



**URAD-LK DATASHEET**

Measuring device for the determination of the UV irradiance

Display unit UV radiometer with dosimeter and data logging features

Full UV LED range available: UVC, UVB and UVA

<b>Electronics</b>	Interface	Wireless - USB Type C (cable length of 2 meters)
	Battery	Sensor node: rechargeable Lithium battery, up to 10h operating time Display unit: rechargeable Lithium battery, up to 10h operating time
	Radio specifications	Range: 15m in air, 10m between rooms, 3m in a machine Standard: low-power 2.4 GHz
<b>Optics</b>	Spectral sensitivity	240 nm – 560 nm
	Calibration wavelength available	UVC: 255, 265, 275 nm UVB: 295, 305, 325, 340 nm UVA: 365, 385, 395, 405 nm BLUE: 420, 445 nm
	Standard measurement range	100µW/cm <sup>2</sup> to 1W/cm <sup>2</sup> (other ranges available on request)
<b>Mechanics</b>	Width x Height x Length	Sensor node: 68mm x 68mm x 22mm Display unit: 110mm x 60mm x 27mm
	Weight	Sensor node: 151g Display unit: 131g
	IP rating	IP40
<b>Environment</b>	Operation	Temperature: -5°C to +50°C – Humidity: < 90% humidity
	Storage	Temperature: +15°C to +55°C – Humidity: < 90% humidity



**Product reference**

The **URAD-LK** is delivered with display unit and case and is calibrated depending on customer needs:

**Display unit and x1 sensor with calibrated wavelength:**

**URAD - LK - WWW**  
N°1

**Display unit and x2 sensors with calibrated wavelength:**

**URAD - LK - WWW - XXX**  
N°1 N°2

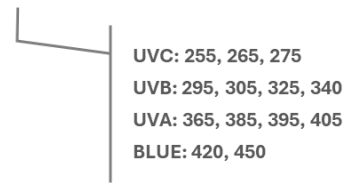
**Display unit and x3 sensors with calibrated wavelength:**

**URAD - LK - WWW - XXX - YYY**  
N°1 N°2 N°3

**Display unit and x4 sensors with calibrated wavelength:**

**URAD - LK - WWW - XXX - YYY - ZZZ**  
N°1 N°2 N°3 N°4

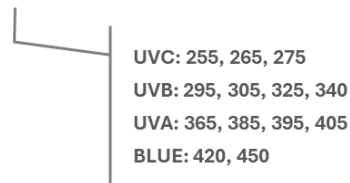
**CALIBRATION WAVELENGTH AVAILABLE (nm)**



If an additional sensor is required (without display unit and case):

**Additional sensor with x1 calibrated wavelength: LK - WWW**  
N°1

**CALIBRATION WAVELENGTH AVAILABLE (nm)**



**→ Please note that each sensor is calibrated with the selected wavelength. Multiple sensors can be connected to one display unit.**



**Presentation**

**General features**

The **URAD-LK** is a stand-alone wireless UV measurement system consisting of a sensor and a display unit. The display offers classic uv radiometer functions such as uv radiance and uv dose measurement.

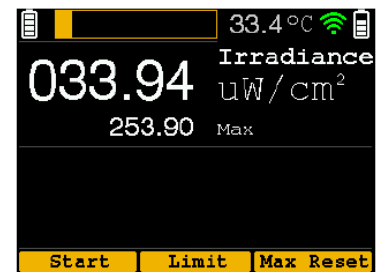
Logging can be performed by connecting the display to a computer with a USB port. Sensor and handheld are battery-powered and can be used safely for an entire working day. The system is ready for use within seconds of being switched on and comes perfectly preconfigured to your measurement application.



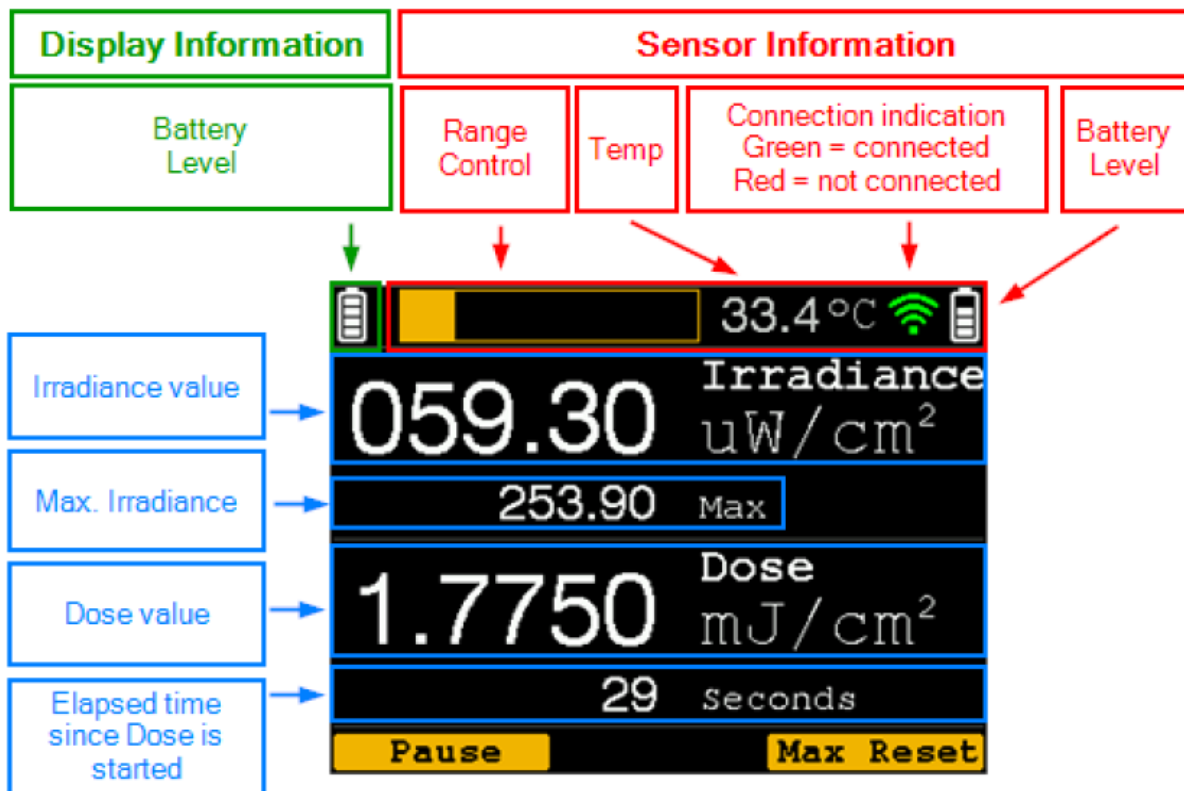
**Basic use**

Switch on the sensor using the on/off switch behind the protective cap and the display using the power button on the side.

To switch off the display again, press the power button for at least 6 seconds. To charge the devices, simply connect them to any USB port.



**Display functions of the radiometer**



**Data logging with PC**

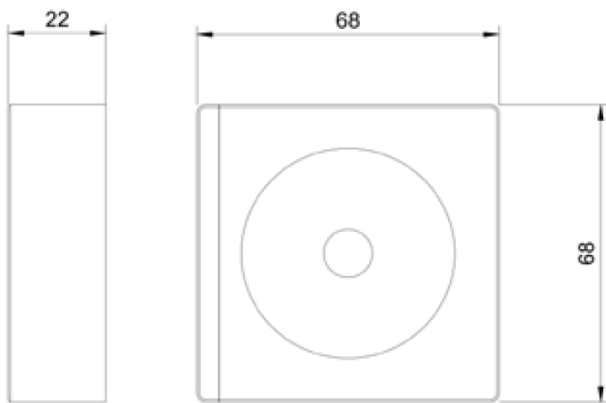
If the display unit is connected to a PC with specific software installation, it is possible to record the measured values using the logging function.

Link to download software will be sent with the device. The log file can then be found via 'Open Log Directory' and further processing can follow.

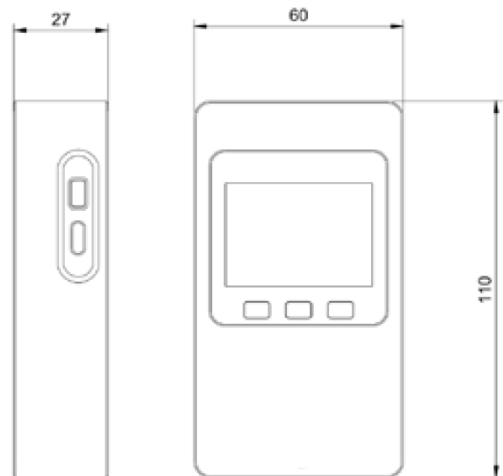
INDEX	ID	IRR[W/m2]	CYCLE	TIME.REL[ms]
1	0	99	1.572830e+01	75 10229
2	1	99	1.572706e+01	76 10354
3	2	99	1.572953e+01	77 10479
4	3	99	1.572953e+01	78 10604
5	4	99	1.573076e+01	79 10729
6	5	99	1.573076e+01	80 10854
7	6	99	1.573200e+01	81 10979
8	7	99	1.573076e+01	82 11104
9	8	99	1.572953e+01	83 11229
10	9	99	1.572830e+01	84 11354
11	10	99	1.573076e+01	85 11479
12	11	99	1.572953e+01	86 11604
13	12	99	1.573076e+01	87 11729
14	13	99	1.573323e+01	88 11854
15	14	99	1.573447e+01	89 11979
16	15	99	1.573447e+01	90 12104
17	16	99	1.573570e+01	91 12229
18	17	99	1.573447e+01	92 12354
19	18	99	1.573570e+01	93 12479
20	19	99	1.573570e+01	94 12604
21	20	99	1.573694e+01	95 12729
22	21	99	1.573694e+01	96 12854
23	22	99	1.573570e+01	97 12979
24	23	99	1.573694e+01	98 13104
25	24	99	1.573694e+01	99 13229
26	25	99	1.573694e+01	100 13354
27	26	99	1.573570e+01	101 13479
28	27	99	1.573570e+01	102 13604
29	28	99	1.573570e+01	103 13729
30				



**Mechanical dimensions [in mm]**



Drawing of the node



Drawing of the display unit



Sensor features

**Spectral responsivity selection options**

Following figure shows the available spectral responsivities. Table 1 shows the position of the peak and the 10% of maximum margins. For UV measurement, by default, unfiltered broadband SiC is applied. If a UV source also emits radiation that must not contribute to the sensor's signal (e.g. UV medium pressure lamps used for water or air purification that also emit non germicidal UV radiation) a filtered sensor (UVC, UVB+C or UVA only) is to be selected. For measurement of radiation above 390nm GaP based detectors are used.

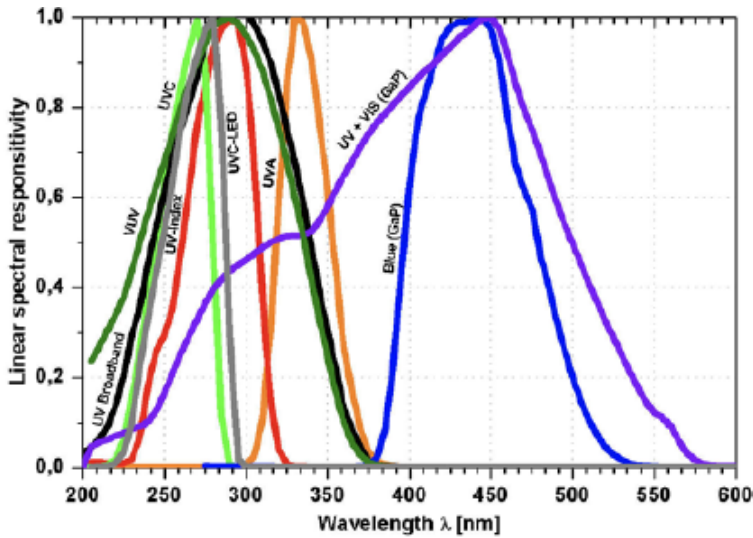
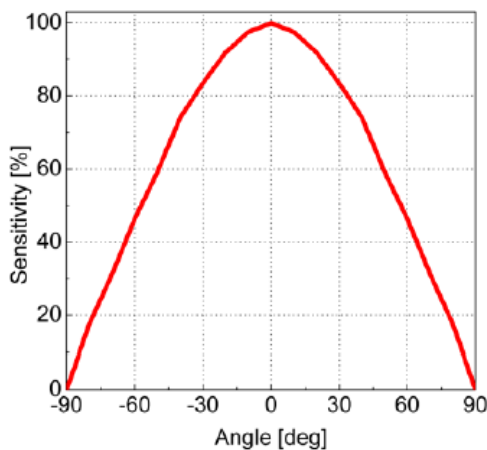


Table 1: position of the peak maximum and position of sensitivity = 10% of peak

SR	Peak	$\lambda_{S_{low}}$	$\lambda_{S_{high}}$
BroadB	280	221	358
UVA	331	309	367
UVB	280	231	309
UVC	275	225	287
UVC-LED	285	225	298
VUV	280	170	355
UV+VIS	445	240	560
BLUE	445	390	515

**Sensor Field of view and picture**





## Warranty and calibration

UWAVE products come with a warranty of 1 year (except specific agreements and contracts), starting from UWAVE shipping date. Any improper use voids the warranty.

The URAD calibration is valid for 18 months. Each URAD is unique through its customization and generates the best conditions for permanently precise and reliable UV measurement. However, expert operation and care are required. Accordingly, the radiometer must be protected from shocks and dirt and should be recalibrated every 18 months.

The URAD comes with its own calibration certificate, dated and signed by our partner lab. It contains all technical information on the system.



## Regulations compliancy

<b>Regulation &amp; marking</b>	CE - UKCA
<b>Environmental standards</b>	RoHS III Directives - REACH Regulation - WEEE Regulation
<b>HS Codes</b>	90275010 for radiometers
<b>Country of origin</b>	Germany (DE) – Manufactured by sglux GmbH