

# HP60

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


New product



## KEY FEATURES

- > **HIGH POWER HANDLING**  
Handles up to 15 kW of continuous power. Custom models available for higher powers.
- > **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 CO<sub>2</sub> CALIBRATIONS**  
All HP models can be calibrated at YAG and CO<sub>2</sub> 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
- > **BLU WIRELESS METER**   
Connects via Bluetooth to a PC

## COMPATIBLE DISPLAYS & PC INTERFACES



MIRO ALTITUDE



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.

# HP60

## Specifications



\*Also traceable to NRC-CNRC



	HP60A-10KW-GD	HP60A-15KW-GD	HP60A-15KW-GD-TUBE
<b>MAX AVERAGE POWER</b>	10kW	15kW	15kW
<b>EFFECTIVE APERTURE</b>	60mm!>	60mm!>	70mm!>
<b>COOLING METHOD</b>	Water-cooled	Water-cooled	Water-cooled
<b>MEASUREMENT CAPABILITY</b>			
Spectral range	0.8-12 $\mu\text{m}$	0.8-12 $\mu\text{m}$	0.8-12 $\mu\text{m}$
Calibrated spectral range <sup>a</sup>	0.8-2.1 $\mu\text{m}$	0.8-2.1 $\mu\text{m}$	0.8-2.1 $\mu\text{m}$
Noise equivalent power <sup>b</sup>	10W	15W	15W
Minimum average power <sup>c</sup>	300W	500W	500W
Rise time (nominal)	12s	15s	15s
Back reflections	10%	5-10%	1-2%
Calibration uncertainty	$\pm 5\%$ at 1064 nm & 1070 nm	$\pm 5\%$ at 1064 nm & 1070 nm	$\pm 5\%$ at 1064 nm & 1070 nm
Repeatability	$\pm 2\%$	$\pm 2\%$	$\pm 2\%$
Linearity with power	$\pm 2\%$	$\pm 2\%$	$\pm 2\%$
Linearity with beam diameter	$\pm 2.0\%$	$\pm 2.5\%$	$\pm 2.5\%$
Linearity with beam position <sup>d</sup>	$\pm 3.0\%$	$\pm 4.0\%$	$\pm 4.0\%$
<b>DAMAGE THRESHOLDS</b>			
Maximum average power density <sup>e</sup>			
1kW	70kW/cm <sup>2</sup>	70kW/cm <sup>2</sup>	70kW/cm <sup>2</sup>
5kW	35 kW/cm <sup>2</sup>	35 kW/cm <sup>2</sup>	35kW/cm <sup>2</sup>
10kW	20 kW/cm <sup>2</sup>	20kW/cm <sup>2</sup>	20kW/cm <sup>2</sup>
15kW	10 kW/cm <sup>2</sup>	10 kW/cm <sup>2</sup>	10kW/cm <sup>2</sup>
<b>PHYSICAL CHARACTERISTICS</b>			
Effective aperture	60mm!>	60mm!>	70 mm $\triangleright$ tube aperture
Absorber	GD (cone reflector)	GD (cone reflector)	GD (cone reflector)
Cooling water			
Required cooling flow <sup>f</sup>	(6 - 8) LPM $\leq \pm 1$ LPM/min	(8 - 10) LPM $\leq \pm 1$ LPM/min	(8 - 10) LPM $\leq \pm 1$ LPM/min
Temperature range	15- 25 °C	15-25 °C	15 - 25 °C
Rate of temperature change	$< \pm 3^\circ\text{C}/\text{min}$	$< \pm 3^\circ\text{C}/\text{min}$	$< \pm 3^\circ\text{C}/\text{min}$
Maximum water pressure (input)	413 kPa (60 psi)	413 kPa (60 psi)	413 kPa (60 psi)
Dimensions	127H x 127W x 97D mm	153H x 153W x 97D mm	153H x 153W x 272D mm
Weight	6kg	10kg	15kg
<b>ORDERING INFORMATION</b>			
Available output options	DB15 & USB or Bluetooth & USB	DB15 & USB or Bluetooth & USB	DB15 & USB or Bluetooth & USB
Compatible stand	STAND-S-443-C	2x STAND-S-443-C	3x STAND-S-443-C
Product page			

a. Calibrations at 2.1 to 2.5  $\mu\text{m}$  and 10.6  $\mu\text{m}$  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, 1.07-7.08  $\mu\text{m}$  and 10.6  $\mu\text{m}$ , for beams  $< 50$  mm  $\phi$ .  
 f.  $> 1$  min. contact Gentec-EO for deionized water cooling module option.

Specifications are subject to change without notice  
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