UP50-W

50 mm Ø, 5 mW – 85 W, 100 kW/cm²

KEY FEATURES

1. **MODULAR CONCEPT**
   Increase the power capability of your detector: 4 different cooling modules
2. **VERY HIGH DAMAGE THRESHOLD**
   100 kW/cm² in average power density
3. **VERY LARGE APERTURE**
   50 mm Ø effective aperture, perfect for the largest beams
4. **HIGHEST ENERGY READINGS IN THE SERIES**
   Measure single shot energy up to 500 J
5. **SMART INTERFACE**
   Containing all the calibration data

AVAILABLE MODELS

UP50N-40S-W9
(40W-Standalone)

UP50N-50H-W9
(50W-Heatsink)

UP50N-50F-W9
(50W-Fan-Cooled)

UP50M-50W-W9
(50W-Water-Cooled)

ACCESSORIES

Stand with Steel Post
(Model Number: 200234)

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

Fiber Adaptors and Connectors
(FC, SC or SMA)

3-Port Fiber Cylinder with
Adaptors and Plug

12V Power Supply
(Model Number: 200130)

Pelican Carrying Case

SEE ALSO

UP50-W

SPECIFICATIONS

NIST* Traceable

*Also traceable to NRC-CNRC

	UP50N-40S-W9	UP50N-50H-W9	UP50N-50F-W9	UP50M-50W-W9
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	40 W / 80 W	50 W / 85 W	50 W / 85 W	50 W [f] / 85 W [f]
EFFECTIVE APERTURE	50 mm Ø	50 mm Ø	50 mm Ø	50 mm Ø
COOLING METHOD	Convection	Heatsink	Fan-Cooled	Water-Cooled
MEASUREMENT CAPABILITY				
Spectral Range *	0.19 – 10 µm	0.19 – 10 µm	0.19 – 10 µm	0.19 – 10 µm
Noise Equivalent Power [a]	5 mW	5 mW	5 mW	5 mW
Rise Time (nominal) [b]	3.5 sec	3.5 sec	3.5 sec	3.5 sec
Sensitivity (typ into 100 kΩ load) [c]	0.12 mV/W	0.12 mV/W	0.12 mV/W	0.12 mV/W
Calibration Uncertainty [d]	±2.5 %	±2.5 %	±2.5 %	±2.5 %
Repeatability	±0.5 %	±0.5 %	±0.5 %	±0.5 %
Energy Mode				
Sensitivity	0.02 mV/J	0.02 mV/J	0.02 mV/J	0.02 mV/J
Maximum Measurable Energy [e]	500 J	500 J	500 J	500 J
Noise Equivalent Energy [a]	0.25 J	0.25 J	0.25 J	0.25 J
Minimum Repetition Period	11.1 sec	11.1 sec	11.1 sec	11.1 sec
Maximum Pulse Width	467 ms	467 ms	467 ms	467 ms
Accuracy with energy calibration option	±5 %	±5 %	±5 %	±5 %
DAMAGE THRESHOLDS				
Maximum Average Power Density [g]	100 kW/cm²	100 kW/cm²	100 kW/cm²	100 kW/cm²
Pulsed Laser Damage Thresholds	Max Energy Density		Peak Power Density	
1064 nm, 150 µs, 5 Hz	100 J/cm²		667 kW/cm²	
1064 nm, 7 ns, 10 Hz	1.1 J/cm²		157 MW/cm²	
532 nm, 7 ns, 10 Hz	1.1 J/cm²		157 MW/cm²	
248 nm, 26 ns, 10 Hz	0.7 J/cm²		27 MW/cm²	
PHYSICAL CHARACTERISTICS				
Effective Aperture	50 mm Ø	50 mm Ø	50 mm Ø	50 mm Ø
Absorber (High Damage Threshold)	W9	W9	W9	W9
Dimensions	89H x 89W x 32D mm	89H x 89W x 106D mm	89H x 89W x 116D mm	89H x 89W x 40D mm
Weight (head only)	0.62 g	0.93 g	1.38 g	0.81 g

ORDERING INFORMATION				
Product Name	UP50N-40S-W9	UP50N-50H-W9	UP50N-50F-W9	UP50M-50W-W9
Product Number (Including stand)	200896	200897	200898	201887

** 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. 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