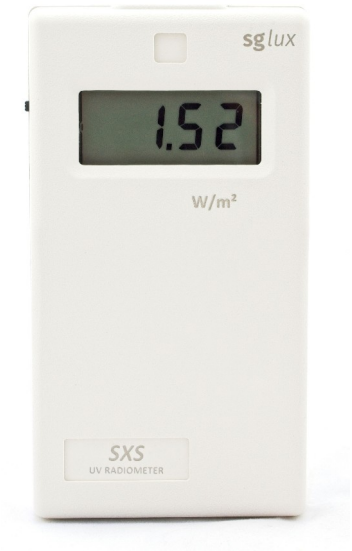
UV Radiometer SXS

sglux UV SENSORS

Measuring device for determining the UV irradiance

GENERAL PROPERTIES



The UV Radiometer SXS is used for measuring UV irradiance. It features an integrated sensor with cosine correction, based on a silicon carbide (SiC) photodiode. Each SXS is individually configured according to customer specifications before delivery and calibrated in our calibration laboratory in accordance with guideline ISO 17025. In close cooperation with the customer, we ensure that the UV measuring device ideally fulfils the measurement task, providing precise, application-specific measurement results.

- Easy operation
- The device is ready for use immediately after switching on
- Powered by a 9V battery. With infrequent use, the device can be operated for several years without battery replacement or recharging
- Two sensor positions available: for forward or upward aligned measurements
- Hold function to freeze the display
- A video explains the function and use of the device

The UV Radiometer SXS only measures the instantaneous irradiance. If a broader range of functions is required, such as graphical trend display, logging, or dosimeter function, or if multiple calibration sets need to be accessible, our UV Radiometer SXL55 is applied.

OPERATION

The device is switched on using the slide switch on the left side (center position). Then, the sensor entry optics should be aligned with the UV light source.

The reading on the display stabilizes within two seconds.

To hold the current reading, the hold function can be activated by moving the slide switch further down.

In regular operation, the total operating time with a standard 9V battery is about 100 hours.

Please note that the displayed irradiance is only correct when using a light source that is spectrally identical to the one used during calibration. Using other light sources will result in measurement errors. The light source is specified in the calibration certificate on rear side of the device.

We are happy to advise you if you are unsure about this point.

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VARIANTS

In addition to the following common variants, many other spectral sensitivities can be realized upon request. Please consult our application experts for the optimal device for your application.

Configuration	Spectral Range $\lambda_{S10\%}$ in nm	Peak-Wavelength λ_{max} in nm	Applications	Notes
Broadband	221 ... 358	280	UV spectroscopy, environmental monitoring	**Attention: UV protection required**
UVA	309 ... 367	331	Paint curing, plastic curing	
UVB	231 ... 309	280	UV sterilization, medical diagnostics	
UVC	225 ... 287	275	Germicidal, water and air disinfection	
UVI	Acc. to ISO 17166	290	UV index monitoring, weather stations	
UV + VIS	240 ... 560	445	Monitoring terrariums, daylight lamps, plant lighting	

SENSOR POSITIONS

The SXS can be configured with two different sensor positions. The vertical orientation is suitable when the radiation source is perpendicular to a surface or when the sensor should be positioned close to the measurement plane. The horizontal orientation is advantageous when the light source is parallel to the working plane.

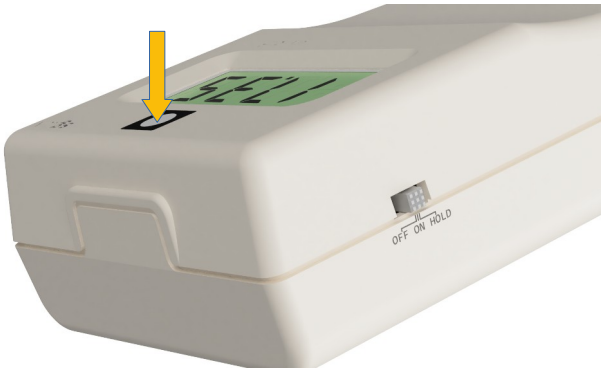

Figure 1: Sensor position: vertical

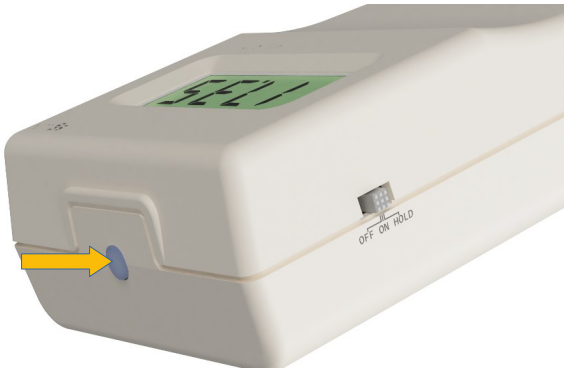

Figure 2: Sensor position: horizontal

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SPECIFICATION

Porperty	Value	Unit
Model	SGLUX UV SXS	
Irradiance	According to customer specification	
Spectral Range	UVA, UVB, UVC, UVI ... (see variants at page 2)	
Resolution	Down to 0.1	digit
Measurement uncertainty	10	%
Sampling Rate	5	measurements / sec
Display	3.5 digit LCD	
Dimensions	145 x 80 x 36.5 (L x W x H)	mm
Weight	180	g
Country of Origin	Germany	

Operating Conditions	Value	Unit
Operating Temperature	-25 ... +85	°C
Storage Temperature	-25 ... +85	°C
Relative Humidity	≤ 90	%
Operating Voltage: Battery operation, 9V type 6F22 or equivalent; if "LO BAT" is displayed, the battery must be replaced (operation with rechargeable 8.4V and 9V batteries possible, charging is outside of the device)	9	V

ORDER INFORMATION

The following information is required for configuration:

1. Type of radiation source used
2. Typical working distances to the radiation source
3. Application or evaluation criteria to define the measurement range
4. Sensor position (forward or upward)

If you do not have all the information available, we are happy to assist you with our expertise in selecting the ideal configuration.

EXPLANATIONS OF THE CALIBRATION CERTIFICATE

As depicted at the below picture the calibration certificate is attached to the rear side of the instrument. The below table explains the various information given with the certificate.

Designation	Explanation
Calibration object	Designation of the calibrated measuring device
Serial No.	Serial number of the measuring device
Calibration Certificate	Certificate number
Calibration Source	Source with which the calibration was performed, in this case a low-pressure mercury tube
Calibration Method	Procedure describing this calibration
Calibration Date	Date of calibration. A recalibration should usually be carried out after 12 months. The existing certificate is removed and replaced by a new one.
Ref. Irradiance	Irradiance used for calibration
Calibration Reference	The reference traceable to the national standard (PTB) used for calibration, in this case a spectroradiometer from the manufacturer Gigahertz Optik GmbH
Ref. Calibration Date	Calibration date of the above reference

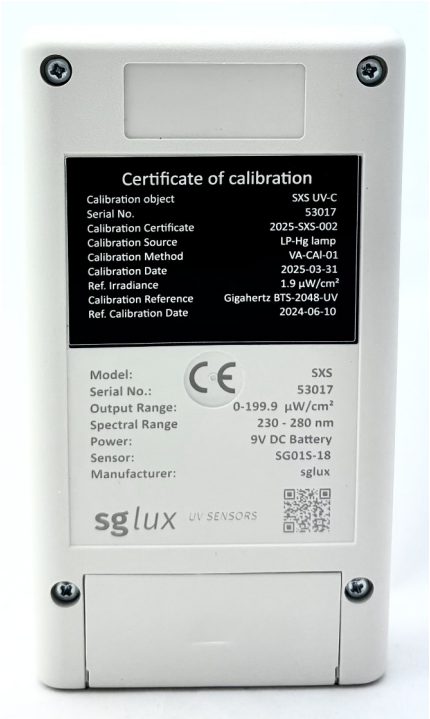

Figure 3: Rear side of the SXS

RELATED DOCUMENTS AND LINKS

- Official Online-Datasheet:

  https://download.sglux.de/radiometers/uvsxs/uv-sxs_en.pdf