UP19K-V

18 mm Ø, 1 mW - 40 W, Volume Absorbers

CE NIST Traceable WEEE/RoHS COMPLIANT

UP19K-30H-VR

UP19K-15S-VR

NEW

Key Features

1 **Modular Concept**
Increase the power capability of your detector : 2 different cooling modules

2 **High Peak Power Volume Absorbers**
- Fast Rise Time (1.8 sec for VM)
- High Damage Threshold (100 GW/cm²)

3 **Compact Design**
Only 21 mm thick (15S model)

4 **Energy Mode**
Measure single shot energy up to 40 J (VR)

5 **New High Durability Absober - VR**
Average power density of 700 W/cm² prevents degradation caused by repetitive pulses

6 **Smart Interface**
Containing all the calibration data

See also

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.

» **Replacement Volume Absorbers**
By following a simple procedure that takes only a few minutes, you can change your absorber glass. (VM only).

» **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-V

SPECIFICATIONS

Models	UP19K-15S-VM	UP19K-30H-VM	UP19K-15S-VR	UP19K-30H-VR
				
Max Average Power (continuous)	15 W	30 W	15 W	30 W
Max Average Power (1 minute)	23 W	40 W	20 W	35 W

MEASUREMENT CAPABILITY	15S-VM	30H-VM	15S-VR	30H-VR
Spectral Range	0.19 – 2.5 µm	0.19 – 2.5 µm	0.19 – 2.5 µm	0.19 – 2.5 µm
Noise Equivalent Power [a]	1 mW	1 mW	2 mW	2 mW
Rise Time (nominal) [b]	1.8 sec	1.8 sec	2.5 sec	2.5 sec
Sensitivity (typ into 100 kΩ load) [c]	0.75 mV/W	0.75 mV/W	0.34 mV/W	0.34 mV/W
Calibration Uncertainty [d]	±2.5 %	±2.5 %	±2.5 %	±2.5 %
Repeatability	±0.5 %	±0.5 %	±0.5 %	±0.5 %
Energy Mode				
Sensitivity	0.28 mV/J	0.28 mV/J	0.1 mV/J	0.1 mV/J
Maximum Measurable Energy [e]	28 J	28 J	40 J	40 J
Noise Equivalent Energy [a]	0.03 J	0.03 J	0.02 J	0.02 J
Minimum Repetition Period	8 sec	8 sec	4.5 sec	4.5 sec
Maximum Pulse Width	300 ms	300 ms	90 ms	90 ms
Accuracy with energy calibration option	±5 %	±5 %	±5 %	±5 %

DAMAGE THRESHOLDS				
Maximum Average Power Density [f]	110 W/cm²	110 W/cm²	700 W/cm²	700 W/cm²
Pulsed Laser Damage Thresholds	Max Energy Density	Peak Power Density	Max Energy Density	Peak Power Density
1064 nm, 360 µs, 5 Hz	11 J/cm²	30 kW/cm²	40 J/cm²	111 kW/cm²
1064 nm, 7 ns, 10 Hz	4 J/cm²	571 MW/cm²	6 J/cm²	860 MW/cm²
532 nm, 7 ns, 10 Hz	3 J/cm²	428 MW/cm²	4 J/cm²	570 MW/cm²
266 nm, 7 ns, 10 Hz	1 J/cm²	143 MW/cm²	1 J/cm²	143 MW/cm²
Max Peak Power Density	100 GW/cm²	100 GW/cm²	100 GW/cm²	100 GW/cm²

PHYSICAL CHARACTERISTICS				
Effective Aperture Diameter	18 mm Ø	18 mm Ø	18 mm Ø	18 mm Ø
Absorber (High Damage Threshold)	VM	VM	VR	VR
Dimensions	50H x 50W	50H x 50W	50H x 50W	50H x 50W
	x 20.6D mm	x 56.3D mm	x 20.6D mm	x 56.3D mm
Weight (head only)	0.16 kg	0.21 kg	0.16 kg	0.21 kg

ORDERING INFORMATION				
Full Product Name	UP19K-15S-VM	UP19K-30H-VM	UP19K-15S-VR	UP19K-30H-VR
Product Number (including stand)	200301	200302	201149	201150

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 360 µs pulses. Higher pulse energy possible when customized for long pulses (ms), less for short pulses (ns).
f. At 1064 nm, 10 W CW.

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