

# SUPER HP


Custom sizes and shapes, up to 100 000 W upon request



## KEY FEATURES

- **THE HIGHEST POWER HANDLING**  
Custom models handle up to 100 000 W of continuous power
- **INFINITE CUSTOMIZATION CAPABILITIES**
  1. Choose YOUR size
  2. Choose YOUR maximum power
  3. We will customize one just for you!
- **COMPACT AND LIGHT WEIGHT**  
Lighter and more compact than any other high power detector on the market, thanks to our unique design
- **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 ± 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 USB2.0 output for direct connection to a PC. Other connectors available upon request
- **TRACK WATER PARAMETERS**  
Water flow and temperature are monitored in real time and displayed continuously
- **HIGH POWER NIST-TRACEABLE CALIBRATION WITH A 5 KW FIBER LASER**

## 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  
For 30 kW model



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



5 m USB cable  
(Included)



Pelican carrying case

# SUPER HP



## Specifications

CE NIST\*  
Traceable



\*Also traceable to NRC-CNRC



	HP280A-30KW-HD	CUSTOMIZATION CAPABILITIES
<b>MAX AVERAGE POWER</b>	30 000 W	Up to 100 000 W
<b>EFFECTIVE APERTURE</b>	280 x 280 mm	Up to 500 x 500 mm
<b>COOLING METHOD</b>	Water-cooled	Water-cooled
<b>MEASUREMENT CAPABILITY</b>		
<b>Spectral range</b>	0.19 - 20 $\mu\text{m}$	0.19 - 20 $\mu\text{m}$
<b>Calibrated spectral range <sup>a</sup></b>	0.248 - 2.1 $\mu\text{m}$	0.248 - 2.5 $\mu\text{m}$ & 10.6 $\mu\text{m}$
<b>Noise equivalent power <sup>b</sup></b>	$\pm 25$ W	Adapted to maximum power
<b>Minimum average power <sup>c</sup></b>	1000 W	Adapted to maximum power
<b>Rise time (nominal)</b>	25 s	$\leq 45$ s
<b>Calibration uncertainty</b>		
at 1064 nm	$\pm 5\%$	$\pm 5\%$
at 0.25- 2.5 $\mu\text{m}$	$\pm 6\%$	$\pm 6\%$
<b>Repeatability</b>	$\pm 2\%$	$\pm 2\%$
<b>Linearity with power</b>	$\pm 2\%$	$\pm 2\%$
<b>Linearity vs beam diameter <sup>d</sup></b>	$\pm 2\%$	$\pm 2\%$
<b>DAMAGE THRESHOLDS</b>		
<b>Maximum average power density <sup>e</sup></b>		
10 kW	2.5 kW/cm <sup>2</sup>	2.5 kW/cm <sup>2</sup>
25 kW	---	0.25 kW/cm <sup>2</sup>
30 kW	0.2 kW/cm <sup>2</sup>	0.2 kW/cm <sup>2</sup>
<b>PHYSICAL CHARACTERISTICS</b>		
<b>Effective aperture</b>	280 x 280 mm	Square apertures up to 400 x 400 mm Rectangular and round apertures also available
<b>Absorber (high damage threshold)</b>	HD	HD
<b>Cooling water</b>		
<b>Required cooling flow</b>	0-30 kW: (15 - 18) LPM $< \pm 1$ LPM/min <sup>f</sup> 0-10 kW: (8 - 12) LPM $< \pm 1$ LPM/min <sup>f</sup>	Adapted to maximum power
<b>Temperature range</b>	15 - 25 °C	15 - 25 °C
<b>Rate of temperature change</b>	$< \pm 3^\circ\text{C}/\text{min}$	$< \pm 3^\circ\text{C}/\text{min}$
<b>Dimensions</b>	300H x 300W x 92D mm	
<b>Weight (head only)</b>	20 kg	
<b>ORDERING INFORMATION</b>		
<b>Available output options</b>	DB15 & USB or Bluetooth & USB	DB15 & USB or Bluetooth & USB
<b>Compatible stand</b>	STAND HP280A-30KW-HD	Ask
<b>Product page</b>		

- 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 centered beam with size from 20% to 80% of the total aperture.  
e. At 1064 nm, 1.07-1.08  $\mu\text{m}$  and 10.6  $\mu\text{m}$ .  
f.  $> 1\text{min}$

Specifications are subject to change without notice