



# UP19-W

19 mm Ø, 1 mW - 85 W, 100 kW/cm<sup>2</sup>



## KEY FEATURES

1. **MODULAR CONCEPT**  
Increase the power capability of your detector:  
5 different cooling modules
2. **VERY HIGH DAMAGE THRESHOLD**  
100 kW/cm<sup>2</sup> in average power density
3. **COMPACT DESIGN**  
Only 21 mm thick (15S model)
4. **ENERGY MODE**  
Measure single shot energy up to 200 J
5. **SMART INTERFACE**  
Containing all the calibration data
6. **integra OPTIONS**
  - Standard: USB Output (-INT)
  - In Option: RS-232 Output (-IDR)

## AVAILABLE MODELS



UP19K-15S-W5  
(15W-Standalone)



UP19K-30H-W5  
(30W-Heatsink)



UP19K-50L-W5  
(50W-Large Heatsink)



UP19K-50F-W5  
(50W-Fan-Cooled)



UP19K-50W-W5  
(50W-Water-Cooled)

## ACCESSORIES



Stand with Steel Post  
(Model Number: 200160)



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



12V Power Supply  
(Model Number: 200130)



Pelican Carrying Case

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MONITORS

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTO DETECTORS

THZ DETECTORS

OEM DETECTORS

SPECIAL PRODUCTS

BEAM DIAGNOSTICS

## UP19-W



\*Also traceable to NRC-CNRC

## SPECIFICATIONS

	UP19K-15S-W5	UP19K-30H-W5	UP19K-50L-W5	UP19K-50F-W5	UP19K-50W-W5
<b>MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)</b>	15 W / 30 W	30 W / 60 W	50 W / 85 W	50 W / 85 W	50 W <sup>†</sup> / 85 W <sup>†</sup>
<b>EFFECTIVE APERTURE</b>	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø
<b>COOLING METHOD</b>	Convection	Heatsink	Large Heatsink	Fan-Cooled	Water-Cooled
<b>MEASUREMENT CAPABILITY</b>					
Spectral Range *	0.19 – 10.0 µm	0.19 – 10.0 µm	0.19 – 10.0 µm	0.19 – 10.0 µm	0.19 – 10.0 µm
Noise Equivalent Power <sup>a</sup>	1 mW	1 mW	1 mW	1 mW	1 mW
Rise Time (nominal) <sup>b</sup>	1.4 sec	1.4 sec	1.4 sec	1.4 sec	1.4 sec
Sensitivity (typ into 100 kΩ load) <sup>c</sup>	0.65 mV/W	0.65 mV/W	0.65 mV/W	0.65 mV/W	0.65 mV/W
Calibration Uncertainty <sup>d</sup>	±2.5 %	±2.5 %	±2.5 %	±2.5 %	±2.5 %
Repeatability	±0.5 %	±0.5 %	±0.5 %	±0.5 %	±0.5 %
<b>Energy Mode</b>					
Sensitivity	0.33 mV/J	0.33 mV/J	0.33 mV/J	0.33 mV/J	0.33 mV/J
Maximum Measurable Energy <sup>e</sup>	200 J	200 J	200 J	200 J	200 J
Noise Equivalent Energy <sup>a</sup>	0.02 J	0.02 J	0.02 J	0.02 J	0.02 J
Minimum Repetition Period	5 sec	5 sec	5 sec	5 sec	5 sec
Maximum Pulse Width	133 ms	133 ms	133 ms	133 ms	133 ms
Accuracy with energy calibration option	±5 %	±5 %	±5 %	±5 %	±5 %
<b>DAMAGE THRESHOLDS</b>					
Maximum Average Power Density <sup>g</sup>	100 kW/cm <sup>2</sup>	100 kW/cm <sup>2</sup>	100 kW/cm <sup>2</sup>	100 kW/cm <sup>2</sup>	100 kW/cm <sup>2</sup>
Pulsed Laser Damage Thresholds	Max Energy Density		Peak Power Density		
1064 nm, 150 µs, 10 Hz	100 J/cm <sup>2</sup>		667 kW/cm <sup>2</sup>		
1064 nm, 7 ns, 10 Hz	1.1 J/cm <sup>2</sup>		157 MW/cm <sup>2</sup>		
532 nm, 7 ns, 10 Hz	1.1 J/cm <sup>2</sup>		157 MW/cm <sup>2</sup>		
248 nm, 26 ns, 10 Hz	0.7 J/cm <sup>2</sup>		27 MW/cm <sup>2</sup>		
<b>PHYSICAL CHARACTERISTICS</b>					
Effective Aperture	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø
Absorber (High Damage Threshold)	W5	W5	W5	W5	W5
Dimensions	50H x 50W x 20.6D mm	50H x 50W x 56.3D mm	76.2H x 76.2W x 74.7D mm	54.2H x 54.2W x 55.6D mm	50H x 50W x 33D mm
Weight (head only)	0.16 kg	0.21 kg	0.48 kg	0.25 kg	0.24 kg
<b>ORDERING INFORMATION</b>					
Product Name	UP19K-15S-W5-D0	UP19K-30H-W5-D0	UP19K-50L-W5-D0	UP19K-50F-W5-D0	UP19K-50W-W5-D0
Product Number (without stand)	200282	200284	200331	200334	200337
Add Extension for INTEGRA (USB)	-INT	-INT	-INT	-INT	-INT
Product Number (without stand)	202633	202635	202637	203047	203049
Add Extension for INTEGRA (RS-232)	-IDR	-IDR	-IDR	-IDR	-IDR
Add Extension for BLU	-BLU	-BLU	-BLU	-BLU	-BLU
Product Number (without stand)	203640	203649		203658	203661

Specifications are subject to change without notice // Compatible stand: P/N 200160

\* For the calibrated spectral range, see the user manual.

a. Nominal value, actual value depends on electrical noise in the measurement system.

b. With anticipation.

c. Maximum output voltage = sensitivity x maximum power.

d. Including linearity with power.

e. For 150 µs pulses. Higher pulse energy possible when customized for long pulses (ms), less for short pulses (ns).

f. Minimum cooling flow 1 liters/min, water temperature ≤ 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.