UP50N-W9

50 mm Ø, 5 mW - 85 W, 100 kW/cm²

CE NIST Traceable WEEE/RoHS COMPLIANT

UP50N-40S-W9

Key Features

1 **Modular Concept**
Increase the power capability of your detector : 4 different cooling modules

2 **Very High Damage Threshold**
100 kW/cm² in average power density

3 **Very Large Aperture**
50 mm effective aperture diameter, perfect for the largest beams.

4 **Highest Energy Readings in the Series**
Measure single shot energy up to 500 J

5 **High Quality Stand**
Post threaded on both sides to allow extension

6 **Smart Interface**
Containing all the calibration data

See also

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.

UP50N-W9

SPECIFICATIONS

Models	UP50N-40S-W9	UP50N-50H-W9	UP50N-50F-W9	UP50N-50W-W9
				
Max Average Power (continuous)	40 W	50 W	50 W	50 W [f]
Max Average Power (1 minute)	80 W	85 W	85 W	85 W [f]

MEASUREMENT CAPABILITY	40S	50H	50F	50W
Spectral Range	0.19 – 10 µm	0.19 – 10 µm	0.19 – 10 µm	0.19 – 10 µm
Noise Equivalent Power [a]	5 mW	5 mW	5 mW	5 mW
Rise Time (nominal) [b]	3.5 sec	3.5 sec	3.5 sec	3.5 sec
Sensitivity (typ into 100 kΩ load) [c]	0.12 mV/W	0.12 mV/W	0.12 mV/W	0.12 mV/W
Calibration Uncertainty [d]	±2.5 %	±2.5 %	±2.5 %	±2.5 %
Repeatability	±0.5 %	±0.5 %	±0.5 %	±0.5 %
Energy Mode				
Sensitivity	0.02 mV/J	0.02 mV/J	0.02 mV/J	0.02 mV/J
Maximum Measurable Energy [e]	500 J	500 J	500 J	500 J
Noise Equivalent Energy [a]	0.25 J	0.25 J	0.25J	0.25 J
Minimum Repetition Period	11.1 sec	11.1 sec	11.1 sec	11.1 sec
Maximum Pulse Width	467 ms	467 ms	467 ms	467 ms
Accuracy with energy calibration option	±5 %	±5 %	±5 %	±5 %

DAMAGE THRESHOLDS

Maximum Average Power Density [g]	100 kW/cm²	100 kW/cm²	100 kW/cm²	100 kW/cm²
Pulsed Laser Damage Thresholds	Max Energy Density		Peak Power Density	
1064 nm, 360 µs, 5 Hz	100 J/cm²		667 kW/cm²	
1064 nm, 7 ns, 10 Hz	1.1 J/cm²		157 MW/cm²	
532 nm, 7 ns, 10 Hz	1.1 J/cm²		157 MW/cm²	
266 nm, 7 ns, 10 Hz	0.7 J/cm²		27 MW/cm²	

PHYSICAL CHARACTERISTICS

Effective Aperture Diameter	50 mm Ø	50 mm Ø	50 mm Ø	50 mm Ø
Absorber (High Damage Threshold)	W9	W9	W9	W9
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	1.38 kg	0.84 kg

ORDERING INFORMATION

Full Product Name	UP50N-40S-W9	UP50N-50H-W9	UP50N-50F-W9	UP50N-50W-W9
Product Number (including stand)	200896	200897	200898	200899

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 0.5 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.
g. At 1064 nm, 10 W CW.

Gentec-EO Worldwide

America

Canada
United States
South America

Europe

Austria
Belgium
France
Germany
Ireland
Italy
Poland
Russia
Spain
Sweden
Scandinavia
Switzerland
The Netherlands
Turkey
United Kingdom

Asia Pacific

China
India
Indonesia
Israel
Japan
Korea
Malaysia
Philippines
Singapore
Taiwan
Thailand
Vietnam

Oceania

Australia
New Zealand

gentec-eo

Leader in Laser Beam Measurement Since 1972

Headquarters

445 St-Jean-Baptiste, Suite 160
Québec, QC, G2E 5N7, CANADA

T (418) 651-8003
F (418) 651-1174
1.888.5Gentec (543.6832)

info@gentec-eo.com

Calibration Centers

Quebec City, Canada
Olching (Munich), Germany

www.gentec-eo.com