

HP60

60 mm Ø with cone reflector, 300 W - 15 000 W



KEY FEATURES

- > **HIGH POWER HANDLING**
Handles up to 15 kW of continuous power. Custom models available for higher powers. The new HP60A-15KW-GD-QBH is designed for use with QB/QBH high power fibers.
- > **LOW BACK REFLECTIONS**
The cone reflector traps most of the incident laser power inside the detector head. With its TUBE extension, the HP60A-15KW-GD-TUBE has the lowest back reflection rating: under 2 %.
- > **AVAILABLE WITH YAG AND CO₂ CALIBRATIONS**
All HP models can be calibrated at YAG and CO₂ wavelengths with a calibration uncertainty of $\pm 5\%$
- > **DIRECT USB CONNECTION TO A PC**
Each head comes with both a DB15 connector (for use with a Gentec-EO display device) and a USB output for direct connection to a PC
- > **TRACK WATER PARAMETERS**
Water flow and temperature are monitored in real time and displayed continuously

OUTPUT OPTIONS

- > **SMART DB15 CONNECTOR**
Contains all the calibration data
- > **USB PORT**
 - Connects directly to a PC
 - Included in all HP models
- > **CUSTOM OPTION: RS-232**
Contact your Gentec-EO representative to configure your available connectors

COMPATIBLE DISPLAYS & PC INTERFACES



MAESTRO



TUNER



UNO

ACCESSORIES



Stand with steel post



Extension cables
(4, 15, 20 or 25 m)*



5 m USB cable
(Included)

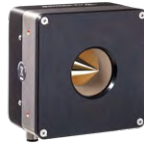


Water filter
(Metric: 202984, Imperial: 202990)



Pelican carrying case

**A USB power adaptor will be necessary if the HP is used with a DB15 extension cable.*



	HP60A-10KW-GD	HP60A-15KW-GD	HP60A-15KW-GD-TUBE	HP60A-15KW-GD-QBH
MAX AVERAGE POWER	10 kW	15 kW	15 kW	15 kW
EFFECTIVE APERTURE	60 mm Ø	60 mm Ø	70 mm Ø	QB/QBH fiber adaptor
COOLING METHOD	Water-cooled	Water-cooled	Water-cooled	Water-cooled

MEASUREMENT CAPABILITY

Spectral range	0.8 - 12 µm	0.8 - 12 µm	0.8 - 12 µm	0.8 - 12 µm
Calibrated spectral range ^a	0.8 - 2.1 µm	0.8 - 2.1 µm	0.8 - 2.1 µm	0.8 - 2.1 µm
Noise equivalent power ^b	10 W	15 W	15 W	15 W
Minimum average power ^c	300 W	500 W	500 W	500 W
Rise time (nominal)	12 s	15 s	15 s	15 s
Back reflections	10%	5 - 10%	1 - 2%	1 - 2%
Calibration uncertainty	± 5% at 1064 nm & 1070 nm	± 5% at 1064 nm & 1070 nm	± 5% at 1064 nm & 1070 nm	± 5% at 1064 nm & 1070 nm
Repeatability	± 2%	± 2%	± 2%	± 2%
Linearity with power	± 2%	± 2%	± 2%	± 2%
Linearity with beam diameter	± 2.0%	± 2.5%	± 2.5%	± 2.5%
Linearity with beam position ^d	± 3.0%	± 4.0%	± 4.0%	± 4.0%

DAMAGE THRESHOLDS

Maximum average power density ^e				
1 kW	70 kW/cm ²	70 kW/cm ²	70 kW/cm ²	70 kW/cm ²
5 kW	35 kW/cm ²	35 kW/cm ²	35 kW/cm ²	35 kW/cm ²
10 kW	20 kW/cm ²	20 kW/cm ²	20 kW/cm ²	20 kW/cm ²
15 kW		10 kW/cm ²	10 kW/cm ²	10 kW/cm ²

PHYSICAL CHARACTERISTICS

Effective aperture	60 mm Ø	60 mm Ø	70 mm Ø tube aperture	QB/QBH fiber adaptor
Absorber	GD (cone reflector)	GD (cone reflector)	GD (cone reflector)	GD (cone reflector)
Cooling water				
Required cooling flow ^f	(6 - 8) LPM < ± 1 LPM/min	(8 - 10) LPM < ± 1 LPM/min	(8 - 10) LPM < ± 1 LPM/min	(8 - 10) LPM < ± 1 LPM/min
Temperature range	15 - 25 °C	15 - 25 °C	15 - 25 °C	15 - 25 °C
Rate of temperature change	< ± 3°C/min	< ± 3°C/min	< ± 3°C/min	< ± 3°C/min
Maximum water pressure (input)	413 kPa (60 psi)	413 kPa (60 psi)	413 kPa (60 psi)	413 kPa (60 psi)
Dimensions	127H x 127W x 95D mm	153H x 153W x 97D mm	153H x 153W x 302D mm	153H x 153W x 302D mm
Weight	6 kg	10 kg	15 kg	15 kg

ORDERING INFORMATION

Available output options	DB15 & USB	DB15 & USB	DB15 & USB	DB15 & USB
Compatible stand	STAND-S-443-C	2x STAND-S-443-C	3x STAND-S-443-C	3x STAND-S-443-C
Product page				

- a. Calibrations at 2.1 to 2.5 µm and 10.6 µm are available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. For lower powers, call your Gentec-EO representative.
d. For a beam size of 20 % of the aperture area, moved across 80 % of the aperture area.
e. At 1064 nm, 1.07-1.08 µm and 10.6 µm, for beams < 50 mm Ø.
f. > 1 min. contact Gentec-EO for deionized water cooling module option.