



UP55-VR

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



FEATURES

1. **MODULAR CONCEPT**
Increase the power capability of your detector:
4 different cooling modules
2. **HIGH PEAK POWER VOLUME ABSORBER**
 - Perfect for high density beams
 - Average power density of 700 W/cm² prevents degradation caused by repetitive pulses
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 200 J
6. **SMART INTERFACE**
Containing all the calibration data

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



Additional 9V Power Supply
(Model Number: 200960)



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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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 44D mm
Weight (head only)	0.62 kg	0.93 kg	1.41 kg	0.84 kg
ORDERING INFORMATION				
Product Name	UP55N-50S-VR	UP55N-100H-VR	UP55N-150F-VR	UP55M-200W-VR
Product Number (Including stand)	201296	201934	201856	201292
Add Extension for INTEGRA	-INT	-INT	-INT	-INT
Product Number (Including stand)	202642	202644		

Specifications are subject to change without notice

* 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 Gentec-EO MAESTRO, UNO, P-LINK, TUNER and S-LINK monitors.
 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.