

UP19K-V



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



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 Absorber - VR**
Average power density of 700 W/cm² prevents degradation caused by repetitive pulses
- 6 **Smart Interface**
Containing all the calibration data

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SOLO 2	20
UNO	22
S-LINK-2	24
P-LINK	26

Monitors

Energy Detectors

Power Detectors

OEM Detectors

Calorimeters

Diffractive Optics

Beam Diagnostics



NEW



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.

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 k Ω load) ^c	0.75 mV/W	0.75 mV/W	0.34 mV/W	0.34 mV/W
Calibration Uncertainty ^d	$\pm 2.5\%$	$\pm 2.5\%$	$\pm 2.5\%$	$\pm 2.5\%$
Repeatability	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$
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	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$

DAMAGE THRESHOLDS

Maximum Average Power Density ^f	110 W/cm ²	110 W/cm ²	700 W/cm ²	700 W/cm ²
Pulsed Laser Damage Thresholds	Max Energy Density	Peak Power Density	Max Energy Density	Peak Power Density
1064 nm, 360 μs , 5 Hz	11 J/cm ²	30 kW/cm ²	40 J/cm ²	111 kW/cm ²
1064 nm, 7 ns, 10 Hz	4 J/cm ²	571 MW/cm ²	6 J/cm ²	860 MW/cm ²
532 nm, 7 ns, 10 Hz	3 J/cm ²	428 MW/cm ²	4 J/cm ²	570 MW/cm ²
266 nm, 7 ns, 10 Hz	1 J/cm ²	143 MW/cm ²	1 J/cm ²	143 MW/cm ²
Max Peak Power Density	100 GW/cm ²	100 GW/cm ²	100 GW/cm ²	100 GW/cm ²

PHYSICAL CHARACTERISTICS

Effective Aperture Diameter	18 mm \emptyset	18 mm \emptyset	18 mm \emptyset	18 mm \emptyset
Absorber (High Damage Threshold)	VM	VM	VR	VR
Dimensions	50H x 50W x 20.6D mm	50H x 50W x 56.3D mm	50H x 50W x 20.6D mm	50H x 50W 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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