



UP19-W

19 mm Ø, 1 mW - 85 W, 100 kW/cm²



KEY FEATURES

- 1. **MODULAR CONCEPT**
Increase the power capability of your detector:
5 different cooling modules
- 2. **VERY HIGH DAMAGE THRESHOLD**
100 kW/cm² 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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UP19-W



SPECIFICATIONS

	UP19K-15S-W5	UP19K-30H-W5	UP19K-50L-W5	UP19K-50F-W5	UP19K-50W-W5
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	15 W / 30 W	30 W / 60 W	50 W / 85 W	50 W / 85 W	50 W [†] / 85 W [†]
EFFECTIVE APERTURE	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø
COOLING METHOD	Convection	Heatsink	Large Heatsink	Fan-Cooled	Water-Cooled
MEASUREMENT CAPABILITY					
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 ^a	1 mW	1 mW	1 mW	1 mW	1 mW
Rise Time (nominal) ^b	1.4 sec	1.4 sec	1.4 sec	1.4 sec	1.4 sec
Sensitivity (typ into 100 kΩ load) ^c	0.65 mV/W	0.65 mV/W	0.65 mV/W	0.65 mV/W	0.65 mV/W
Calibration Uncertainty ^d	±2.5 %	±2.5 %	±2.5 %	±2.5 %	±2.5 %
Repeatability	±0.5 %	±0.5 %	±0.5 %	±0.5 %	±0.5 %
Energy Mode					
Sensitivity	0.33 mV/J	0.33 mV/J	0.33 mV/J	0.33 mV/J	0.33 mV/J
Maximum Measurable Energy ^e	200 J	200 J	200 J	200 J	200 J
Noise Equivalent Energy ^a	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 %
DAMAGE THRESHOLDS					
Maximum Average Power Density ^g	100 kW/cm²	100 kW/cm²	100 kW/cm²	100 kW/cm²	100 kW/cm²
Pulsed Laser Damage Thresholds	Max Energy Density		Peak Power Density		
1064 nm, 150 µs, 10 Hz	100 J/cm²		667 kW/cm²		
1064 nm, 7 ns, 10 Hz	1.1 J/cm²		157 MW/cm²		
532 nm, 7 ns, 10 Hz	1.1 J/cm²		157 MW/cm²		
248 nm, 26 ns, 10 Hz	0.7 J/cm²		27 MW/cm²		
PHYSICAL CHARACTERISTICS					
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
ORDERING INFORMATION					
Product Name	UP19K-15S-W5	UP19K-30H-W5	UP19K-50L-W5	UP19K-50F-W5	UP19K-50W-W5
Product Number (Including stand)	200295	200296	200297	200299	200300
 Add Extension for INTEGRA (USB)	-INT	-INT	-INT	-INT	-INT
Product Number (Including stand)	202632	202634	202636		
 Add Extension for INTEGRA (RS-232)	-IDR	-IDR	-IDR	-IDR	-IDR
Specifications are subject to change without notice					

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* 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.