

## Spectroradiometer SR900



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Flat radiometer measuring head (h=10 mm)  
with cos correction

The compact spectroradiometer SR900 is a high-resolution measurement system for quick and precise measurements in the UV range, the visible spectral range and the IR. The spectroradiometer consists of an array spectrometer without any moving parts and a silicon detector with 2048 pixels. The spectral resolution is 0.4 nm.

The SR900 is combined with a SMA-905 quartz light light guide and our radiometric sensor heads for measuring the irradiance and illuminance.

Traceable to the PTB, the SR900 is factory-calibrated. A DAkkS test in our accredited laboratory is optionally available. The SR900 thus enables exact spectroradiometric measurements for the assessment of irradiances and illuminances, biological effectiveness and color measurements. Due to the nearly scatter-free construction, a high sensitivity in the UV range is reached. Control and data evaluation is carried out by the spectral software SRpro. With trigger input and output, the SR900 is also suitable for automated measurements.

For the SR900 we additionally offer a wide range of accessories, which are combinable with customized extensions.

### HIGHLIGHTS

- Spectral range 200-1100 nm
- Nearly scatter-free grid with 300 lines/mm
- Spectral resolution 0.4 nm and 2,3 nm bandwidth
- Order filtering
- Spectral software for the color measurement, radiometric and effects-based measurements
- Simple validation by means of the user concept
- Wide range of accessories

### APPLICATIONS

- Spectroradiometry
- Online process control, quality control
- Testing of light sources (lamps, LEDs)
- Color measurements and color control
- Measurement of the global radiation
- Inspection of optical materials and components, e.g. light conductors
- Qualitative and quantitative analyses in chemistry, pharmacy and biology

## TECHNICAL DATA

<b>Spectral range</b>	200 - 1100 nm
<b>versions:</b>	measurement range
<b>Standard</b>	~ 1 - 200 mW/cm <sup>2</sup>
<b>High-Sensitive</b>	~ 0,01 - 10 mW/cm <sup>2</sup>
<b>High-Power</b>	~0,01 - 10 W/cm <sup>2</sup>
<b>Spectral resolution</b>	0,44 nm (pixel pitch)
<b>Spectral bandwidth</b>	2,3 nm (FWHM)
<b>Gratting</b>	300 l/mm, holografic
<b>Focal length</b>	75 mm
<b>Blaze wavelength</b>	250 nm
<b>Detector</b>	SI
<b>Pixel size</b>	14 x 200 µm
<b>Number of pixel</b>	2048
<b>Resolution</b>	16 bit
<b>Integrations time</b>	0,1 ms to 60 s
<b>Max. Dynamic range</b>	10 <sup>5</sup> :1 with 3 measurements
<b>Interface</b>	USB
<b>Trigger</b>	rear connection
<b>Dimensions</b>	177 x 125 x 45 mm
<b>Weight</b>	1.2 kg
<b>Supply voltage</b>	5 V, 500 mA
<b>Power</b>	< 3 W
<b>Operating temperature</b>	5 to 40 °C
<b>Storage temperature</b>	-10 to 60 °C
<b>Humidity</b>	<80%, non-condensating
<b>System requirements</b>	Win 7/10, min 1 GB RAM

## SCOPE OF DELIVERY

Spectroradiometer SR900, USB cable

optional: ISO 17025 DAkkS test certificate / factory calibration; Radiometry set 1 consisting of quartz light guide 1.5 m and radiometer sensor head

set 1: h = 35 mm (Standard)

set 2: h = 25 mm (like Set 1, reduced height)

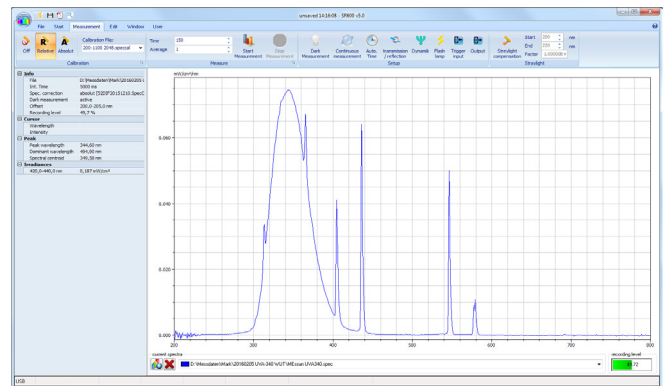
set 3: h = 10 mm (flat, for UV curing)

Our calibrations are traceable to PTB and available as factory calibration and ISO 17025 DAkkS test. Ask also for our calibration service for third-party devices.



An optional xenon flash lamp and a fixed sample or cuvette holder can be used for transmission measurements. The xenon flash lamp can be operated directly on the SR900 and does not require any warm-up time. The high durability of 10<sup>9</sup> flashes ensures a permanent use.

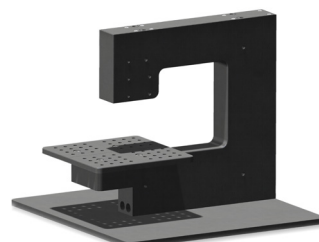
The photometer add-on TR-ZPM-SMA for the determination of the transmission of 3D samples also uses the xenon flash lamp. For luminous flux measurements and LED measurements, the SR900 can be combined with our integrating sphere.



Spectral software with color measurement

## PART NUMBERS

<b>SR900 Spectralradiometer</b>	840310
<b>SR900 High Sensitive</b>	840310HS
<b>SR900 High Power</b>	840310HP
<b>Radiometry set 1 (35 mm)</b>	840311
<b>Radiometry set 2 (25 mm)</b>	840311-1
<b>Radiometry set 3 (10 mm)</b>	840311-2
<b>ISO 17025 DAkkS certificate</b>	17023
<b>Factory calibration</b>	710104
<b>Software SRpro</b>	940151
<b>Calibration lamp 1000 W</b>	860300
<b>Xenon flashlamp, SMA</b>	840310XE2
<b>Carring case</b>	921002
<b>TR-ZPM-SMA-905</b>	840310ZPM-SMA



TR-ZPM-SMA-905



Radiometric sensor head  
(h = 25 mm)