

# UP55N(M)

55 mm Ø, 5 mW - 500 W



## KEY FEATURES

- 1 Modular Concept**  
Increase the power capability of your detector:  
4 different cooling modules
- 2 High Performance**  
Fast Rise Time (2 sec)  
High Damage Threshold (45 kW/cm<sup>2</sup>)
- 3 Compact Design**  
Only 32 mm thick (40S model)
- 4 Energy Mode**  
Measure single shot energy up to 200 J
- 5 Smart Interface**  
Containing all the calibration data

## AVAILABLE MODELS



UP55N-40S-H9  
(40W-Standalone)



UP55N-100H-H9  
(100W-Heatsink)



UP55N-300F-H12  
(300W-Fan-Cooled)



UP55M-500W-H12  
(500W-Water-Cooled)

## ACCESSORIES



Stand with Steel Post



Extension Cable  
(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  
(for Fan-Cooled version)



Pelican Carrying Case

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## SPECIFICATIONS



\*Also traceable to NRC-CNRC

MODELS	UP55N-40S-H9	UP55N-100H-H9	UP55N-300F-H12	UP55M-500W-H12
<b>MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)</b>	40 W / 80 W	100 W / 200 W	300 W / 300 W	500 W <sup>f</sup> / 500 W <sup>f</sup>
<b>EFFECTIVE APERTURE</b>	55 mm Ø	55 mm Ø	55 mm Ø	55 mm Ø
<b>COOLING METHOD</b>	Convection	Heatsink	Fan-Cooled	Water-Cooled

### MEASUREMENT CAPABILITY

Spectral Range	0.19 – 20 µm	0.19 – 20 µm	0.19 – 20 µm	0.19 – 20 µm
Noise Equivalent Power <sup>a</sup>	5 mW	5 mW	15 mW	15 mW
Rise Time (nominal) <sup>b</sup>	2 sec	2 sec	2 sec	2 sec
Sensitivity (typ into 100 kΩ load) <sup>c</sup>	0.12 mV/W	0.12 mV/W	0.06 mV/W	0.06 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	0.028 mV/J	0.028 mV/J	0.015 mV/J	0.015 mV/J
Maximum Measurable Energy <sup>e</sup>	200 J	200 J	200 J	200 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	12 sec	12 sec
Maximum Pulse Width	433 ms	433 ms	430 ms	430 ms
Accuracy with energy calibration option	±5 %	±5 %	±5 %	±5 %

### DAMAGE THRESHOLDS

Maximum Average Power Density <sup>g</sup>	45 kW/cm <sup>2</sup>	45 kW/cm <sup>2</sup>	45 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	9 J/cm <sup>2</sup>		25 kW/cm <sup>2</sup>	
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>	

### PHYSICAL CHARACTERISTICS

Effective Aperture Diameters	55 mm Ø	55 mm Ø	55 mm Ø	55 mm Ø
Absorber (High Damage Threshold)	H9	H9	H12	H12
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 kg	0.93 kg	1.41 kg	0.81 kg

### ORDERING INFORMATION

Full Product Name (55 mm Ø)	UP55N-40S-H9	UP55N-100H-H9	UP55N-300F-H12	UP55M-500W-H12
Product Number (Including stand)	200218	200222	201160	201883

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 1 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