TUBE-IMP-BLU-D0	TBD

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)