

uvLink radiometer

wireless UV sensor nodes (uvLink One / uvLink Field / uvLink IoT)

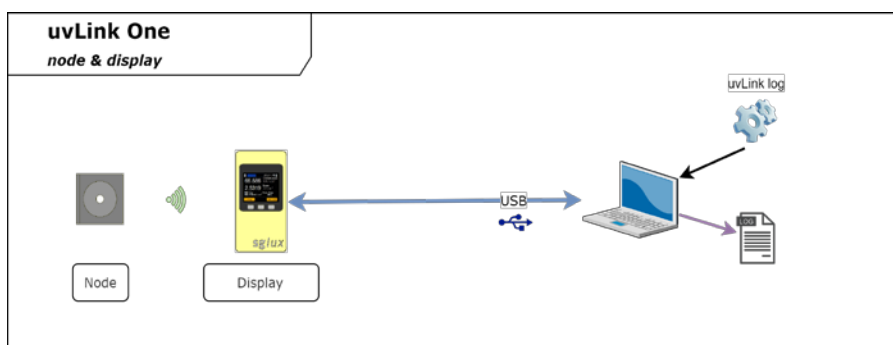


PRODUCT OVERVIEW UVLINK RADIOMETER

A cable connection between a sensor and its evaluation/display unit is the means of choice due to its reliability. However, there are applications where a cable connection can only be realized with difficulty or not at all. This applies, for example, to setups, where the sensor must be positioned in different or difficult-to-access places, or in the event that dangerous UV radiation prohibits a person from being in the vicinity of the sensor. A wireless connection is then useful. Our wireless UV sensor nodes are available for this purpose.

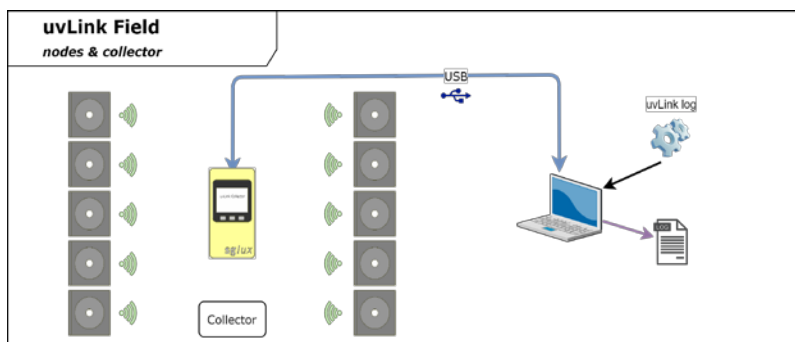
They can be divided into three categories: *uvLink One*, *uvLink Field* and *uvLink IoT*.

UVLINK ONE - Specifications from page 2



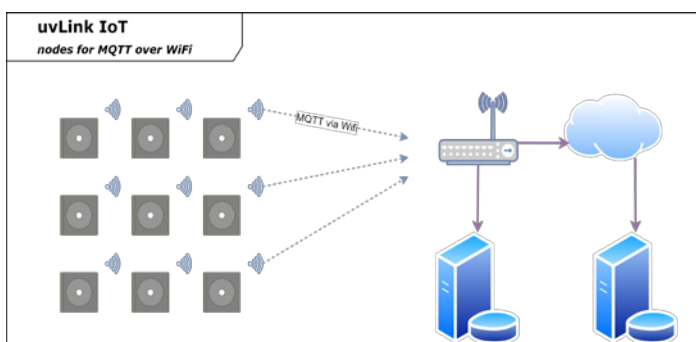
The uvLink One consists of a wireless sensor (node) and a display which can be connected to a computer via USB. The display provides the classic functions of a radiometer, i.e. display of irradiance, dose measurement, logging (when connected to the computer).

UVLINK FIELD- Specifications: docs.sglux.com/products/uvlink



If there are other sensors (nodes) within radio range, the uvLink One becomes the uvLink Field. The display becomes a “collector”. The connected nodes (sensors) and the current measured value are displayed. The evaluation is done on the PC using the supplied software „uvLink log“. The „Field“ variant is used when a process is to be evaluated at several points simultaneously.

UVLINK IOT Specifications: docs.sglux.com/products/uvlink



The uvLink IoT is connected via a WiFi network with connected to an MQTT server. A spatial proximity of the sensors to each other or to the display/collector is not required, in contrast to the two products presented above. Accordingly, the device is suitable for measurements at different locations (e.g.) ships, which are to be evaluated centrally in real time.

uvLink One

Wireless UV cosine corrected UV radiometer



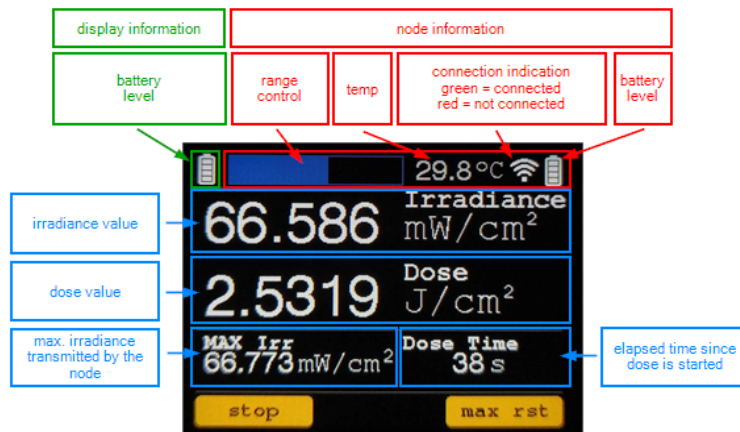
GETTING STARTED



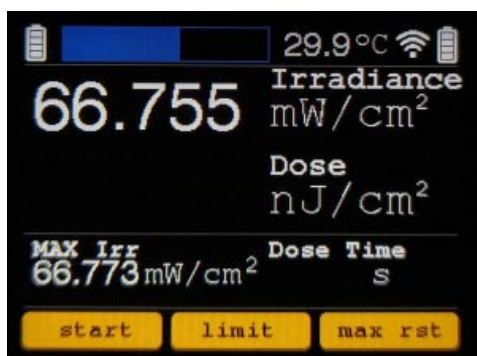
The on/off switch and the USB-C connection for charging are located behind the protective cap on the sensor (node). The display (receiver) is activated by pressing the red button on the left side of the housing. Pressing the button twice switches the display off. The display is also charged via a USB-C port.

DISPLAY FUNCTIONS

The below picture shows the display functions.



THE START SCREEN



After switching on the display unit, a start screen opens. The unit of irradiance (in the picture mW/cm²) adapts dynamically. The three function keys are assigned as follows here:

A dose measurement can be started on the left.

A target dose can be programmed in the center. When it is reached, the device generates a signal tone. The target dose must be defined before starting the dose measurement.

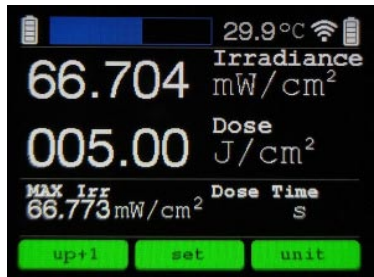
On the right, the display of the maximum irradiance detected since the instrument was put into operation can be reset.

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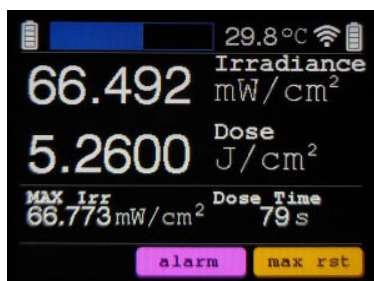


MANAGEMENT OF THE TARGET DOSE

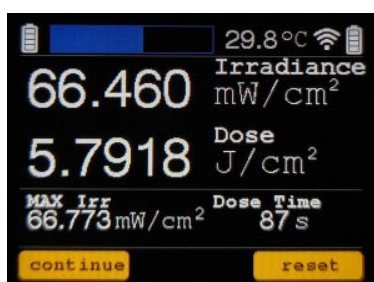


The three function keys for defining the target dose are assigned as follows:

On the left, the dose value can be increased. If the value was accidentally set too high, the programming must be exited (middle function key) and the process restarted.

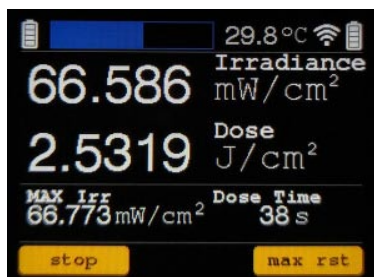


In the center, the programmed target dose is confirmed. The display returns to the start screen. The dose measurement then does not start automatically but is started on the start screen by pressing the left function key.



The middle image shows the status when the target dose is reached. In addition to the acoustic signal, the middle function key is then programmed with the „alarm“ function. Pressing this function key pauses the dose measurement and generates the screen shown in the lower picture. There, the right function key resets the dose measurement. The target dose is retained. The target dose function can be deleted by switching the instrument off and on again. The left function key resumes the dose measurement. As the target dose is then still reached, the alarm tone can be heard continuously.

OPTIONS DURING DOSE MEASUREMENT



The left function key („stop“) pauses the dose measurement. Then the dose measurement can be continued there („continue“).

DATA LOGGING FUNCTION

If the display unit is connected to a PC and the „uvLink log“ software is installed there, it is possible to record the measured values (logging function). Further information is available at: docs.sglux.com/products/uvlink.

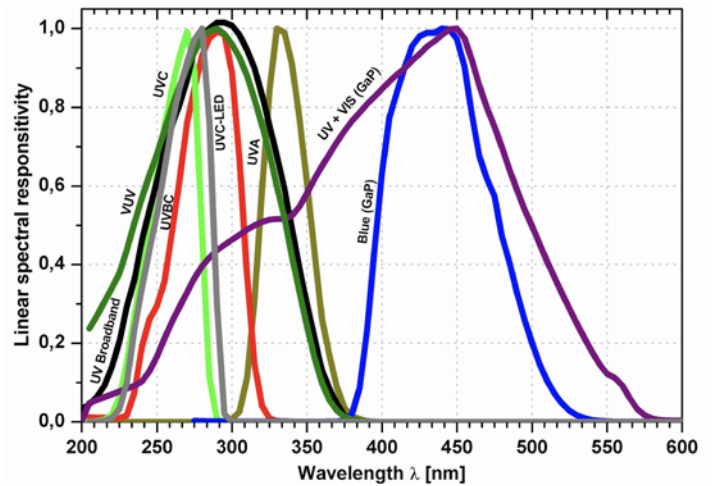
uvLink One

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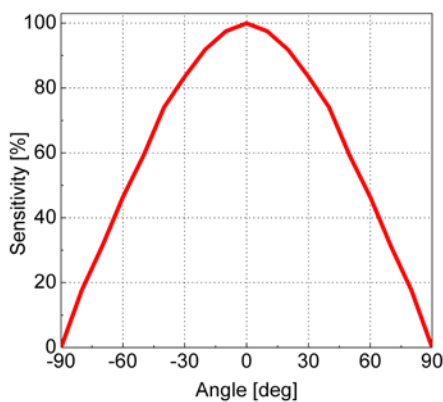


SPECTRAL SENSITIVITY OPTIONS

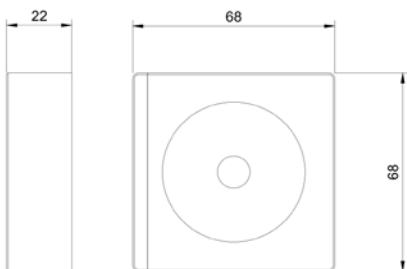
The uvLink One is supplied with a PTB-traceable calibration and a dynamic range agreed with the customer. For most applications, the spectral sensitivity of a SiC photodiode provides a suitable receiving characteristic. However, if the source to be measured also emits UV radiation in a wavelength region that is not to be measured, spectrally matched, filtered photodiodes are used. For measurements around 400nm (e.g. 395nm LED) we use GaP-based photodiodes. The overview on the right shows the different options for spectral sensitivity.



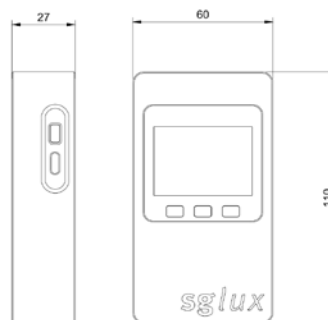
FIELD OF VIEW



DRAWINGS



Drawing of the node



Drawing of the display unit

uvLink One

Wireless UV cosine corrected UV radiometer



SPECIFICATIONS OF THE SENSOR NODE

Dimensions	please refer to drawing on page 4
Weight	151 g
Temperature coefficient (30 to 65°C)	0.05 to 0.075%/K
Operating and storage temperature	0°C to +60°C
IP protection class	IP40 (optional IP67)
Options of spectral sensitivity	broadband UV, UVA, UVB, UVC, VUV, far UV, UVI, Blue and UV+VIS
Battery lifetime	10 hours (unlimited if charged via USB-C)
Radio range	15m in air, 10m between rooms and 3m in a machine
Connections	USB-C
Dynamic range	5 orders of magnitude. The dynamic range will be defined according to the customer's requirements.
Calibration	PTB traceable (substitution method)
Radio standard	low-power 2.4 GHz

SPECIFICATIONS OF THE DISPLAY UNIT

Dimensions	please refer to drawing on page 4
Weight	131 g
Operating temperature	0°C to to 40°C
Storage temperature	0°C to +60°C
IP protection class	IP40
Battery lifetime	10 hours (unlimited if charged via USB-C)