

UP19K-W5

17 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

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

SEE ALSO

HOW IT WORKS	12
CALIBRATION	6
TECHNICAL DRAWINGS	88
ABSORPTION CURVES	93
OEM DETECTORS	116
COMPATIBLE MONITORS	
MAESTRO	18
TUNER	22
UNO	24
S-LINK-2	26
P-LINK	28
M-LINK	30
LIST OF ALL ACCESSORIES	174

UP19K-W5

SPECIFICATIONS



*Also traceable to NRC-CNRC

MODELS	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 ^f / 85 W ^f
EFFECTIVE APERTURE	17 mm Ø	17 mm Ø	17 mm Ø	17 mm Ø	17 mm Ø
COOLING METHOD	Convection	Heatsink	Large Heatsink	Fan-Cooled	Water-Cooled

MEASUREMENT CAPABILITY

Spectral Range	0.19 – 10 µm	0.19 – 10 µm	0.19 – 10 µm	0.19 – 10 µm	0.19 – 10 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/cm ²	100 kW/cm ²	100 kW/cm ²	100 kW/cm ²	100 kW/cm ²
Pulsed Laser Damage Thresholds	Max Energy Density		Peak Power Density		
1064 nm, 150 µs, 10 Hz	100 J/cm ²		667 kW/cm ²		
1064 nm, 7 ns, 10 Hz	1.1 J/cm ²		157 MW/cm ²		
532 nm, 7 ns, 10 Hz	1.1 J/cm ²		157 MW/cm ²		
248 nm, 26 ns, 10 Hz	0.7 J/cm ²		27 MW/cm ²		

PHYSICAL CHARACTERISTICS

Effective Aperture	17 mm Ø	17 mm Ø	17 mm Ø	17 mm Ø	17 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

Full 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

a. Nominal value, actual value depends on electrical noise in the measurement system.
 b. With Gentec-EO MAESTRO, UNO, P-LINK, TUNER and S-LINK-2 monitors.
 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.

Specifications are subject to change without notice