



# UP55-HD

55 mm Ø, 45 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 500W) with a fast response time. A compact and versatile detector that is more affordable than any other high power solution on the market.
- 5. integra OPTIONS**
  - Standard: USB Output (-INT)
  - In Option: RS-232 Output (-IDR)

## AVAILABLE MODELS



UP55G-600F-HD  
(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 Plug



12V Power Supply  
(Model Number: 202199)



Pelican Carrying Case

## SEE ALSO

HOW IT WORKS	202
CALIBRATION	8
TECHNICAL DRAWINGS	108
COMPATIBLE DISPLAYS & PC INTERFACES	
MAESTRO	18
TUNER	22
UNO	24
U-LINK	26
S-LINK	28
LIST OF ALL ACCESSORIES	206

## UP55-HD



\*Also traceable to NRC-CNRC

## SPECIFICATIONS

	UP55G-600F-HD	UP55M-700W-HD	UP55C-2.5KW-HD
<b>MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)</b>	600 W / 600 W	700 W <sup>f</sup> / 700 W <sup>f</sup>	2 500 W <sup>f</sup> / 2 500 W <sup>f</sup>
<b>EFFECTIVE APERTURE</b>	55 mm Ø	55 mm Ø	55 mm Ø
<b>COOLING METHOD</b>	Fan-Cooled	Water-Cooled	Water-Cooled
<b>MEASUREMENT CAPABILITY</b>			
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 %
<b>Energy Mode</b>			
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 %	---
<b>DAMAGE THRESHOLDS</b>			
<b>Maximum Average Power Density</b>			
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>
10.6 µm, 500 W, CW	---	---	4.5 kW/cm <sup>2</sup>
10.6 µm, 1 500 W, CW	---	---	3.5 kW/cm <sup>2</sup>
10.6 µm, 2 500 W, CW	---	---	3.0 kW/cm <sup>2</sup>
<b>Maximum Energy Density</b>			
1064 nm, 360 µs, 5 Hz	9 J/cm <sup>2</sup>	9 J/cm <sup>2</sup>	9 J/cm <sup>2</sup>
1064 nm, 7 ns, 10 Hz	1 J/cm <sup>2</sup>	1 J/cm <sup>2</sup>	1 J/cm <sup>2</sup>
532 nm, 7 ns, 10 Hz	0.6 J/cm <sup>2</sup>	0.6 J/cm <sup>2</sup>	0.6 J/cm <sup>2</sup>
266 nm, 7 ns, 10 Hz	0.3 J/cm <sup>2</sup>	0.3 J/cm <sup>2</sup>	0.3 J/cm <sup>2</sup>
<b>PHYSICAL CHARACTERISTICS</b>			
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 37D mm
Weight (head only)	2.75 kg	0.90 kg	3.3 kg
<b>ORDERING INFORMATION</b>			
Product Name	UP55G-600F-HD-D0	UP55M-700W-HD-D0	UP55C-2.5KW-HD-D0
Product Number (without stand)	201878	201908	202174
Add Extension for INTEGRA (USB)	-INT / 203197	-INT / 203199	-INT / 203195
Add Extension for BLU	-BLU / 203721	-BLU / 203724	NEW -BLU

Specifications are subject to change without notice // Compatible stand: P/N 201102

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

a. Nominal value, actual value depends on electrical noise in the measurement system.

b. With anticipation.

c. Maximum output voltage = sensitivity x maximum power.

d. Including linearity with power.

e. For 360 µs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).

f. Minimum cooling flow 1.5 l/m (UP55M-700W-HD) or 3 l/m (UP55C-2.5KW-HD), 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.