HP125A-15KW-HD-MET-D0

High power detector for laser power measurement up to 15 000 W.

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_2 CALIBRATION

All HP Models can be calibrated at YAG and CO_2 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.

SPECIFICATIONS

MEASUREMENT CAPABILITIES

Maximum average power (continuous)	15000 W
Minimum average power[1]	500 W
Noise equivalent power[2]	15 W
Spectral range	0.193 - 20 µm
Typical rise time	15 s
Power calibration uncertainty	±5 %
Repeatability	±2 %
Back reflections	~ 15 %
Linearity with power	±2 %
Linearity vs beam diameter	±1 %
Linearity vs beam position[3]	±1.0 %

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[1]	(8 - 10) LPM < ±1 LPM/min
Temperature range	15 – 25 °C

Rate of temperature change	< ±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[1]	16 kW/cm²

1. At 1064 nm, 1.07-1.08 µm and 10.6 µm, 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[1]	0-2 Volts
Serial commands via	USB
External power supply[2]	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 width	125 mm
Aperture height	125 mm
Absorber	HD
Dimensions	153H x 153W x 70D mm
Weight	5 kg

ORDERING INFORMATION

HP125A-15KW-HD-MET-D0	202263M
HP125A-15KW-HD-MET-BLU-D0	TBD

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