

ISD-30

<https://www.gigahertz-optik.com/en-us/product/isd-30-si/>

Product tags: VIS , NIR



Description

Integrating sphere detector with 300 mm diameter, configured to measure laser and laser diodes with a divergence up to 64° and peak powers up to 100 W.

100 mm Diameter Measurement Port

The ISD-30 integrating sphere detector with 300 mm diameter integrating sphere features a large 100 mm diameter measurement port making it suitable for use with larger diameter Laser beams like Laser range finders. The sphere is coated with Barium Sulfate (ODP97).

If needed, the measuring port can be reduced to smaller diameters with port reducers.

Broad Spectral Responsivity

The integrating sphere detector is equipped with a Si diode or a InGaAs diode. The Si diode covers the wavelength range from 400 nm to 1100 nm, the InGaAs the range from 800 nm up to 1800 nm. If the total responsivity range is needed, the ISD-30 is also available with both detectors.

Detectors with Diffuser Windows

Diffuser windows mounted in front of the detectors enable the detectors to integrate reflected radiation from almost the complete integrating sphere surface minimizing hot-spots caused by the first beam reflection.

Detector in "Shadow Position"

The detector is positioned close to the measurement port for a large acceptance angle within the sphere without direct irradiation of the detector.

This eliminates the need to use a baffle.

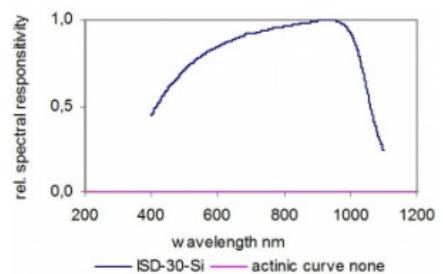
Fiber Connector and Auxiliary Port

In addition to the detector port and the measurement port, the ISD-30 is also equipped with two additional ports:

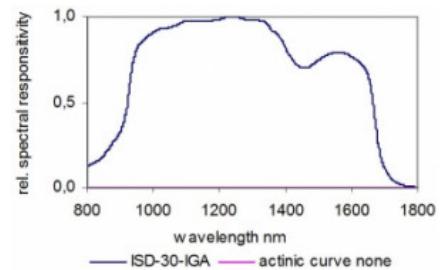
- A SMA connector to connect a fiber from a spectralradiometer to the sphere
- An auxiliary port, e.g. to use for substitution correction



ISD-30-Si/IGA, Application specific construction



ISD-30-Si Typical Spectral Responsivity



ISD-30-IGA Typical Spectral Responsivity

Specifications

Specification

Sphere diameter	300 mm															
Port Size	100 mm															
Coating	ODP97															
Spectral responsivity	400nm - 1100 nm Si Photodiode 800nm - 1800 nm InGaAs Photodiode															
Typical responsivity	0.2 mA/W @ 633 nm 0.25 mA/W @ 900 nm 25 μ A/W @ 1300 nm 18 μ A/W @ 1550 nm															
Max. signal current	1 mA															
Cable Length	2 m															
Rise time	0.5 μ s															
Spectral range	(400 - 1100) nm or (800 - 1800) nm															
Measurement ranges	<table><tr><td>Sensor</td><td>min (0.1 pA NEI)</td><td>max (200 μA)</td></tr><tr><td>ISD-30 @ 633 nm</td><td>5.00E-10</td><td>1.0</td></tr><tr><td>ISD-30 @ 900 nm</td><td>4.00E-10</td><td>0.8</td></tr><tr><td>ISD-30 @ 1300 nm</td><td>4.00E-09</td><td>8.0</td></tr><tr><td>ISD-30 @ 1550 nm</td><td>5.56E-09</td><td>11</td></tr></table>	Sensor	min (0.1 pA NEI)	max (200 μ A)	ISD-30 @ 633 nm	5.00E-10	1.0	ISD-30 @ 900 nm	4.00E-10	0.8	ISD-30 @ 1300 nm	4.00E-09	8.0	ISD-30 @ 1550 nm	5.56E-09	11
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Miscellaneous

Temperature range	(5 - 40) °C
Plug Types	-1, -2, -4

Options

ISD-AUX	Optional UMPF-0.5 auxiliary port with UMPP-0.5 port plug.
ISD-SMA	Optional UMPF-0.5_UMPA-0.5/11_UFC-11-SMA detector port with SMA connector

Configurable with

Product Name	Product Image	Description	Go to product
P-9710		High-End Optometer for Measurement of CW-, Single Pulse and Modulated Radiation	https://www.gigahertz-optik.com/en-us/product/p-9710/

Product Name	Product Image	Description	Go to product
P-9801		8-Channel High Class Current Amplifier/Optometer	https://www.gigahertz-optik.com/en-us/product/p-9801/
P-2000		Two-Channel Optometer	https://www.gigahertz-optik.com/en-us/product/p-2000/

Purchasing information

Article-Nr	Modell	Description
Product		
15298433	ISD-30-Si-1	Integrating sphere detector with Si diode and -1 connection (BNC), Calibration Certificate
15298434	ISD-30-Si-2	Integrating sphere detector with Si diode and -2 connection (Calibration Data), Calibration Certificate
15298435	ISD-30-Si-4	Integrating sphere detector with Si diode and -4 connection (ITT), Calibration Certificate
15307336	ISD-30-IGA-1	Integrating sphere detector with InGaAs diode and -1 connection (BNC), Calibration Certificate
15307337	ISD-30-IGA-2	Integrating sphere detector with InGaAs diode and -2 connection (Calibration Data), Calibration Certificate
15307338	ISD-30-IGA-4	Integrating sphere detector with InGaAs diode and -4 connection (ITT), Calibration Certificate
15298342	ISD-30-SiIGA-1	Integrating sphere detector with Si and InGaAs diodes and -1 connection (BNC), Calibration Certificate
15298343	ISD-30-SiIGA-2	Integrating sphere detector with Si and InGaAs diodes and -2 connection (Calibration Data), Calibration Certificate
15298344	ISD-30-SiIGA-4	Integrating sphere detector with Si and InGaAs diodes and -4 connection (ITT), Calibration Certificate
Re-calibration		
15300752	K-ISD30Si-SD	Detector, Calibration Certificate

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