



UP55-VR

55 mm Ø, 15 mW - 200 W, Volume Absorber



KEY FEATURES

- 1. MODULAR CONCEPT**
Increase the power capability of your detector:
4 different cooling modules
- 2. HIGH PEAK POWER VOLUME ABSORBER**
Perfect for pulsed beams with high energy density
- 3. LARGE APERTURE**
55 mm Ø aperture accomodates the largest beams
- 4. HIGH AVERAGE POWER**
Up to 200 W of continuous power with the water-cooled unit
- 5. ENERGY MODE**
Measure single shot energy up to 500 J
- 6. SMART INTERFACE**
Containing all the calibration data

7. integra OPTIONS

- Standard: USB Output (-INT)
- In Option: RS-232 Output (-IDR)

AVAILABLE MODELS



UP55N-50S-VR
(50W-Standalone)



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



UP55N-150F-VR
(150W-Fan-Cooled)



UP55M-200W-VR
(200W-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

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APPLICATION NOTE
MEASURING LASER POWER WITH A THERMOPILE DETECTOR: THE BASICS! [202175](#)

MONITORS

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTO DETECTORS

THZ DETECTORS

OEM DETECTORS

SPECIAL PRODUCTS

BEAM DIAGNOSTICS

UP55-VR



*Also traceable to NRC-CNRC

SPECIFICATIONS

	UP55N-50S-VR	UP55N-100H-VR	UP55N-150F-VR	UP55M-200W-VR
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	50 W / 50 W	100 W / 100 W	150 W / 150 W	200 W ^g / 200 W ^g
EFFECTIVE APERTURE	55 mm Ø	55 mm Ø	55 mm Ø	55 mm Ø
COOLING METHOD	Convection	Heatsink	Fan-Cooled	Water-Cooled
MEASUREMENT CAPABILITY				
Spectral Range ^{*a}	0.3 – 2.5 µm	0.3 – 2.5 µm	0.3 – 2.5 µm	0.3 – 2.5 µm
Noise Equivalent Power ^b	15 mW	15 mW	15 mW	15 mW
Rise Time (nominal) ^c	4 sec	4 sec	4 sec	4 sec
Sensitivity (typ into 100 kΩ load) ^d	0.04 mV/W	0.04 mV/W	0.04 mV/W	0.04 mV/W
Calibration Uncertainty ^e	±2.5 %	±2.5 %	±2.5 %	±2.5 %
Repeatability	±0.5 %	±0.5 %	±0.5 %	±0.5 %
Energy Mode				
Sensitivity	0.010 mV/J	0.010 mV/J	0.010 mV/J	0.010 mV/J
Maximum Measurable Energy ^f	500 J	500 J	500 J	500 J
Noise Equivalent Energy ^b	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	433 ms	433 ms	433 ms	433 ms
Accuracy with energy calibration option	±5 %	±5 %	±5 %	±5 %
DAMAGE THRESHOLDS				
Maximum Average Power Density ^h	700 W/cm ²	700 W/cm ²	700 W/cm ²	700 W/cm ²
Pulsed Laser Damage Thresholds	Max Energy Density		Peak Power Density	
1064 nm, 360 µs, 5 Hz	40 J/cm ²		111 kW/cm ²	
1064 nm, 7 ns, 10 Hz	6 J/cm ²		860 MW/cm ²	
532 nm, 7 ns, 10 Hz	4 J/cm ²		570 MW/cm ²	
266 nm, 7 ns, 10 Hz	1 J/cm ²		143 MW/cm ²	
PHYSICAL CHARACTERISTICS				
Effective Aperture	55 mm Ø	55 mm Ø	55 mm Ø	55 mm Ø
Absorber (Volume Absorber)	VR	VR	VR	VR
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	0.84 kg
ORDERING INFORMATION				
Product Name	UP55N-50S-VR-D0	UP55N-100H-VR-D0	UP55N-150F-VR-D0	UP55M-200W-VR-D0
Product Number (without stand)	201295	201935	201854	201291
Add Extension for INTEGRA (USB)	-INT	-INT	-INT	-INT
Product Number (without stand)	202643	202645	203071	203067
Add Extension for INTEGRA (RS-232)	-IDR	-IDR	-IDR	-IDR
Add Extension for BLU	-BLU	-BLU	-BLU	-BLU
Product Number (without stand)	203712	203697	203700	203688

Specifications are subject to change without notice // Compatible stand: P/N 200234

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

a. Adjustment multipliers for wavelengths under 300 nm are not traceable.

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

c. With anticipation.

d. Maximum output voltage = sensitivity x maximum power.

e. Including linearity with power.

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

g. 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.

h. At 1064 nm, 10 W CW.