

UP25N(Z)



25 mm Ø, 3 mW - 300 W



Monitors

Energy Detectors

Power Detectors

OEM Detectors

Calorimeters

Diffractive Optics

Beam Diagnostics



UP25N-40S-H9



UP25Z-15S-H9



Key Features

- 1 **Modular Concept**
Increase the power capability of your detector : 4 different cooling modules
- 2 **High Performance**
 - . Fast Rise Time (1.3 sec)
 - . High Damage Threshold (45 kW/cm²)
- 3 **Compact Design - Z Version**
Only 60 mm x 60 mm front with 38 mm thick
- 4 **Energy Mode**
Measure single shot energy up to 40 J
- 5 **High Quality Stand**
Post threaded on both sides to allow extension
- 6 **Smart Interface**
Containing all the calibration data

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- . OEM Custom detectors80
- . Compatible monitors
 - SOLO 220
 - UNO22
 - S-LINK-224
 - P-LINK26

Accessories

» Fiber Optic Adapters (FC, SMA, SC)

Variety of fiber adapter options to give you the most flexibility in using our power detectors with your fiber coupled lasers.



» Extension Cables (4, 15, 20 and 25 m)

For some OEM, manufacturing and laboratory applications.









» Pelican Carrying Case

We offer a robust hard shell polymer carrying case.



SPECIFICATIONS

Models	UP25N-40S-H9	UP25N-100H-H9	UP25N-250F-H12	UP25N-300W-H9	UP25Z-15S-H9	UP25Z-200W-H9
						
Max Average Power (continuous)	40 W	100 W	250 W	300 W ^f	15 W	200 W ^f
Max Average Power (1 minute)	80 W	200 W	300 W	300 W ^f	30 W	200 W ^f

MEASUREMENT CAPABILITY	N-40S	N-100H	N-250F	N-300W	Z-15S	Z-200W
Spectral Range	0.19 – 20 μm	0.19 – 20 μm	0.19 – 20 μm	0.19 – 20 μm	0.19 – 20 μm	0.19 – 20 μm
Noise Equivalent Power ^a	3 mW	3 mW	10 mW	3 mW	3 mW	3 mW
Rise Time (nominal) ^b	1.3 sec	1.3 sec	1.3 sec	1.3 sec	1.3 sec	1.3 sec
Sensitivity (typ into 100 k Ω load) ^c	0.23 mV/W	0.23 mV/W	0.1 mV/W	0.23 mV/W	0.23 mV/W	0.23 mV/W
Calibration Uncertainty ^d	$\pm 2.5\%$	$\pm 2.5\%$	$\pm 2.5\%$	$\pm 2.5\%$	$\pm 2.5\%$	$\pm 2.5\%$
Repeatability	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$
Energy Mode						
Sensitivity	0.14 mV/J	0.14 mV/J	0.05 mV/J	0.14 mV/J	0.14 mV/J	0.14 mV/J
Maximum Measurable Energy ^e	40 J	40 J	40 J	40 J	40 J	40 J
Noise Equivalent Energy ^a	0.2 J	0.2 J	0.2 J	0.2 J	0.2 J	0.2 J
Minimum Repetition Period	4.6 sec	4.6 sec	11.5 sec	4.6 sec	4.6 sec	4.6 sec
Maximum Pulse Width	123 ms	123 ms	390 ms	123 ms	133 ms	133 ms
Accuracy with energy calibration option	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$

DAMAGE THRESHOLDS

Maximum Average Power Density ^g	45 kW/cm ²	45 kW/cm ²	45 kW/cm ²	45 kW/cm ²	45 kW/cm ²	45 kW/cm ²
Pulsed Laser Damage Thresholds	Max Energy Density			Peak Power Density		
1064 nm, 360 μs , 5 Hz	9 J/cm ²			25 kW/cm ²		
1064 nm, 7 ns, 10 Hz	1 J/cm ²			143 MW/cm ²		
532 nm, 7 ns, 10 Hz	0.6 J/cm ²			86 MW/cm ²		
266 nm, 7 ns, 10 Hz	0.3 J/cm ²			43 MW/cm ²		

PHYSICAL CHARACTERISTICS

Effective Aperture Diameter	25 mm \emptyset	25 mm \emptyset	25 mm \emptyset	25 mm \emptyset	25 mm \emptyset	25 mm \emptyset
Absorber (High Damage Threshold)	H9	H9	H12	H9	H9	H9
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	60H x 60W x 38D mm	60H x 60W x 38D mm
Weight (head only)	0.68 kg	0.99 kg	1.44 kg	0.90 kg	0.33 kg	0.33 kg

ORDERING INFORMATION

Full Product Name	UP25N-40S-H9	UP25N-100H-H9	UP25N-250F-H12	UP25N-300W-H9	UP25Z-15S-H9	UP25Z-200W-H9
Product Number (including stand)	200198	200202	201154	200210	200724	200726

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

b. With Gentec-EO SOLO, UNO, P-LINK and S-LINK-2 monitors.

c. Maximum output voltage = sensitivity x maximum power.

d. Including linearity with power.

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

f. Minimum cooling flow 1 liters/min, water temperature $\leq 22^\circ\text{C}$, 1/8 NPT compression fittings for 1/4 inch semi-rigid tube. Contact Gentec-EO for clean deionized water cooling module option.

g. At 1064 nm, 10 W CW.

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gentec-EO

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