

# 11UP19-H

## POWER DETECTORS

19 mm Ø, 1 mW - 200 W



\*Also traceable to NRC-CNRC

### Key Features

- **MODULAR CONCEPT**  
Increase the power capability of your detector: 5 different cooling modules
- **HIGH PERFORMANCE**  
Fast Rise Time (0.6 sec)  
High Damage Threshold (45 kW/cm<sup>2</sup>)
- **COMPACT DESIGN**  
Only 20.6 mm thick (15S model)
- **ENERGY MODE**  
Measure single shot energy up to 15 J
- **SMART INTERFACE**  
Containing all the calibration data

### Available Models



11UP19K-15S-H5  
15W-Standalone



11UP19K-30H-H5  
30W-Heatsink



11UP19K-50L-H5  
50W-Large Heatsink



11UP19K-110F-H9  
110W-Fan-Cooled



11UP19K-150W-H5  
150W-Water-Cooled



11UP19K-200W-H9  
200W-Water-Cooled

## Specifications

	11UP19K-15S-H5	11UP19K-30H-H5	11UP19K-50L-H5	11UP19K-110F-H9	11UP19K-150W-H5	11UP19K-200W-H9
<b>MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)</b>	15 W / 30 W	30 W / 60 W	50 W / 90 W	110 W / 150 W	150 W <sup>f</sup> / 190 W <sup>f</sup>	200 W <sup>f</sup> / 200 W <sup>f</sup>
<b>EFFECTIVE APERTURE</b>	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø
<b>COOLING METHOD</b>	Convection	Heatsink	Large Heatsink	Fan-Cooled	Water-Cooled	Water-Cooled
<b>MEASUREMENT CAPABILITY</b>						
Spectral Range *	0.19 – 20 µm	0.19 – 20 µm	0.19 – 20 µm	0.19 – 20 µm	0.19 – 20 µm	0.19 – 20 µm
Noise Equivalent Power <sup>a</sup>	1 mW	1 mW	1 mW	3 mW	1 mW	3 mW
Rise Time (nominal) <sup>b</sup>	0.6 sec	0.6 sec	0.6 sec	1.5 sec	0.6 sec	1.5 sec
Sensitivity (typ into 100 kΩ load) <sup>c</sup>	0.65 mV/W	0.65 mV/W	0.65 mV/W	0.23 mV/W	0.65 mV/W	0.23 mV/W
Calibration Uncertainty <sup>d</sup>	±2.5 %	±2.5 %	±2.5 %	±2.5 %	±2.5 %	±2.5 %
Repeatability	±0.5 %	±0.5 %	±0.5 %	±0.5 %	±0.5 %	±0.5 %
Energy Mode						
Sensitivity	0.65 mV/J	0.65 mV/J	0.65 mV/J	0.23 mV/J	0.65 mV/J	0.23 mV/J
Maximum Measurable Energy <sup>e</sup>	15 J	15 J	15 J	25 J	15 J	25 J
Noise Equivalent Energy <sup>a</sup>	0.02 J	0.02 J	0.02 J	0.06 J	0.02 J	0.06 J
Minimum Repetition Period	4 sec	4 sec	4 sec	4 sec	4 sec	4 sec
Maximum Pulse Width	88 ms	88 ms	88 ms	88 ms	88 ms	88 ms
Accuracy with energy calibration option	±5 %	±5 %	±5 %	±5 %	±5 %	±5 %
<b>DAMAGE THRESHOLDS</b>						
Maximum Average Power Density <sup>g</sup>	36 kW/cm <sup>2</sup>	36 kW/cm <sup>2</sup>	36 kW/cm <sup>2</sup>	45 kW/cm <sup>2</sup>	36 kW/cm <sup>2</sup>	45 kW/cm <sup>2</sup>
Pulsed Laser Damage Thresholds	Max Energy Density		Peak Power Density			
1064 nm, 360 µs, 5 Hz	5 J/cm <sup>2</sup> (H5), 9 J/cm <sup>2</sup> (H9)		14 kW/cm <sup>2</sup> (H5), 25 kW/cm <sup>2</sup> (H9)			
1064 nm, 7 ns, 10 Hz	1 J/cm <sup>2</sup>		143 MW/cm <sup>2</sup>			
532 nm, 7 ns, 10 Hz	0.6 J/cm <sup>2</sup>		86 MW/cm <sup>2</sup>			
266 nm, 7 ns, 10 Hz	0.3 J/cm <sup>2</sup>		43 MW/cm <sup>2</sup>			
<b>PHYSICAL CHARACTERISTICS</b>						
Effective Aperture	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø
Absorber (High Damage Threshold)	H5	H5	H5	H9	H5	H9
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	50H x 50W x 33D mm
Weight (head only)	0.16 kg	0.21 kg	0.48 kg	0.25 kg	0.24 kg	0.24 kg

## ORDERING INFORMATION

Product Name	11UP19K-15S-H5	11UP19K-30H-H5	11UP19K-50L-H5	11UP19K-110F-H9	11UP19K-150W-H5	11UP19K-200W-H9
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\*For the calibrated spectral range, see the user manual.

a. Nominal value, actual value depends on electrical noise in the measurement system.

b. With Standa 11MAESTRO, 11UNO, 11P-LINK, 11TUNER and 11S-LINK 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. Minimum cooling flow 0.5 liters/min, water temperature ≤ 22°C, 1/8 NPT compression fittings for 1/4 inch semi-rigid tube. Contact Standa for clean deionized water cooling module option.

g. At 1064 nm, 10 W CW.

**Specifications are subject to change without notice**