

POWER DETECTORS

AVAILABLE WITH *integra*



See page 36 for details

page 38

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 accommodates 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 (-HDR)

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	202
CALIBRATION	6
TECHNICAL DRAWINGS	98
ABSORPTION CURVES	102
COMPATIBLE DISPLAYS & PC INTERFACES	
MAESTRO	18
TUNER	22
UNO	24
S-LINK	26
P-LINK	28
M-LINK	32
LIST OF ALL ACCESSORIES	206

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

UP55-VR

CE NIST[®]
Traceable 
*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 ^a / 200 W ^a
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
Maximum Energy Density				
1064 nm, 360 µs, 5 Hz	40 J/cm ²	40 J/cm ²	40 J/cm ²	40 J/cm ²
1064 nm, 7 ns, 10 Hz	6 J/cm ²	6 J/cm ²	6 J/cm ²	6 J/cm ²
532 nm, 7 ns, 10 Hz	4 J/cm ²	4 J/cm ²	4 J/cm ²	4 J/cm ²
266 nm, 7 ns, 10 Hz	1 J/cm ²	1 J/cm ²	1 J/cm ²	1 J/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
Product Number (without stand)	203389	203381	203383	203375
 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 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.

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

At 1064 nm, 10 W CW.

Catalogue 2019_V1.0