

IS50A-1KW-RSI-INT-D0

Water-cooled integrating sphere detector for laser power measurement up to 1000 W.



KEY FEATURES

FASTEST RESPONSE

With its silicon sensor, the integrating sphere is as fast as a photodiode.

HIGH AVERAGE POWER

Measure up to 1000 W of continuous power.

RESISTANT COATING

Our proprietary coating is designed to be strong. Its damage thresholds are orders of magnitude higher than any other "white" coatings on the market.

PRECISE CALIBRATION

The IS detectors have a NIST-traceable calibration for their entire calibrated spectral range. Temperature compensation completes the calibration to give you the most accurate and stable measurements.

CHOICE OF OUTPUT

The IS detectors are available with two output options:

- INTEGRA with USB output (-INT)
- INTEGRA with RS-232 output (-IDR)

COMPATIBLE STAND

[STAND-S-443-C](#)



SPECIFICATIONS

MEASUREMENT CAPABILITIES

Maximum average power (continuous)	1000 W
Noise equivalent power ¹	10 μ W
Spectral range	340 - 1100 nm
Typical rise time	0.2 sec
Linearity with power	± 1 %
Sphere inner diameter	100 mm \varnothing
Maximum incidence angle	$\pm 25^\circ$ for beam diameter < 12mm, $\pm 5^\circ$ for beam diameter > 12mm
Maximum divergence	10° (half-angle)
Power calibration uncertainty	± 5.0 % (405 - 499 nm) ± 3.5 % (500 - 1069 nm) ± 2.5 % (1070 nm)
Calibrated spectral range	405 - 1070 nm
Back reflections	12 %, concentrated in a cone with 15 degrees half-angle

1. At 1070 nm. Nominal value. Actual value depends on environmental electromagnetic interference and wavelength.

DAMAGE THRESHOLDS

Maximum average power density ¹	5 kW/cm ²
Maximum energy density ²	400 mJ/cm ²

1. At 1064 - 1070 nm, CW. May vary with wavelength and average power.

2. At 1064 - 1070 nm, 7 ns. May vary with wavelength and pulse width.

PHYSICAL CHARACTERISTICS

Aperture diameter	50 mm
Dimensions	127H x 140W x 115D mm
Weight	4 kg

ORDERING INFORMATION

IS50A-1KW-RSI-INT-D0

205483

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