

Measure with Confidence from VIS to NIR

ILT970VNIR Spectroradiometric Measurement Systems

The VNIR Spectroradiometric Measurement Systems optimized for the visible (VIS) and near-infrared (NIR) spectral regions calibrated from 380 nm to 1000 nm. Choose from seven (7) options for measuring spectral irradiance ($\text{W}/\text{cm}^2\text{-nm}$), spectral radiance ($\text{W}/\text{cm}^2\text{-sr-nm}$), and spectral flux (W/nm). Each Spectroradiometer includes the VNIR spectrometer and optical fiber, an optical measurement head for spectral irradiance or spectral flux, a stand, SpectrILight III control software and DLLs, and a carry and storage case.

These Spectroradiometer Systems have been fully characterized and are calibrated for their spectroradiometric response following ISO 17025-certified processes, and supported by global recalibration centers in North America, Europe, and China.

VIS NIR Spectroradiometers for measuring:

- Spectral Irradiance, Irradiance, Illuminance & Color
- Spectral Radiance, Radiance, Luminance & Color
- Spectral Flux, Optical Power, Lumens & Color

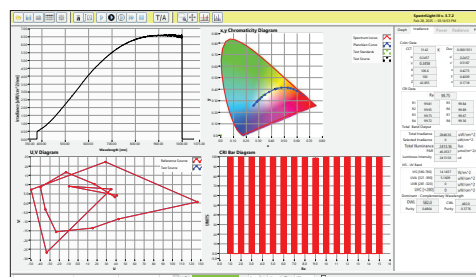
Ideal for:

- Color Management
- Light Source Characterization
- Inspection, Validation, Production Test and R&D



At A Glance:

- Easy to Use
- User Friendly Software*
- Spectral Range: 380 nm to 1000 nm



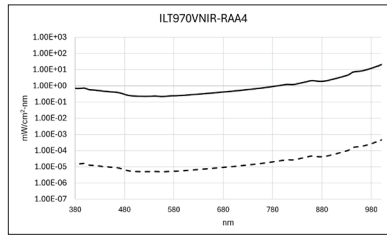
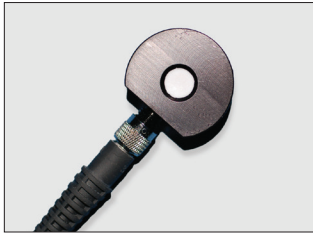
* Computer not included

ILT970VNIR Specifications

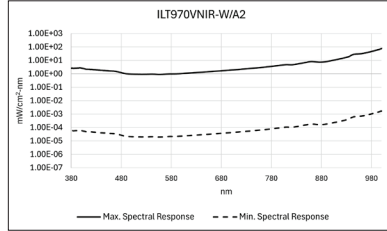
SPECTRORADIOMETERS	ILT970VNIR-RAA4	ILT970VNIR-W/A2	ILT970VNIR-W5E	ILT970VNIR-R2	ILT970VNIR-R3	ILT970VNIR-INT50	ILT970VNIR-INT150
Type	VIS NIR Spectral Irradiance	VIS NIR NIR Spectral Irradiance	VIS NIR Spectral Irradiance	VIS NIR Spectral Radiance	VIS NIR Spectral Radiance	VIS NIR Spectral Flux	VIS NIR Spectral Flux
Spectral Range of Spectrometer	350 nm to 1040 nm	350 nm to 1040 nm	350 nm to 1040 nm	350 nm to 1040 nm	350 nm to 1040 nm	350 nm to 1040 nm	350 nm to 1040 nm
Spectral Range of Calibration	380 nm to 1000 nm	380 nm to 1000 nm	380 nm to 1000 nm	380 nm to 1000 nm	380 nm to 1000 nm	380 nm to 1000 nm	380 nm to 1000 nm
Radiometric Dynamic Range (380 - 1000 nm)	1.63 E-02 to 7.31 E+02 W/cm²	6.42 E-02 mW/cm²	3.04 E-02 mW/cm²	3.35 E-03 mW/cm².sr	4.91 E-02 mW/cm².sr	1.54 E-05 to 8.75 E+02 W	1.60 E-04 to 9.1 E+02 W
Luminous Flux Range for 3200K QTH						3.7 E-04 to 53 lumen	3.6 E-03 to 517 lumens
Illuminance Range	4 to 178K lux	16 to 722K lux	8 to 340K lux				
Luminance Range				8.0 E-2 to 1.0 E+04 cd/m²	2.0 E-1 to 2.0 E+04 cd/m²		
Integration Time Range			3.8 ms - 10 sec.	3.8 ms - 10 sec.			
Spectral Resolution	1.65 nm	1.65 nm	1.65 nm	1.65 nm	1.65 nm	1.65 nm	1.65 nm
Wavelength Accuracy	1 nm	1 nm	1 nm	1 nm	1 nm	1 nm	1nm
Stray Light Rejection	2.3 AU	2.3 AU	2.3 AU	2.3 AU	2.3 AU	2.3 AU	2.3 AU
Fiber Length	1 m	1 m	1 m	1 m	1 m	1 m	1 m
Fiber Connections	SMA-905	SMA-905	SMA-905	SMA-905	SMA-905	SMA-905	SMA-905
Optical Heads	RAA4	W/A2	W5E	R2	R3	INT50	INT150
Input Configuration	Right Angle	Parallel	Parallel	Radiance/Luminance Optic w/2 Deg FOV	Radiance/Luminance Optic with 2.8 mm spotsize at 50 cm	Sphere Entrance Port	Sphere Entrance Port
Reference Plane	Front Surface	Front Surface	Front Surface				
Active Sensor Area	0.27 in. (6.9 mm) dia.	0.598 in. (15.2 mm) dia.	0.157 in. (4 mm) dia.	0.383 in. (9.7 mm) dia.	0.59 in. (15.0 mm) dia.	0.28 in. (7 mm) input port	1.5 in. (38 mm) input port
Optical Head Dimensions	0.61 in. (1.54 cm) dia. by 0.44 in. (1.12 cm) tall	1.65 in. (4.19 cm) dia. by 1.29 in. (3.28 cm) tall	1.25 in. (0.64 cm) dia. by 0.79 in. (2.0 cm) long	1.54 in. (4.19 cm) dia. by 1.46 in. (3.70 cm) tall	1.98 in. (4.27 cm) base dia., 1.20 in. (3.05 cm) lens dia. by 2.40 (6.10 cm) tall	2 in. (5 cm) dia. integrating sphere with 0.27 in. (0.7 cm) entrance port and 0.5 in. (1.27cm) near cosine fiber port	6 in. (15.24 cm) dia. integrating sphere with 3 ports, 1.5 in. (3.8 cm) entrance port, 0.5 in. (1.24 cm near cosine fiber port, and 1 in. (2.54 cm north pole port with port plug
Spectrometer Dimensions HxWxL	3.46 in. (88 mm) x 2.51 in. (64 mm) x 1.22 in. (31 mm)	3.46 in. (88 mm) x 2.51 in. (64 mm) x 1.22 in. (31 mm)	3.46 in. (88 mm) x 2.51 in. (64 mm) x 1.22 in. (31 mm)	3.46 in. (88 mm) x 2.51 in. (64 mm) x 1.22 in. (31 mm)	3.46 in. (88 mm) x 2.51 in. (64 mm) x 1.22 in. (31 mm)	3.46 in. (88 mm) x 2.51 in. (64 mm) x 1.22 in. (31 mm)	3.46 in. (88 mm) x 2.51 in. (64 mm) x 1.22 in. (31 mm)
Spectrometer Weight	276 g	276 g	276 g	276 g	276 g	276 g	276 g
Sphere Coating						Spectrafect®	Spectrafect
Mounting	1/4-20 mounting thread with tripod	1/4-20 mounting thread with tripod	1/4-20 mounting thread with tripod	1/4-20 mounting thread with tripod	1/4-20 mounting thread with tripod	1/4-20 mounting thread with tripod	1/4-20 boss, 4 in. (10 cm)post, 4 in. (10 cm) post holder, and 6 in. x 6 in. (15 cm x 15 cm) base
Calibration	Spectral Irradiance Response	Spectral Irradiance Response	Spectral Irradiance Response	Spectral Radiance Response	Spectral Radiance Response	Spectral Flux Response	Spectral Flux Response
Storage and Carrying Case	Included	Included	Included	Included	Included	Included	Included
Software*	SpectriLight III	SpectriLight III	SpectriLight III	SpectriLight III	SpectriLight III	SpectriLight III	SpectriLight III

* Computer Specifications:
- A CPU or laptop with 1GHz processor, 1GB of RAM, 256GB hard drive, and a screen resolution of 1024 x 768
- Operating system: Windows 11 or later
- Microsoft .Net Framework 4.5 or later needs to be installed and enabled

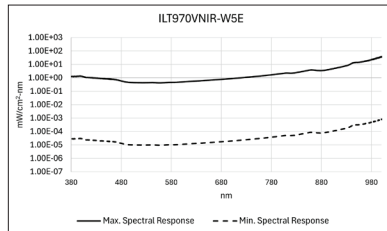
Optical Heads and Spectroradiometer Measurement Ranges



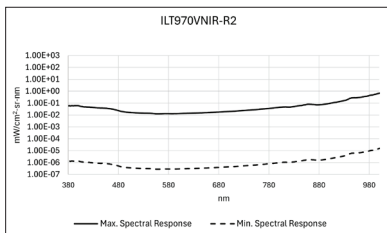
RAA4 Right-Angle Adapter/Diffuser Head with mini-integrating sphere for measuring spectral irradiance, total irradiance, and spectral characteristics of light sources.



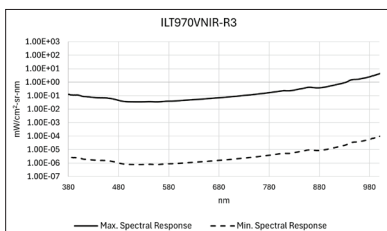
W/A2 Diffused Quartz Head with SMA adaptor for measuring spectral and total irradiance, illuminance, color parameters, and spectral characteristics of light sources.



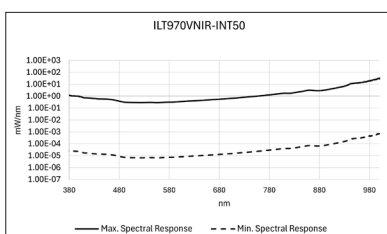
The W5E miniature cosine correcting diffuser with a SMA905 fiber adaptor for measuring spectral and total irradiance, illuminance, color parameters, and spectral characteristics of light sources.



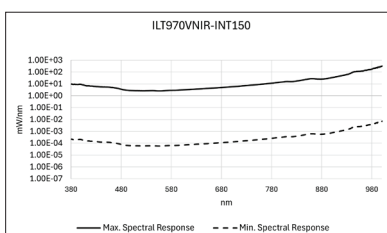
R2 Optical Head with an average field of view of 2 degrees for measuring spectral and total radiance, luminance, color parameters, and spectral characteristics of extended light sources.



R3 Small Spot, 500 mm fixed distance Optical Head for measuring spectral and total radiance, luminance, color parameters, and spectral characteristics of extended light sources.



INT50 5 cm (2'') Integrating Sphere for measuring forward and total spectral flux, power in watts, and spectral characteristics.



INT150 15 cm (6'') Integrating Sphere for measuring forward and total spectral flux, power in watts, and spectral characteristics.