

UP19-W

17 mm Ø, 1 mW - 85 W, 100 kW/cm²

AVAILABLE WITH

integra



See page 36 for details

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	14
CALIBRATION	6
TECHNICAL DRAWINGS	86
ABSORPTION CURVES	90
OEM DETECTORS	130
COMPATIBLE MONITORS	
MAESTRO	20
TUNER	24
UNO	26
S-LINK	28
P-LINK	30
M-LINK	32
LIST OF ALL ACCESSORIES	190

APPLICATION NOTE

MEASURING LASER POWER WITH A THERMOPILE DETECTOR: THE BASICS! [202175](#)

UP19-W

SPECIFICATIONS



*Also traceable to NRC-CNRC

	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					
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	-INT	-INT	-INT	-INT	-INT
Product Number (Including stand)	202632	202634	202636		

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

- 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 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