



# UP50-W

50 mm Ø, 5 mW – 85 W, 100 kW/cm<sup>2</sup>



## FEATURES

1. **MODULAR CONCEPT**  
Increase the power capability of your detector:  
4 different cooling modules
2. **VERY HIGH DAMAGE THRESHOLD**  
100 kW/cm<sup>2</sup> 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

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MEASURING HIGH POWER WITH A LOW POWER DETECTOR	<a href="#">202188</a>

MONITORS

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTO DETECTORS

THZ DETECTORS

OEM DETECTORS

SPECIAL PRODUCTS

BEAM DIAGNOSTICS

## UP50-W



\*Also traceable to NRC-CNRC

## SPECIFICATIONS

	UP50N-40S-W9	UP50N-50H-W9	UP50N-50F-W9	UP50M-50W-W9
<b>MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)</b>	40 W / 80 W	50 W / 85 W	50 W / 85 W	50 W <sup>f</sup> / 85 W <sup>f</sup>
<b>EFFECTIVE APERTURE</b>	50 mm Ø	50 mm Ø	50 mm Ø	50 mm Ø
<b>COOLING METHOD</b>	Convection	Heatsink	Fan-Cooled	Water-Cooled
<b>MEASUREMENT CAPABILITY</b>				
Spectral Range *	0.19 – 10 µm	0.19 – 10 µm	0.19 – 10 µm	0.19 – 10 µm
Noise Equivalent Power <sup>a</sup>	5 mW	5 mW	5 mW	5 mW
Rise Time (nominal) <sup>b</sup>	3.5 sec	3.5 sec	3.5 sec	3.5 sec
Sensitivity (typ into 100 kΩ load) <sup>c</sup>	0.12 mV/W	0.12 mV/W	0.12 mV/W	0.12 mV/W
Calibration Uncertainty <sup>d</sup>	±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 <sup>e</sup>	500 J	500 J	500 J	500 J
Noise Equivalent Energy <sup>a</sup>	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 %
<b>DAMAGE THRESHOLDS</b>				
Maximum Average Power Density <sup>a</sup>	100 kW/cm <sup>2</sup>	100 kW/cm <sup>2</sup>	100 kW/cm <sup>2</sup>	100 kW/cm <sup>2</sup>
Pulsed Laser Damage Thresholds	Max Energy Density		Peak Power Density	
1064 nm, 150 µs, 5 Hz	100 J/cm <sup>2</sup>		667 kW/cm <sup>2</sup>	
1064 nm, 7 ns, 10 Hz	1.1 J/cm <sup>2</sup>		157 MW/cm <sup>2</sup>	
532 nm, 7 ns, 10 Hz	1.1 J/cm <sup>2</sup>		157 MW/cm <sup>2</sup>	
248 nm, 26 ns, 10 Hz	0.7 J/cm <sup>2</sup>		27 MW/cm <sup>2</sup>	
<b>PHYSICAL CHARACTERISTICS</b>				
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
<b>ORDERING INFORMATION</b>				
Product Name	UP50N-40S-W9	UP50N-50H-W9	UP50N-50F-W9	UP50M-50W-W9
Product Number (Including stand)	200896	200897	200898	201887
Add Extension for INTEGRA	-INT	-INT	-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. 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.