



# UP17-H/W

17 mm Ø, 1 mW - 7 W, Ultra Thin Casing



## KEY FEATURES

1. **ULTRA THIN CASING**  
Only 10.7 mm thick!
2. **CHOICE BETWEEN 2 ABSORBERS**
  - H5: 36 kW/cm<sup>2</sup>
  - W5: Unequalled 100 kW/cm<sup>2</sup>
3. **HIGH POWER TO SIZE RATIO**  
6 W continuous reading
4. **ENERGY MODE**  
Measure single shot energy up to 200 J (with the W5 version)
5. **SMART INTERFACE**  
Containing all the calibration data

## AVAILABLE MODELS



UP17P-6S-H5  
(6W-36 kW/cm<sup>2</sup>)



UP17P-6S-W5  
(6W-100 kW/cm<sup>2</sup>)

## 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  |
| CALIBRATION             | 6   |
| TECHNICAL DRAWINGS      | 88  |
| ABSORPTION CURVES       | 92  |
| COMPATIBLE MONITORS     |     |
| MAESTRO                 | 20  |
| TUNER                   | 24  |
| UNO                     | 26  |
| S-LINK                  | 28  |
| P-LINK                  | 30  |
| M-LINK                  | 32  |
| LIST OF ALL ACCESSORIES | 186 |

## APPLICATION NOTE

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

MONITORS

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTO DETECTORS

THZ DETECTORS

OEM DETECTORS

SPECIAL PRODUCTS

BEAM DIAGNOSTICS

# UP17-H/W



\*Also traceable to NRC-CNRC

## SPECIFICATIONS

|  | UP17P-6S-H5           | UP17P-6S-W5            |                       |                        |
|--|-----------------------|------------------------|-----------------------|------------------------|
| <b>MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)</b> | 6 W / 7 W             | 6 W / 7 W              |                       |                        |
| <b>EFFECTIVE APERTURE</b>                        | 17 mm Ø               | 17 mm Ø                |                       |                        |
| <b>COOLING METHOD</b>                            | Convection            | Convection             |                       |                        |
| <b>MEASUREMENT CAPABILITY</b>                    |                       |                        |                       |                        |
| Spectral Range *                                 | 0.19 – 20 µm          | 0.19 – 10 µm           |                       |                        |
| Noise Equivalent Power <sup>a</sup>              | 1 mW                  | 1 mW                   |                       |                        |
| Rise Time (nominal) <sup>b</sup>                 | 0.8 sec               | 1.4 sec                |                       |                        |
| Sensitivity (typ into 100 kΩ load) <sup>c</sup>  | 0.6 mV/W              | 0.6 mV/W               |                       |                        |
| Calibration Uncertainty <sup>d</sup>             | ±2.5 %                | ±2.5 %                 |                       |                        |
| Repeatability                                    | ±0.5 %                | ±0.5 %                 |                       |                        |
| Energy Mode                                      |                       |                        |                       |                        |
| Sensitivity                                      | 0.7 mV/J              | 0.2 mV/J               |                       |                        |
| Maximum Measurable Energy <sup>e</sup>           | 15 J                  | 200 J                  |                       |                        |
| Noise Equivalent Energy <sup>a</sup>             | 0.02 J                | 0.02 J                 |                       |                        |
| Minimum Repetition Period                        | 4 sec                 | 5 sec                  |                       |                        |
| Maximum Pulse Width                              | 88 ms                 | 133 ms                 |                       |                        |
| Accuracy with energy calibration option          | ±5 %                  | ±5 %                   |                       |                        |
| <b>DAMAGE THRESHOLDS</b>                         |                       |                        |                       |                        |
| Maximum Average Power Density <sup>f</sup>       | 36 kW/cm <sup>2</sup> | 100 kW/cm <sup>2</sup> |                       |                        |
| Pulsed Laser Damage Thresholds                   | Max Energy Density    | Peak Power Density     | Max Energy Density    | Peak Power Density     |
| 1064 nm, 360 µs, 5 Hz                            | 5 J/cm <sup>2</sup>   | 14 kW/cm <sup>2</sup>  | 100 J/cm <sup>2</sup> | 667 kW/cm <sup>2</sup> |
| 1064 nm, 7 ns, 10 Hz                             | 1 J/cm <sup>2</sup>   | 143 MW/cm <sup>2</sup> | 1.1 J/cm <sup>2</sup> | 157 MW/cm <sup>2</sup> |
| 532 nm, 7 ns, 10 Hz                              | 0.6 J/cm <sup>2</sup> | 86 MW/cm <sup>2</sup>  | 1.1 J/cm <sup>2</sup> | 157 MW/cm <sup>2</sup> |
| 266 nm, 7 ns, 10 Hz                              | 0.3 J/cm <sup>2</sup> | 43 MW/cm <sup>2</sup>  | 0.7 J/cm <sup>2</sup> | 27 MW/cm <sup>2</sup>  |
| <b>PHYSICAL CHARACTERISTICS</b>                  |                       |                        |                       |                        |
| Effective Aperture                               | 17 mm Ø               | 17 mm Ø                |                       |                        |
| Absorber (High Damage Threshold)                 | H5                    | W5                     |                       |                        |
| Dimensions                                       | 46H x 46W x 10.7D mm  | 46H x 46W x 10.7D mm   |                       |                        |
| Weight (head only)                               | 0.1 kg                | 0.1 kg                 |                       |                        |
| <b>ORDERING INFORMATION</b>                      |                       |                        |                       |                        |
| Product Name                                     | UP17P-6S-H5           | UP17P-6S-W5            |                       |                        |
| Product Number (Including stand)                 | 201036                | 201037                 |                       |                        |
| Add Extension for INTEGRA                        | -INT                  | -INT                   |                       |                        |

Specifications are subject to change without notice

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

- a. Nominal value, actual value depends on electrical noise in the measurement system.  
 b. With Gentec-EO MAESTRO, UNO, P-LINK, TUNER and S-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. At 1064 nm, 10 W CW.