



UP55-VR

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



KEY FEATURES

- MODULAR CONCEPT**
Increase the power capability of your detector:
4 different cooling modules
- HIGH PEAK POWER VOLUME ABSORBER**
 - Perfect for high density beams
 - Average power density of 700 W/cm² prevents degradation caused by repetitive pulses
- LARGE APERTURE**
55 mm Ø aperture accommodates the largest beams
- HIGH AVERAGE POWER**
Up to 200 W of continuous power with the water-cooled unit
- ENERGY MODE**
Measure single shot energy up to 500 J
- SMART INTERFACE**
Containing all the calibration data
- 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

HOW IT WORKS	14
CALIBRATION	6
TECHNICAL DRAWINGS	96
ABSORPTION CURVES	100
COMPATIBLE MONITORS	
MAESTRO	20
TUNER	24
UNO	26
S-LINK	28
P-LINK	30
M-LINK	32
LIST OF ALL ACCESSORIES	194

APPLICATION NOTE

MEASURING LASER POWER WITH A
THERMOPILE DETECTOR: THE BASICS! 202175

UP55-VR



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-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 incl semi-rigid tube.

Contact Gentec-EO for clean deionized water cooling module option.

^h At 1064 nm, 10 W CW.