



UP19-VR

18 mm Ø, 2 mW - 35 W, Volume Absorber



KEY FEATURES

1. **MODULAR CONCEPT**
Increase the power capability of your detector: 2 different cooling modules
2. **HIGH PEAK POWER VOLUME ABSORBER**
 - Perfect for high density beams
 - Average power density of 700 W/cm² prevents degradation caused by repetitive pulses
3. **COMPACT DESIGN**
Only 21 mm thick (15S model)
4. **ENERGY MODE**
Measure single shot energy up to 40 J
5. **SMART INTERFACE**
Containing all the calibration data
6. **integra OPTIONS**
 - Standard: USB Output (-INT)
 - In Option: RS-232 Output (-IDR)

AVAILABLE MODELS



UP19K-15S-VR
(15W-Standalone)



UP19K-30H-VR
(30W-Heatsink)

ACCESSORIES



Stand with Steel Post
(Model Number: 200160)



Extension Cables
(4, 15, 20 or 25 m)



Pelican Carrying Case

SEE ALSO

HOW IT WORKS	14
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APPLICATION NOTE

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

UP19-VR



SPECIFICATIONS

	UP19K-15S-VR	UP19K-30H-VR
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	15 W / 20 W	30 W / 35 W
EFFECTIVE APERTURE	18 mm Ø	18 mm Ø
COOLING METHOD	Convection	Heatsink
MEASUREMENT CAPABILITY		
Spectral Range *a	0.3 – 2.5 µm	0.3 – 2.5 µm
Noise Equivalent Power ^b	2 mW	2 mW
Rise Time (nominal) ^c	2.5 sec	2.5 sec
Sensitivity (typ into 100 kΩ load) ^d	0.34 mV/W	0.34 mV/W
Calibration Uncertainty ^e	±2.5 %	±2.5 %
Repeatability	±0.5 %	±0.5 %
Energy Mode		
Sensitivity	0.1 mV/J	0.1 mV/J
Maximum Measurable Energy ^f	40 J	40 J
Noise Equivalent Energy ^b	0.02 J	0.02 J
Minimum Repetition Period	4.5 sec	4.5 sec
Maximum Pulse Width	90 ms	90 ms
Accuracy with energy calibration option	±5 %	±5 %
DAMAGE THRESHOLDS		
Maximum Average Power Density ^g	700 W/cm ²	700 W/cm ²
Pulsed Laser Damage Thresholds	Max Energy Density	Peak Power Density
1064 nm, 360 µs, 10 Hz	40 J/cm ²	111 kW/cm ²
1064 nm, 7 ns, 10 Hz	6 J/cm ²	860 MW/cm ²
532 nm, 7 ns, 10 Hz	4 J/cm ²	570 MW/cm ²
266 nm, 7 ns, 10 Hz	1 J/cm ²	143 MW/cm ²
PHYSICAL CHARACTERISTICS		
Effective Aperture	18 mm Ø	18 mm Ø
Absorber (Volume Absorber)	VR	VR
Dimensions	50H x 50W x 20.6D mm	50H x 50W x 56.3D mm
Weight (head only)	0.16 kg	0.21 kg
ORDERING INFORMATION		
Product Name	UP19K-15S-VR-DO	UP19K-30H-VR-DO
Product Number (without stand)	201147	201148
Add Extension for INTEGRA (USB)	-INT	-INT
Product Number (without stand)	202639	202641
Add Extension for INTEGRA (RS-232)	-IDR	-IDR
Add Extension for BLU	-BLU	-BLU
Product Number (without stand)	203637	203646

Specifications are subject to change without notice // Compatible stand: P/N 200160

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

- a. Adjustment multipliers for wavelengths under 300 nm are not traceable.
 b. Nominal value, actual value depends on electrical noise in the measurement system.
 c. With anticipation.
 d. Maximum output voltage = sensitivity x maximum power.

e. Including linearity with power.

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

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