

UP19K-H

19 mm Ø, 1 mW - 200 W



KEY FEATURES

- 1 Modular Concept**
Increase the power capability of your detector:
5 different cooling modules
- 2 High Performance**
Fast Rise Time (0.6 sec)
High Damage Threshold (45 kW/cm²)
- 3 Compact Design**
Only 20.6 mm thick (15S model)
- 4 Energy Mode**
Measure single shot energy up to 15 J
- 5 Smart Interface**
Containing all the calibration data

AVAILABLE MODELS



UP19K-15S-H5
(15W-Standalone)



UP19K-30H-H5
(30W-Heatsink)



UP19K-50L-H5
(50W-Large Heatsink)



UP19K-110F-H9
(110W-Fan-Cooled)



UP19K-150W-H5
(150W-Water-Cooled)



UP19K-200W-H9
(200W-Water-Cooled)

ACCESSORIES



Stand with Steel Post



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



Isolation Tube



Fiber Adaptors and Connectors
(FC, SC or SMA)



12V Power Supply
(for Fan-Cooled version)



Pelican Carrying Case

SEE ALSO

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UP19K-H

SPECIFICATIONS



*Also traceable to NRC-CNRC

| MODELS | UP19K-15S-H5 | UP19K-30H-H5 | UP19K-50L-H5 | UP19K-110F-H9 | UP19K-150W-H5 | UP19K-200W-H9 |
|--|--------------|--------------|----------------|---------------|---|---|
| MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE) | 15 W / 30 W | 30 W / 60 W | 50 W / 90 W | 110 W / 150 W | 150 W ^f / 190 W ^f | 200 W ^f / 200 W ^f |
| EFFECTIVE APERTURE | 19 mm Ø | 19 mm Ø | 19 mm Ø | 19 mm Ø | 19 mm Ø | 19 mm Ø |
| COOLING METHOD | Convection | Heatsink | Large Heatsink | Fan-Cooled | Water-Cooled | Water-Cooled |

MEASUREMENT CAPABILITY

| | | | | | | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|
| 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 ^a | 1 mW | 1 mW | 1 mW | 3 mW | 1 mW | 3 mW |
| Rise Time (nominal) ^b | 0.6 sec | 0.6 sec | 0.6 sec | 1.5 sec | 0.6 sec | 1.5 sec |
| Sensitivity (typ into 100 kΩ load) ^c | 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 ^d | ±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 ^e | 15 J | 15 J | 15 J | 25 J | 15 J | 25 J |
| Noise Equivalent Energy ^a | 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 % |

DAMAGE THRESHOLDS

| | | | | | | |
|--|--|-----------------------|-----------------------|--|-----------------------|-----------------------|
| Maximum Average Power Density ^g | 36 kW/cm ² | 36 kW/cm ² | 36 kW/cm ² | 45 kW/cm ² | 36 kW/cm ² | 45 kW/cm ² |
| Pulsed Laser Damage Thresholds | Max Energy Density | | | Peak Power Density | | |
| 1064 nm, 360 µs, 5 Hz | 5 J/cm ² (H5), 9 J/cm ² (H9) | | | 14 kW/cm ² (H5), 25 kW/cm ² (H9) | | |
| 1064 nm, 7 ns, 10 Hz | 1 J/cm ² | | | 143 MW/cm ² | | |
| 532 nm, 7 ns, 10 Hz | 0.6 J/cm ² | | | 86 MW/cm ² | | |
| 266 nm, 7 ns, 10 Hz | 0.3 J/cm ² | | | 43 MW/cm ² | | |

PHYSICAL CHARACTERISTICS

| | | | | | | |
|----------------------------------|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------|-----------------------|
| Effective Aperture Diameter | 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 | 0.28 kg |

ORDERING INFORMATION

| | | | | | | |
|----------------------------------|--------------|--------------|--------------|---------------|---------------|---------------|
| Full Product Name | UP19K-15S-H5 | UP19K-30H-H5 | UP19K-50L-H5 | UP19K-110F-H9 | UP19K-150W-H5 | UP19K-200W-H9 |
| Product Number (Including stand) | 200173 | 200174 | 200175 | 200996 | 200177 | 200583 |

a. Nominal value, actual value depends on electrical noise in the measurement system.
 b. With Gentec-EO MAESTRO, 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. Minimum cooling flow 0.5 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