

UP19K-W5

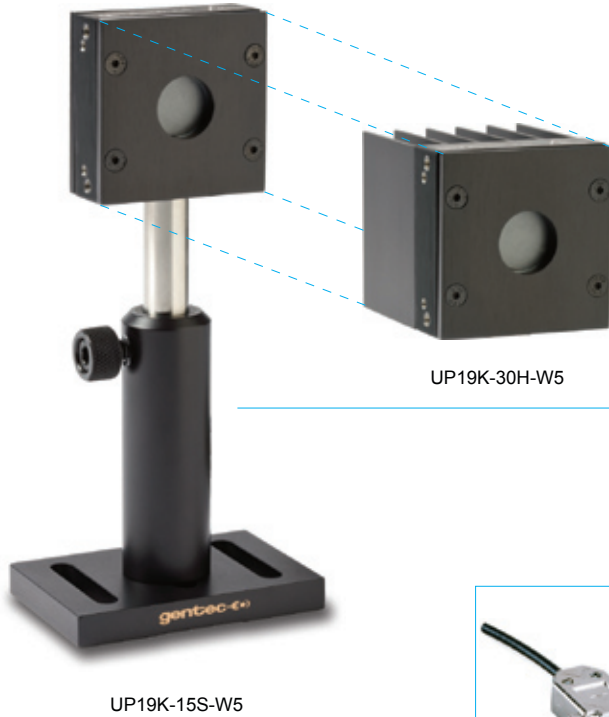


17 mm Ø, 1 mW - 85 W, 100 kW/cm²



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 **High Quality Stand**
Post threaded on both sides to allow extension
- 6 **Smart Interface**
Containing all the calibration data



See also

- . How it works14
- . Calibration6
- . Detailed dimensions77
- . Spectral absorption107
- . OEM Custom detectors80
- . Compatible monitors
 - SOLO 220
 - UNO22
 - S-LINK-224
 - P-LINK26

Accessories

» Fiber Optic Adapters (FC, SMA, SC)

Variety of fiber adapter options to give you the most flexibility in using our power detectors with your fiber coupled lasers.



» Extension Cables (4, 15, 20 and 25 m)

For some OEM, manufacturing and laboratory applications.








» Pelican Carrying Case

We offer a robust hard shell polymer carrying case.



UP19K-W5

SPECIFICATIONS

Models	UP19K-15S-W5	UP19K-30H-W5	UP19K-50L-W5	UP19K-50F-W5	UP19K-50W-W5
					
Max Average Power (continuous)	15 W	30 W	50 W	50 W	50 W ^f
Max Average Power (1 minute)	30 W	60 W	85 W	85 W	85 W ^f

MEASUREMENT CAPABILITY	15S	30H	50L	50F	50W
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 k Ω 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	$\pm 2.5\%$	$\pm 2.5\%$	$\pm 2.5\%$	$\pm 2.5\%$	$\pm 2.5\%$
Repeatability	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$
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	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$

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, 360 μs , 5 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		
266 nm, 7 ns, 10 Hz	0.7 J/cm ²		27 MW/cm ²		

PHYSICAL CHARACTERISTICS

Effective Aperture Diameter	17 mm \emptyset	17 mm \emptyset	17 mm \emptyset	17 mm \emptyset	17 mm \emptyset
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 SOLO, UNO, P-LINK 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 01 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