

HP

100 mm Ø, 3 W – 12 000 W



KEY FEATURES

- 1 High Power Handling**
Handles up to 12 kW of continuous power with our standard models. Custom models available for higher powers
- 2 Thermally Stable**
Less sensitive to variations in water cooling temperature
- 3 Large Aperture**
Our standard HP models (3KW and 12KW) have a very large effective aperture of 100 mm Ø to accommodate even the largest laser beams. Larger apertures with various shapes are available upon request.
- 4 Special Model for Small Beams**
10 kW model with reflective cone available. Perfect for small beams (with Avg Power Densities up to 10 kW/cm²)
- 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

AVAILABLE MODELS (STANDARD)



HP100A-3KW-HE
(3000W-Water-Cooled)



HP100A-12KW-HD
(12000W-Water-Cooled)



HP60A-10KW-GD
(10000W-High Avg Power)

LARGE APERTURES / HIGH POWERS



- Very High Average Powers (Up to 30 kW, more on request)
- NO Limitations on Aperture Size and Shape
- High Damage Thresholds
- Direct USB Output to PC
- CO₂, YAG, Fiber Laser, Diode Arrays...

ACCESSORIES



Stand with Steel Post
(Model Number: 201102)



Extension Cables
(4, 15, 20 or 25 m)



5 m USB Cable
(Included)



Pelican Carrying Case

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MONITORS
ENERGY DETECTORS
POWER DETECTORS
PHOTO DETECTORS
THZ DETECTORS
OEM DETECTORS
CALORIMETERS
SPECIAL PRODUCTS
BEAM DIAGNOSTICS

HP



*Also traceable to NRC-CNRC



MODELS	HP100A-3KW-HE	HP100A-12KW-HD	HP60A-10KW-GD
MAX AVERAGE POWER (CONTINUOUS / 5 MINUTE)	3 000 W / 4 000 W	12 000 W / 12 000 W	10 000 W / 10 000 W High Average Power up to 10 kW/cm ²
EFFECTIVE APERTURE	100 mm Ø	100 mm Ø	60 mm Ø with cone reflector
COOLING METHOD	Water-Cooled	Water-Cooled	Water-Cooled

MEASUREMENT CAPABILITY

Spectral Range	0.19 – 20 µm	0.19 – 20 µm	0.8 – 12 µm
Noise Equivalent Power ^a	3 W	10 W	10 W
Rise Time (nominal)	7 sec	9 sec	11 sec
Sensitivity (typ into 100 kΩ load)	0.5 mV/W	0.15 mV/W	0.2 mV/W
Calibration Uncertainty	±5 % @ 1064 nm	±5 % @ 1064 nm	±5 % @ 1064 nm
Repeatability	±2 %	±2 %	±2 %
Linearity with Power	±2 %	±2 %	±2 %
Linearity vs Beam Diameter	±1 %	±1 %	< 35 mm Ø: ±0.5 % > 35 mm Ø: ±1.5 %

DAMAGE THRESHOLDS

Maximum Average Power Density ^b			
500 W	10 kW/cm ²	16 kW/cm ²	
3 kW	3 kW/cm ²	9.7 kW/cm ²	
5 kW		6.5 kW/cm ²	
10 kW		3.5 kW/cm ²	< 35 mm Ø: 10 kW/cm ² > 35 mm Ø: 3.5 kW/cm ²

PHYSICAL CHARACTERISTICS

Effective Aperture	100 mm Ø	100 mm Ø	60 mm Ø (Optimized for 35 mm Ø)
Absorber (High Damage Threshold)	HE	HD	GD (cone reflector)
Required Cooling Flow	(4 - 6) LPM < ±1 LPM/min ^c	(6 - 10) LPM < ±1 LPM/min ^c	(6 - 10) LPM < ±1 LPM/min ^c
Temperature of Cooling Water	(15 - 25) °C < ±3°C/min ^c	(15 - 25) °C < ±3°C/min ^c	(15 - 25) °C < ±3°C/min ^c
Output Connectors	DB-15 cable & USB port	DB-15 cable & USB port	DB-15 cable & USB port
PCB Electrical Supply	Through USB or Gentec-EO monitors	Through USB or Gentec-EO monitors	Through USB or Gentec-EO monitors
Maximum Output Signal	2 V	2 V	2 V
Dimensions	127H x 127W x 74D mm	127H x 127W x 70D mm	127H x 127W x 90D mm
Weight (head only)	1.8 kg	3.3 kg	5 kg

ORDERING INFORMATION

Full Product Name	HP100A-3KW-HE	HP100A-12KW-HD	HP60A-10KW-GD
Product Number (Including stand)	201963	201329	201306

a. Nominal value, actual value depends on electrical noise in the measurement system.
 b. At 1064 nm, 1.07-1.08 µm and 10.6 µm.
 c. > 1 min.

Specifications are subject to change without notice