

UP50N-40S-W9-D0

Thermal detector for laser power measurement up to 40 W.



KEY FEATURES

MODULAR CONCEPT

Increase the power capability of your detector: 4 different cooling modules

VERY HIGH DAMAGE THRESHOLD

100 kW/cm² in average power density

VERY LARGE APERTURE

50 mm effective aperture diameter, perfect for the largest beams

HIGHEST ENERGY READINGS IN THE SERIES

Measure single shot energy up to 500 J

SMART INTERFACE

Containing all the calibration data

COMPATIBLE STAND

[STAND-S-443](#)

SPECIFICATIONS

MEASUREMENT CAPABILITIES

Maximum average power (continuous)	40 W
Maximum average power (1 minute)	80 W
Noise equivalent power ¹	5 mW
Spectral range ²	0.193 - 10 μm
Typical rise time ³	3.5 sec
Typical power sensitivity ⁴	0.12 mV/W
Power calibration uncertainty ⁵	±2.5 %
Repeatability	±0.5 %

1. Nominal value, actual value depends on electrical noise in the measurement system.
2. For the calibrated spectral range, see the user manual.
3. With anticipation.
4. Into 100 kΩ load. Maximum output voltage = sensitivity x maximum power.
5. Including linearity with power.

MEASUREMENT CAPABILITIES (ENERGY MODE)

Typical energy sensitivity	0.02 mV/J
Maximum measurable energy ¹	500 J
Noise equivalent energy ²	0.25 J
Minimum repetition period	11.1 s
Maximum pulse width	467 ms
Energy calibration uncertainty ³	±5 %

1. For 360 μs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).
2. Nominal value, actual value depends on electrical noise in the measurement system.
3. When single-shot energy calibration is purchased

DAMAGE THRESHOLDS

Maximum average power density ¹	100 kW/cm ²
Maximum energy density ²	1.1 J/cm ²

1. At 1064 nm, 10 W CW.
2. At 1064 nm, 7 ns, 10 Hz.

PHYSICAL CHARACTERISTICS

Aperture diameter	50 mm
Absorber	W
Dimensions	89H x 89W x 38D mm
Weight	0.62 kg

ORDERING INFORMATION

UP50N-40S-W9-D0	200893
UP50N-40S-W9-BLU-D0	203676
UP50N-40S-W9-INT-D0	203059
UP50N-40S-W9-IDR-D0	203369

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