

OPERATING INSTRUCTIONS

DREAMFILTERS® UVC-LED WATER DISINFECTION DEVICE 15 L/MIN – G 3/8" MALE THREADS

1. GENERAL SAFETY INFORMATION:

- This device is a UVC-LED module designed for the disinfection of drinking water.
- It does not remove chemical contaminants (e.g. heavy metals, chlorine, pesticides).
- The system does not replace a complete water treatment process.
- For effective disinfection, the water must be clear and pre-filtered.
- The device must only be operated within the specified operating parameters.

2. WARNING – SAFETY PRECAUTIONS

- UVC radiation (260–280 nm) is hazardous to the eyes and skin.
- The module must only be operated in a completely closed, light-tight system.
- Never look directly into an active UVC light source.
- The device must not be opened or tampered with during operation.
- Installation and maintenance must only be carried out when the power supply is disconnected.

3. INSTALLATION AND OPERATING INSTRUCTIONS

- The module is designed for use in:
 - Motorhomes and campervans
 - Food trucks
 - As a final treatment stage in reverse osmosis systems
- **Do not exceed the maximum flow rate, as this may reduce the disinfection efficiency.**
- The integrated water flow sensor ensures that:
 - The UVC LEDs are activated only when water is flowing
 - The UVC LEDs switch off automatically when there is no water flow
- Despite this safety function:
 - The device must never be intentionally operated without water
 - Proper integration into the water system must be ensured
- The module must be installed in such a way that:
 - No UVC light can escape to the outside
 - No air bubbles remain in the system, as they may reduce disinfection efficiency

4. IMPORTANT NOTICE FOR CAMPERVANS / MOTORHOMES



WARNING – RISK OF FREEZING!



This device is not frost-resistant.

Even temperatures slightly below freezing can cause residual water inside the device to freeze.

This may result in mechanical damage and complete device failure.

Before exposure to freezing temperatures, the following steps are mandatory:

- Completely drain the device
- Disconnect and remove it from the water system
- Store it in a frost-free location

*** The device may only remain installed in the vehicle if freezing conditions can be reliably ruled out.**

5. STATUTORY WARRANTY

Statutory warranty rights remain unaffected. Damage proven to have been caused by improper installation, freezing temperatures, exceeding the specified operating limits or unauthorized modifications to the device is not covered by the statutory warranty.

6. DISCLAIMER OF LIABILITY

- The manufacturer accepts no liability for damage resulting from:
 - Improper use
 - Failure to follow these instructions
 - Incorrect installation
 - Operation outside the specified operating conditions
- To the extent permitted by applicable law, the manufacturer accepts no liability for consequential damage, in particular:
 - Water damage
 - Health-related damage caused by improper use
 - Damage caused by the use of insufficiently treated water

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DREAMFILTERS® UVC-LED WATER DISINFECTION DEVICE 15 L/MIN – G 3/8" MALE THREADS

Installation of the Module:

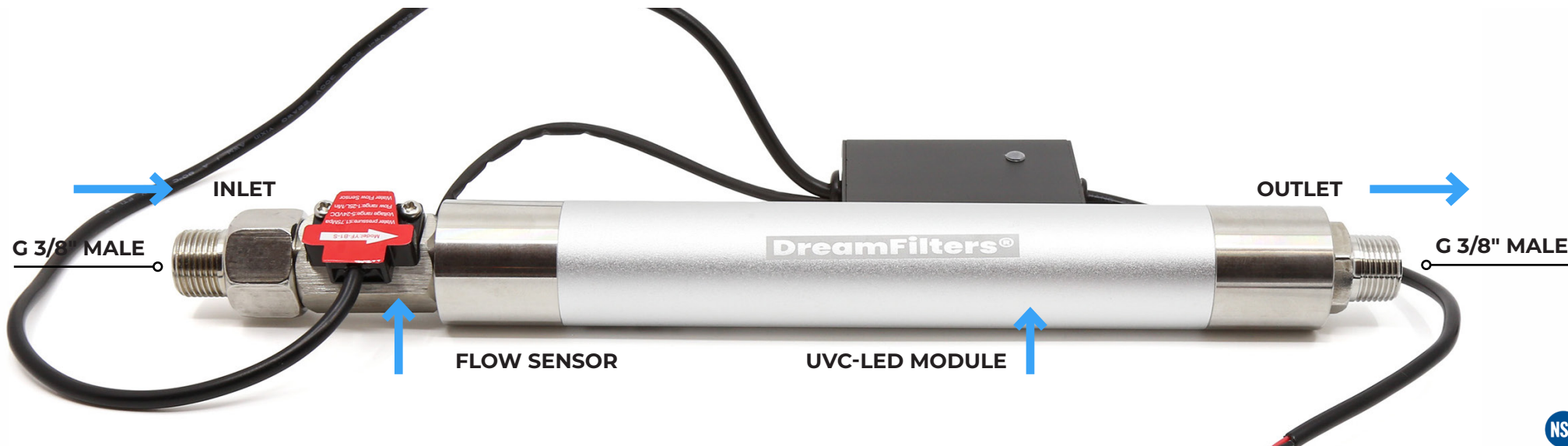
The user receives a pre-assembled UVC-LED module with an integrated water flow sensor. This version features G 3/8" male threads (BSP) on both the water inlet and outlet. This allows the module to be connected to the existing water system using suitable flexible hoses with compatible swivel nuts.

Secure the UVC-LED module in a suitable location using the two mounting clamps included in the package – ideally downstream of the water filter.

Connection of the Flow Sensor:

The flow sensor is already pre-installed and is located upstream of the UVC-LED module in the direction of water flow. It automatically activates the UVC LEDs when water flows through the device and switches them off when the water flow stops. Separate installation of the flow sensor is not required.

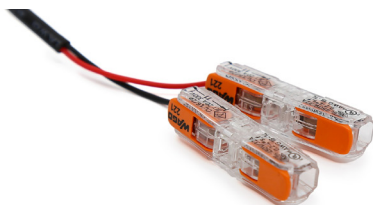
IMPORTANT: Always ensure the correct water flow direction during installation. Water must first pass through the flow sensor and then through the UVC-LED module. The flow direction is indicated by blue arrows in the illustration.



Electrical Connection:

The module can be connected directly to a suitable 12 V or 24 V DC power source (depending on the model).

Ensure correct polarity and protect the electrical circuit with a fuse where necessary. Alternatively, the module can be operated using a separate power adapter connected to a 230 V AC mains supply. Only use the power adapter recommended by the manufacturer, ensuring that it provides the correct output voltage and an appropriate protection rating.



DC 12/24 V

The cable is equipped with WAGO connectors, allowing quick and secure electrical connections, for example in motorhomes or campervans.

IMPORTANT!

Ensure correct polarity when connecting the wires.



AC 230 V

The power adapter allows the UVC-LED module to be connected to the mains power supply, making it particularly convenient for installations such as under a kitchen sink.

G 3/8" Threaded Connections of the UVC-LED Module



- a) Before installation, shut off the water supply and depressurize the water system. Connect the UVC-LED module using its G 3/8" male threads with suitable flexible hoses, compatible swivel nuts or appropriate adapters. Ensure that suitable seals approved for drinking water applications are used.
- b) Carefully tighten the connections without overtightening the threads. The hose connections must be installed without mechanical tension to prevent stress on the module or the flow sensor.
- c) After installation, turn on the water supply and carefully check all connections for leaks. Do not operate the device until all connections are completely leak-free.

NOTE: The UVC-LED module features G 3/8" male threads (BSP) on both the water inlet and outlet. If your water installation requires different connection sizes or additional adapters, please contact us. We will be happy to help you select the appropriate fittings.

Example of suitable flexible hose connections: G 3/8" swivel nut for connection to the UVC-LED module and G 3/8" male thread for connection to the water installation.

Operating Status of the UVC-LED Module

The UVC-LED module is equipped with three-colour LED indicators that inform the user about the current operating status:



RED LED: The red indicator lights up when the module is in standby mode.



GREEN LED: The green indicator lights up when water flows through the UVC-LED module and disinfection is taking place, indicating that the module is operating correctly.



ORANGE LED: The orange indicator lights up when the UVC-LED module is not functioning properly. This indicates that the module needs to be replaced.

Disinfection Performance Test Results at 15 L/min

Microbiological effectiveness confirmed by laboratory testing.
Test report: NBF24-0014096-01 – 99.99% reduction of the E. coli bacteriophage MS2 at a flow rate of 15 L/min.

Prüfobjekt(e): Test item(s)	Einheit(en): Unit(s)	Prüfverfahren: Test method(s)	Prüfergebnis(se): Test result(s)		Entfernungsrate (%): Removal rate (s)%
			Zulaufwasser (mit MS2 belastet) Influent spiked water	Ablaufwasser (sterilisiertes Wasser) Effluent sterilized water	
Escherichia coli-Bakteriophage MS2	PFU/ml	USEPA-Methode 1602 USEPA method 1602	1,9 × 10 ⁵	1	99,99 %

The microbiological effectiveness of the UVC-LED technology used in this device has been confirmed by laboratory testing. The test was conducted using the test organism Escherichia coli bacteriophage MS2 in accordance with USEPA Method 1602.

At a flow rate of 15 litres per minute, a 99.99% reduction of the MS2 test organism was demonstrated under the specified laboratory conditions. Actual disinfection performance may vary depending on water quality and operating conditions.

Technical Specifications:

Power Supply:	12/24 V DC; 230 V AC via a separate suitable power adapter
Rated Power:	12 W
On/Off Cycles:	30,000 switching cycles
Optical Output:	25 mW per LED
LED Service Life:	10,000 hours
Automatic Water Flow Detection:	Yes
Module Length incl. Flow Sensor:	295 mm
UVC-LED Module Diameter:	30 mm
UVC Wavelength:	260–280 nm
Laboratory-Tested MS2 Reduction at 15 L/min:	99.99%
Maximum Water Flow Rate:	15 litres per minute
Connections:	G 3/8" male threads (BSP) on inlet and outlet

Instructions for Use and Disposal:

This device is intended exclusively for water disinfection and must only be used in accordance with the specified technical requirements. It is not suitable for use with chemically contaminated or industrially polluted water.

At the end of its service life, the UVC-LED module must be disposed of in an environmentally responsible manner in accordance with applicable local regulations. Electronic components must not be disposed of with household waste.

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