UV SENSOR "UV-DVGW-160"
UV Sensor for ÖNORM and DVGW certified water purifiers

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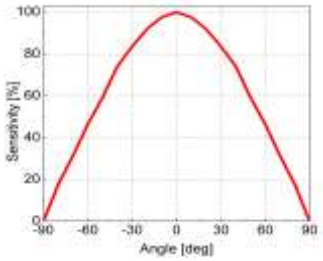
The sensor UV-DVGW-160 is a special type suitable for use with DVGW and ÖNORM certified water purifiers. It complies with the standard DVGW W294-3(2006) and ÖNORM 5873-2. Always delivered calibrated according to DVGW and ÖNORM requirements.

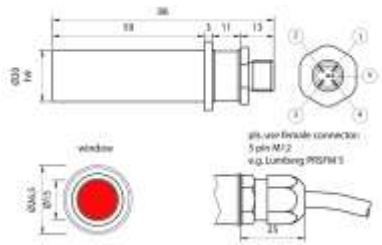
The probe is amplified and shielded against electromagnetic interference. The visible blind sensors are based on a Silicon Carbide (SiC) UV photodiode, which guarantees highest radiation hardness, long term stability and $>10^{10}$ visible blindness (ratio of UV to VIS-IR sensitivity). Blue and GaP type sensors are based on a Galliumphosphide (GaP) UV photodiode. Please find at page 2 an individual configuration procedure which allows the prospective user to select the correct spectral response (STEP 1), different output types (STEP 2) and to select a sensitivity range (STEP 3).

Picture

Field of View



Drawing



Specifications

Fixed Specifications

Parameter	Value
Dimensions	pls. refer to the drawing
Weight	120 g
Temp. Coefficient	0,035%/K
Operating Temp.	-20…+80°C
Humidity	<80%, non condensing, on request: 100% submersible

Configurable Specifications

Parameter	Value
Absolute Sensitivity	1nW/cm^2 … 10W/cm^2
Spectral Sensitivity	UVC
Signal Output	0…5V, 4…20mA, USB
Connections	2m cable or 2m cable with 5 pin male connector type Lumberg PRSFM5

Please find the configuration guide at page 2 of this datasheet.

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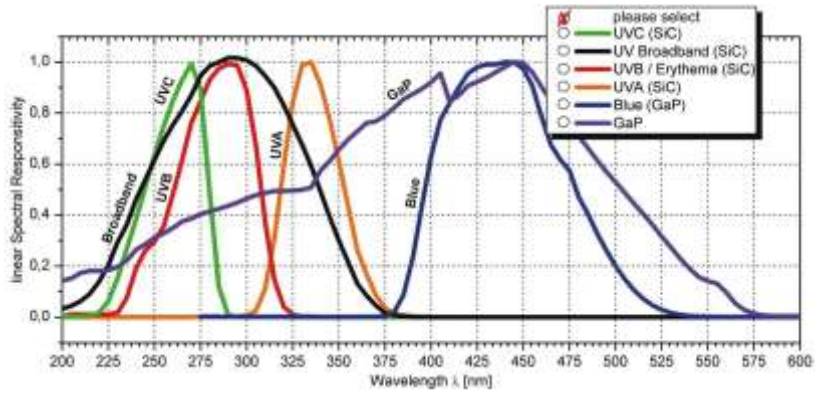
STEP 1 → Configuration of the Spectral Sensitivity



Please select one spectral sensitivity curve.

STEP 2 → Signal Output

Please tick your selection. The pin configuration is shown in the drawings on page 1.

	Output Type	Description	Connection = "cable"	Connection = "male plug"
○	0…5V	0...5V voltage output proportional to radiation input, supply voltage is 7..24VDC, current consumption is <30mA	○ V_0=brown, V_+=white, Out=green, Shield=black	○ V_0=1, V_+=2, Out=3
○	4…20mA	4...20mA current loop for PLC controllers. The current is proportional to the radiation, supply voltage is 24VDC	○ V_0=brown, V_+=white	○ V_0=1, V_+=2
○	USB	The signal is transmitted via USB to a computer. Software is included.	----------→	○ Standard USB-A plug, 1,5 m cable
○	Pulse	UV pulse counting for pulses > 30ns, signal out is 5V when the pulse intensity is above threshold and 0V when below.	○ V_0=brown, V_+=white, Out=green, Shield=black	○ V_0=1, V_+=2, Out=3

STEP 3 → Sensitivity

We configure your UV sensor for intensities across 10 orders of magnitude from 1nW/cm² to 10W/cm². For good dynamic behaviour the min and max. intensity at the probe position needs to be known as precisely as possible. Please fill that value, if known, into the box below. If only a rough estimate is possible, please estimate it in the range selection fields. We will contact you for further refinement of the range.

max. radiation in mW/cm² or, if not precisely known, range estimation

○ ☐ ○ 1nW/cm² … 10µW/cm² ○ 10µW/cm² … 100mW/cm² ○ 100mW/cm² … 10W/cm²

Probe mechanical design overview

Besides the ticked mechanical design of this datasheet other mechanical designs are available

	Type	Description
○	UV-Surface	Standard surface-mount 180° FOV UV Sensor
○	UV-Air	Standard axis oriented in-chamber UV Sensor
○	UV-Cosine	Waterproof UV Sensor for outdoor use
○	UV-Water /-G3/4	10 bar water pressure proof
○	**UV-DVGW/-160**	**UV Sensor for ÖNORM/DVGW certified water purifiers (this datasheet)**
○	UV-MINILOG	UV Datalogger with PC software
○	TOCON-probe	Pre-amplified UV Photodetector in a M12x1 housing, only with voltage output available

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