

# UP19-H


19 mm Ø, 1 mW - 200 W



## KEY FEATURES

- > **MODULAR CONCEPT**  
Increase the power capability of your detector: 5 different cooling modules
- > **HIGH PERFORMANCE**  
Fast Rise Time (0.6 s)  
High damage threshold (45 kW/cm<sup>2</sup>)
- > **COMPACT DESIGN**  
Only 20.6 mm thick (15S model)
- > **ENERGY MODE**  
Measure single shot energy up to 25 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)
- > **BLU WIRELESS METER**   
Connects via Bluetooth® to a smartphone, tablet or PC

## COMPATIBLE DISPLAYS & PC INTERFACES



MIRO ALTITUDE



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)



Isolation tube



Fiber adaptors and connectors  
(FC, SC or SMA)








12V power supply



Pelican carrying case



	UP19K-15S-H5-D0	UP19K-30H-H5-D0	UP19K-50L-H5-D0	UP19K-110F-H9-D0	UP19K-200W-H9-D0
<b>MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)</b>	15 W / 30 W	30 W / 60 W	50 W / 90 W	110 W / 150 W	200 W <sup>f</sup> / 200 W <sup>g</sup>
<b>EFFECTIVE APERTURE</b>	19 mm $\phi$	19 mm $\phi$	19 mm $\phi$	19 mm $\phi$	19 mm $\phi$
<b>COOLING METHOD</b>	Convection	Heatsink	Large heatsink	Fan-cooled	Water-cooled
<b>MEASUREMENT CAPABILITY</b>					
<b>Spectral range</b>	0.19 - 20 $\mu$ m	0.19 - 20 $\mu$ m	0.19 - 20 $\mu$ m	0.19 - 20 $\mu$ m	0.19 - 20 $\mu$ m
<b>Calibrated spectral range<sup>a</sup></b>	0.248 - 2.1 $\mu$ m	0.248 - 2.1 $\mu$ m	0.248 - 2.1 $\mu$ m	0.248 - 2.1 $\mu$ m	0.248 - 2.1 $\mu$ m
<b>Noise equivalent power<sup>b</sup></b>	1 mW	1 mW	1 mW	3 mW	3 mW
<b>Rise time (nominal)<sup>c</sup></b>	0.6 s	0.6 s	0.6 s	1.5 s	1.5 s
<b>Calibration uncertainty<sup>d</sup></b>	$\pm$ 2.5%	$\pm$ 2.5%	$\pm$ 2.5%	$\pm$ 2.5%	$\pm$ 2.5%
<b>Repeatability</b>	$\pm$ 0.5%	$\pm$ 0.5%	$\pm$ 0.5%	$\pm$ 0.5%	$\pm$ 0.5%
<b>Energy mode</b>					
<b>Maximum measurable energy<sup>e</sup></b>	15 J	15 J	15 J	25 J	25 J
<b>Noise equivalent energy<sup>b</sup></b>	0.02 J	0.02 J	0.02 J	0.06 J	0.06 J
<b>Minimum repetition period</b>	4 s	4 s	4 s	4 s	4 s
<b>Maximum pulse width</b>	88 ms	88 ms	88 ms	88 ms	88 ms
<b>Accuracy with energy calibration option</b>	$\pm$ 5%	$\pm$ 5%	$\pm$ 5%	$\pm$ 5%	$\pm$ 5%
<b>DAMAGE THRESHOLDS</b>					
<b>Maximum average power density<sup>a</sup></b>	36 kW/cm <sup>2</sup>	36 kW/cm <sup>2</sup>	36 kW/cm <sup>2</sup>	45 kW/cm <sup>2</sup>	45 kW/cm <sup>2</sup>
<b>Maximum energy density</b>					
<b>1064 nm, 360 <math>\mu</math>s, 5 Hz</b>	5 J/cm <sup>2</sup>	5 J/cm <sup>2</sup>	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>	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>	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>	0.3 J/cm <sup>2</sup>	0.3 J/cm <sup>2</sup>
<b>PHYSICAL CHARACTERISTICS</b>					
<b>Effective aperture</b>	19 mm $\phi$	19 mm $\phi$	19 mm $\phi$	19 mm $\phi$	19 mm $\phi$
<b>Absorber (high damage threshold)</b>	H5	H5	H5	H9	H9
<b>Dimensions</b>	50H x 50W x 20.6D mm	50H x 50W x 56.3D mm	76.2H x 76.2W x 74.7D mm	50H x 50W x 63D mm	50H x 50W x 33D mm
<b>Weight (head only)</b>	0.16 kg	0.21 kg	0.48 kg	0.25 kg	0.24 kg
<b>ORDERING INFORMATION</b>					
<b>Available output options</b>	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth	DB15, USB or RS-232	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth
<b>Compatible stand</b>	STAND-S-233	STAND-S-233	STAND-S-233	STAND-S-233	STAND-S-233
<b>Product page</b>					

a. Calibrations at 2.1 to 2.5  $\mu$ m and 10.6  $\mu$ 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  $\mu$ 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°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.