

# UP55-HD

55 mm Ø, 15 mW - 2 500 W



## KEY FEATURES

- 1 High Density Absorber**  
The HD absorber is the strongest on the market for use at high powers, presenting both high average power handling and high power density capabilities
- 2 UP55G-600F-HD - No need for Water-Cooling**  
Unique on the market, measure 600 W of continuous power WITHOUT THE NEED FOR WATER-COOLING. Just plug the fan and you are ready to go!
- 3 UP55M-700W-HD - Fast and Compact**  
A very compact detector that measures up to 700 W of continuous power.
- 4 UP55C-2.5KW-HD - Performance and Speed at a Low Price**  
Measures both very low and very high powers (up to 2 500 W) with a fast response time. A compact and versatile detector that is more affordable than any other high power solution on the market.

## AVAILABLE MODELS

UP55G-600F-H12  
(600W-Fan-Cooled)UP55M-700W-HD  
(700W-Water-Cooled)UP55C-2.5KW-HD  
(2500W-Water-Cooled)

## ACCESSORIES

Stand with Steel Post  
(Model Number: 201102)Extension Cables  
(4, 15, 20 or 25 m)Fiber Adaptors and Connectors  
(FC, SC or SMA)3-Port Fiber Cylinder with  
Adaptors and Plug12V Power Supply  
(Model Number: 200130)

Pelican Carrying Case

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# UP55-HD

## SPECIFICATIONS



\*Also traceable to NRC-CNRC



MODELS	UP55G-600F-HD	UP55M-700W-HD	UP55C-2.5KW-HD
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	600 W / 600 W	700 W <sup>f</sup> / 700 W <sup>f</sup>	2 500 W / 2 500 W
EFFECTIVE APERTURE	55 mm Ø	55 mm Ø	55 mm Ø
COOLING METHOD	Fan-Cooled	Water-Cooled	Water-Cooled

### MEASUREMENT CAPABILITY

Spectral Range *	0.19 – 20 µm	0.19 – 20 µm	0.19 – 20 µm
Noise Equivalent Power <sup>a</sup>	45 mW	45 mW	200 mW
Rise Time (nominal) <sup>b</sup>	2.8 sec	2 sec	3.5 sec
Sensitivity (typ into 100 kΩ load) <sup>c</sup>	0.03 mV/W	0.03 mV/W	8 µV/W
Calibration Uncertainty <sup>d</sup>	±2.5 %	±2.5 %	±2.5 %
Repeatability	±0.5 %	±0.5 %	±0.5 %
Energy Mode			
Sensitivity	0.008 mV/J	0.008 mV/J	---
Maximum Measurable Energy <sup>e</sup>	200 J	200 J	---
Noise Equivalent Energy <sup>a</sup>	0.25 J	0.25 J	---
Minimum Repetition Period	12 sec	12 sec	---
Maximum Pulse Width	430 ms	430 ms	---
Accuracy with energy calibration option	±5 %	±5 %	---

### DAMAGE THRESHOLDS

Maximum Average Power Density			
1064 nm, 10 W, CW	45 kW/cm <sup>2</sup>	45 kW/cm <sup>2</sup>	45 kW/cm <sup>2</sup>
1064 nm, 500 W, CW	8 kW/cm <sup>2</sup>	8 kW/cm <sup>2</sup>	9 kW/cm <sup>2</sup>
1064 nm, 2 500 W, CW	---	---	6 kW/cm <sup>2</sup>
Pulsed Laser Damage Thresholds	Max Energy Density		Max 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	55 mm Ø	55 mm Ø	55 mm Ø
Absorber (High Damage Threshold)	HD	HD	HD
Dimensions	120H x 120W x 135D mm	89H x 89W x 40D mm	116H x 116W x 48D mm
Weight (head only)	2.75 kg	0.90 kg	1.95 kg

### ORDERING INFORMATION

Full Product Name	UP55G-600F-HD	UP55M-700W-HD	UP55C-2.5KW-HD
Product Number (Including stand)	201879	201916	202219

\* 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 1.5 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.

Specifications are subject to change without notice