

SR9910 SPECTRORADIOMETER

Designed for the accurate measurement of spectral irradiance and radiance in the ultra-violet, visible and near infra-red spectrum.



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The Irradian SR9910 computer controlled spectroradiometer (model SR9910-V7) is designed for the measurement of spectral irradiance and radiance in the ultra-violet, visible and near infra-red spectrum.

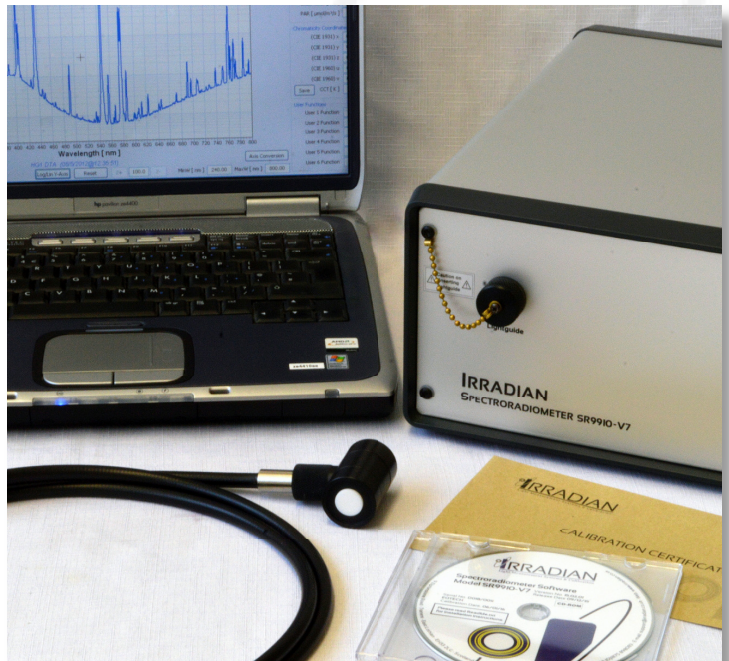
Using flexible, quartz fibre optic lightguides and a range of available accessories, many optical measurements are made possible. Specialised software provides user friendly control of the instrument with wide ranging and detailed facilities for storage, mathematical analysis, presentation and graphing of the acquired data.

OPERATION

Light incident on the standard cosine diffuser head is transmitted by the lightguide to a precision double-grating monochromator. Wavelength control is by a stepper motor drive mechanism programmed through a USB connection to the Windows based operating software. Current from the high sensitivity, thermoelectrically cooled photomultiplier detector is amplified, integrated, converted to a digital signal and transmitted to the operating computer. Calibration files ensure the raw data is scaled and corrected before being presented to the user for display, storage and manipulation in the provided software application.

APPLICATIONS

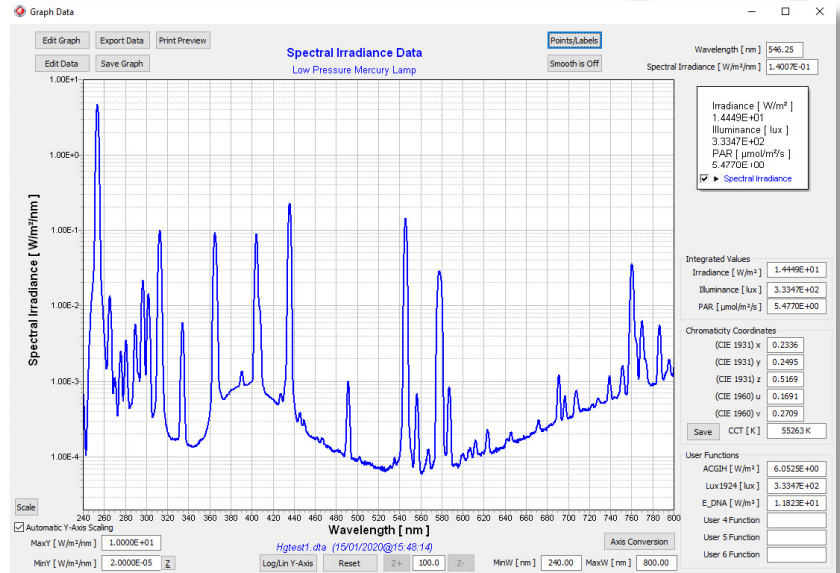
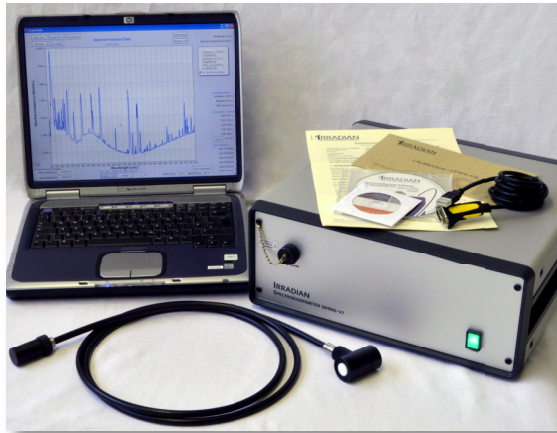
- Solar UV measurements.
- LED measurement.
- Tanning lamp testing.
- Measurement of mercury discharge lamps, in photolithography.
- Monitoring and measuring UV sources in phototherapy.
- Photostability testing.



SOFTWARE FEATURES

- **Wavelength Scanning**
Start, stop, step size, integration time, delayed start.
- **Data Graphing & Display**
Linear, log axis, single & multiple graphs, zoom, radiometric, photometric, quantummetric & user programmable integrals.
- **Real Time Monitoring**
Single wavelength logging vs time.
- **Data Analysis**
Average, multiply, subtract, divide, normalise, interpolate data.
Calculate chromaticity coordinates.
- **Automatic Data Storage**
Automatic file naming of spectral scans.
- **Default Settings**
User programmable options for one touch scanning.
- **Export Into Excel**
Send data to a spreadsheet.





SPECIFICATION

The Irradian spectroradiometer is supplied with a 1 metre quartz fibre flexible lightguide fitted with a side-view cosine diffuser assembly and support plinth; full Windows 10 operating software; 12V power supply and mains lead; computer interface cable including RS232 to USB adapter; operating instructions, traceable calibration certificate and carrying cases.

SPECTRORADIOMETER

Model:	SR9910-V7
Design:	Lightguide coupled, scanning grating monochromator with thermoelectrically cooled, multi-alkali photomultiplier controlled by Windows 10 operating software. Powered by 12 V supply.
Cosine Diffuser:	±3° up to 70°.
Monochromator:	Double grating design.
Spectral Range:	240 nm - 800 nm.
Bandwidth (options):	2 nm (1 nm) nominal.
Wavelength resolution:	0.25 nm.
Wavelength accuracy:	± 0.5 nm.
Stray light:	2 x 10 ⁻⁷ .
Focal length:	100 mm.
Filter wheel:	4 position order sorter filter wheel.
Detector:	Multi-alkali photomultiplier tube.
Cooling:	Thermoelectrically cooled.
Dimensions:	36 cm x 36 cm x 16 cm.
Weight:	10.1 kg.
Sensitivity:	Depends on lightguide length and particular accessories used. Contact Irradian for further information.

Typical scanning times:	280 nm to 400 nm in 1 nm steps, 100 ms integration time :- 100 seconds.
	240 nm to 800 nm in 5 nm steps, 100 ms integration time :- 105 seconds.

ACCESSORIES & OPTIONS

Various lengths of quartz fibre flexible light guides from 1 metre to 10 metres long.

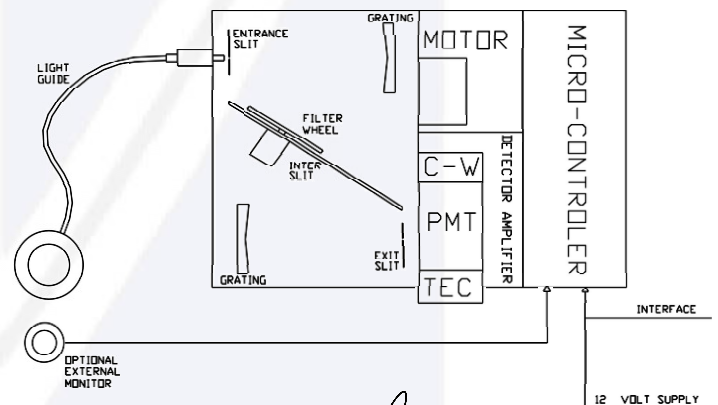
Spectral radiance telescope accessory.

12 V battery pack.

External broadband monitor.

Input integrating sphere.

SR9910-V7 SCHEMATIC



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