

# UP12-H

12 mm Ø, 1 mW - 110 W



## KEY FEATURES

- **MODULAR CONCEPT**  
Increase the power capability of your detector: 3 different cooling modules
- **HIGH PERFORMANCE**  
Fast rise time (0.3 s)  
High damage threshold (36 kW/cm<sup>2</sup>)
- **COMPACT DESIGN**  
Only 14 mm thick (10S model)
- **ENERGY MODE**  
Measure single shot energy up to 5 J

## OUTPUT OPTIONS

- **SMART DB15 CONNECTOR**  
Contains all the calibration data
- **integra ALL-IN-ONE-METER**  
Connects directly to a PC  
Two models available:
  - USB output (-INT)
  - RS-232 output (-IDR)

## COMPATIBLE DISPLAYS & PC INTERFACES



MIRO ALTIITUDE



MAESTRO



TUNER



UNO



U-LINK and P-LINK



S-LINK and M-LINK

## ACCESSORIES



Stand with steel post



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



Replacement cover  
for fiber adaptors






Pelican carrying Case

# UP12-H

## Specifications

CE NIST\*  
Traceable  
\*Also traceable to NRC-CNRC



	UP12E-10S-H5-D0	UP12E-20H-H5-D0	UP12E-70W-H5-D0
<b>MAX AVERAGE POWER (CONTINUOUS/1 MINUTE)</b>	10 W / 20 W	20 W / 40 W	70 W / 110 W <sup>f</sup>
<b>EFFECTIVE APERTURE</b>	12 mm $\phi$	12 mm $\phi$	12 mm $\phi$
<b>COOLING METHOD</b>	Convection	Heatsink	Water-cooled
<b>MEASUREMENT CAPABILITY</b>			
<b>Spectral range</b>	0.19 - 20 $\mu\text{m}$	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 - 2.1 $\mu\text{m}$	0.248 - 2.1 $\mu\text{m}$
<b>Noise equivalent power<sup>b</sup></b>	1 mW	1 mW	1 mW
<b>Rise time (nominal)<sup>c</sup></b>	0.3 s	0.3 s	0.3 s
<b>Calibration uncertainty<sup>d</sup></b>	$\pm 2.5\%$	$\pm 2.5\%$	$\pm 2.5\%$
<b>Repeatability</b>	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$
<b>Energy mode</b>			
<b>Maximum measurable energy<sup>e</sup></b>	5 J	5 J	5 J
<b>Noise equivalent energy<sup>b</sup></b>	0.02 J	0.02 J	0.02 J
<b>Minimum repetition period</b>	1.5 s	1.5 s	1.5 s
<b>Maximum pulse width</b>	50 ms	50 ms	50 ms
<b>Accuracy with energy calibration option</b>	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$
<b>DAMAGE THRESHOLDS</b>			
<b>Maximum average power density<sup>g</sup></b>	36 kW/cm <sup>2</sup>	36 kW/cm <sup>2</sup>	36 kW/cm <sup>2</sup>
<b>Maximum energy density</b>			
<b>1064 nm, 360 <math>\mu\text{s}</math>, 5 Hz</b>	5 J/cm <sup>2</sup>	5 J/cm <sup>2</sup>	5 J/cm <sup>2</sup>
<b>1064 nm, 7 ns, 10 Hz</b>	1 J/cm <sup>2</sup>	1 J/cm <sup>2</sup>	1 J/cm <sup>2</sup>
<b>532 nm, 7 ns, 10 Hz</b>	0.6 J/cm <sup>2</sup>	0.6 J/cm <sup>2</sup>	0.6 J/cm <sup>2</sup>
<b>266 nm, 7 ns, 10 Hz</b>	0.3 J/cm <sup>2</sup>	0.3 J/cm <sup>2</sup>	0.3 J/cm <sup>2</sup>
<b>PHYSICAL CHARACTERISTICS</b>			
<b>Effective aperture</b>	12 mm $\phi$	12 mm $\phi$	12 mm $\phi$
<b>Absorber (high damage threshold)</b>	H5	H5	H5
<b>Dimensions</b>	38H x 38W x 14D mm	38H x 38W x 45D mm	38H x 38W x 32D mm
<b>Weight (head only)</b>	0.13 kg	0.15 kg	0.19 kg
<b>ORDERING INFORMATION</b>			
<b>Available output options</b>	DB15, USB or RS-232	DB15, USB or RS-232	DB15, USB or RS-232
<b>Compatible stand</b>	STAND-S-233	STAND-S-233	STAND-S-233
<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. With anticipation.  
 d. Including linearity with power.  
 e. For 360  $\mu\text{s}$  pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).  
 f. Minimum cooling flow 0.5 liters/min, water temperature  $\leq 22^\circ\text{C}$ , 1/8 NPT compression fittings for 1/4 inch semi-rigid tube. Contact Gentec-EO for clean deionized water cooling module option.  
 g. At 1064 nm, 10 W CW.

Specifications are subject to change without notice