



# IS

Integrating Sphere Detector for Laser Power Measurement up to 9 W.

## KEY FEATURES

- 1. FASTEST RESPONSE**  
With its silicon sensor, the integrating sphere is as fast as a photodiode.
- 2. HIGH AVERAGE POWER**  
Measure up to 9 W of continuous power.
- 3. 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.
- 4. PRECISE CALIBRATION**  
The IS12L detectors have a NIST-traceable calibration for the entire spectral range.

**5. *integra* OPTIONS**

- Standard: USB Output (-INT)
- In Option: RS-232 Output (-IDR)



## AVAILABLE MODELS



IS12L-9S-Rsi  
(12 mm - Silicon)

## ACCESSORIES



Stand with Delrin Post  
(Model Number: 200428)



Fiber Adaptors & Connectors  
(FC, SC, ST and SMA)



Pelican Carrying Case

## SEE ALSO

CALIBRATION	8
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LIST OF ALL ACCESSORIES	206

## APPLICATION NOTE

CALIBRATION UNCERTAINTY OF PHOTODETECTORS	202174
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DISPLAYS & PC INTERFACES

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTODETECTORS

THZ DETECTORS

OEM DETECTORS

SPECIAL PRODUCTS

BEAM DIAGNOSTICS

IS



\*Also traceable to NRC-CNRC

## SPECIFICATIONS

## IS12L-9S-RSI

<b>MAX MEASURABLE ENERGY*</b>	9 W
<b>EFFECTIVE APERTURE</b>	12 mm Ø

## MEASUREMENT CAPABILITY

Spectral Range	405 - 1064 nm
Maximum Measurable Power	9 W
Resolution	10 pW at 1064 nm
Noise Equivalent Power <sup>a</sup>	1 µW at 1064 nm
Maximum Divergence	10° (half angle)
Maximum Incidence Angle	± 10 °
Rise Time (nominal)	<0.5 sec
Sampling rate	15 Hz
Minimum Repetition Rate	10 kHz
Calibration Uncertainty	±5.0 % (405 - 499 nm)
	±3.5 % (500 - 1063 nm)
	±2.5 % (1064 nm)
Linearity with Power	±1 %

## DAMAGE THRESHOLDS

Maximum Average Power Density	
1064 nm, CW	2 kW/cm <sup>2</sup>
Maximum Energy Density	
1064 nm, 7 ns	400 mJ/cm <sup>2</sup>

## PHYSICAL CHARACTERISTICS

Effective Aperture	12 mm Ø
Threaded input	SM1
Inner Sphere Diameter	50 mm Ø
Sensor	Silicon
Dimensions	66H x 78W x 66D mm
Weight	0.75 kg

## ORDERING INFORMATION

Product Name		
 INTEGRA (USB)	IS12L-9S-RSI-INT-D0	
Product Number (without stand)	203203	
 INTEGRA (RS-232)	IS12L-9S-RSI-IDR-D0	
Product Number (without stand)	205100	

Specifications are subject to change without notice

a. Nominal value. Depends on environmental electromagnetic interferences and wavelength.