

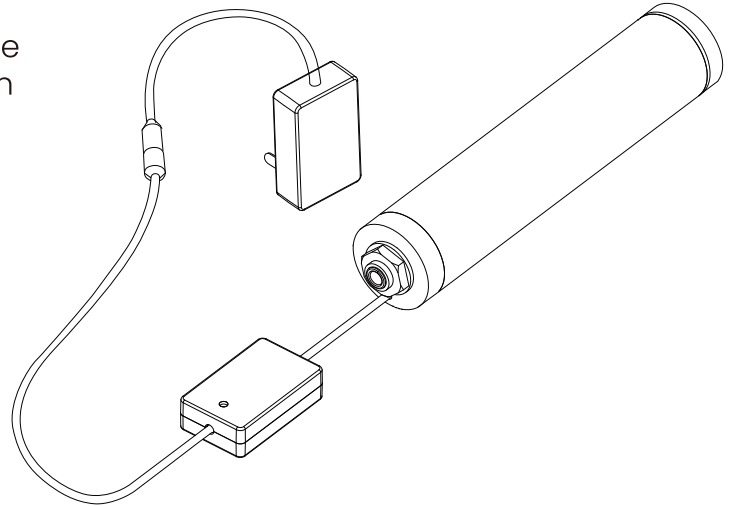
JOREVS UVC-LED WATER DISINFECTION SYSTEM

Model: INUV-UWD-4LC



Important Notice

Please read this user manual carefully before using the JOREVS UVC-LED Water Disinfection System. Keep this manual for future reference.



PRODUCT OVERVIEW

The JOREVS UVC-LED water disinfection system is a mercury-free, compact sized electronic product designed to provide efficient and eco-friendly water disinfection. Utilizing UVC light with a wavelength of between 270 nm to 280 nm, this device inactivates the DNA and RNA structures of microorganisms in the water flowing through it, and thereby making it safe for consumption. It is ideal for a wide range of applications, including drinking water, domestic water, aquariums, food and beverage processing, and more.

PRODUCT FEATURES

- **Efficient Sterilization:** Achieving up to a 99.999% disinfection rate by destroying microbial DNA/RNA under specific laboratory test conditions.
- **Broad Spectrum Sterilization:** Effective against bacteria and viruses, including pathogenic microorganisms in water.
- **No Chemical Residue:** Uses a physical disinfection process, avoiding chemical additives and ensuring safety for human health and the environment.
- **Mercury-Free Design:** Unlike traditional mercury lamps, UVC-LED eliminate the risk of mercury leakage, making the device safer and more sustainable.
- **Instant On/Off:** Provides immediate disinfection without preheating, enabled by UVC-LED technology with a flow sensor package for unlimited cycling.
- **High Durability:** UVC-LED offer a lifespan of over 30,000 hours, significantly outlasting traditional mercury lamps.
- **Stable Performance:** Maintains consistent disinfection under normal conditions, unaffected by temperature or humidity fluctuations.
- **Physical Protection:** Fully enclosed design prevents UV leakage, ensuring user and environmental safety.
- **Compact Design:** Small footprint and lightweight construction for easy integration into water treatment systems (e.g., water dispensers, coffee machines, humidifiers).

Table of Contents

(1) Cautions	1
(2) Product Parameters	2
(3) Product Diagram	4
(4) Dimensions	5
(5) Troubleshooting	6
(6) Instructions For Use	7
(7) UVC-LED For Water Disinfection	8
(8) Warranty & Customer Service	9
(9) Packing List	9
(10) Disclaimers	10

(1) CAUTIONS

The JOREVS UVC-LED water disinfection system produces harmful ultraviolet (UVC) radiation that can cause serious injury to eyes and skin. Adhere to the following precautions to ensure safe operation:



UV Exposure Risk:

- Do not look directly into the inlet or outlet ports while the device is powered on. Always wear UV-resistant safety glasses if exposure is necessary.
- UVC radiation can cause skin damage, including the risk of skin cancer. Wear protective clothing if under exposure risk.

Operational Safety:

- Do not operate the device without water flow, as this may damage the UVC-LED module.
- Ensure the device is connected to a stable water supply and water is flowing before powering on.
- Do not exceed the absolute maximum ratings outlined in this manual (see Technical Specifications).
- Operate the device with a water pressure range of 0.1 MPa to 0.3 MPa at the supply end, with a maximum pressure not exceeding 0.4 MPa.
- Consume treated water within 4 hours of disinfection for optimal quality.

Installation and Maintenance:

- Follow the installation and usage instructions strictly. Perform regular maintenance as outlined in this manual.
- Disconnect the power supply before performing any maintenance or servicing.
- The UVC-LED module must be replaced by qualified technicians once its accumulated operation time exceeds the rated service life (10 years under continuous use).
- There are no user-serviceable parts. Do not disassemble the device.

Environmental and Electrical Safety:

- Do not immerse the device in water or clean it with chemical solutions, acids, or alkaline cleaners.
- Keep the device away from heat sources and avoid placing heavy objects on it to prevent deformation or damage.
- Regularly inspect the power supply and device exterior for damage. If damage is observed, disconnect the power immediately and contact the manufacturer or dealer for repair or replacement. Do not attempt self-repairs.
- Do not install the device in areas exposed to direct sunlight.
- Keep the device out of reach of children—it is NOT a toy.

Compliance:

- Always comply with local plumbing and electrical codes during installation and use.

(2) PRODUCT PARAMETERS

No.	Specifications	
1	Model	INUV-UWD-4LC
2	Rated Flow Rate	4 L/min(1 GPM)
3	Water Pressure	0.1 MPa - 0.3 MPa (max 0.4 MPa)/14.5 psi-43.5 psi(max 60 psi)
4	Water Pipe Fitting	1/4 "
5	Power Adapter Input	100-240 V 50/60 Hz
6	Power Adapter Output	24 V, 1.5 A
7	UVC-LED Emission Wavelength	270 nm- 280 nm
8	UVC-LED Radiation Flux	70-100 mW
9	UVC-LED Lifespan	10 years (30,000 hours)
10	Exterior Material	Stainless Steel
11	Target Microorganisms	E. coli, among others
12	Disinfection Efficiency	(*) Up to 99.999% or 5.0 Log
13	Operating Temperature	5°C to 40°C (do not allow water to freeze inside the device which can result in permanent damage to the product)

(*) Disinfection efficiency may vary based on incoming water quality and lab test conditions, and should not be regarded as a guarantee when product is being used outside of lab test conditions.

The above test results are based on the following test conditions with test strain of Escherichia coli (8099), with 5×10^4 to 5×10^5 CFU/mL dechlorinated sterile test water

pH	7.5+0.5	turbidity	< 1.0 NTU	TDS	200 to 500 mg/L
UV transmittance	98+2%	temperature	20+2.5°C(68±5 °F)		

Recommended Operational Conditions

Parameter	Value	Unit
Power Adapter Input	110	Volt(AC)
Flow Rate	4(1.06)	lpm(gpm)
Water Pressure	0.1 ~ 0.3	MPa
Water Temperature	25(77)	°C(F)
Ambient Temperature	25(77)	°C(F)

Recommended Water Quality: Use with pre-filtered water. Do not use unfiltered liquids such as river, lake, or groundwater.

Absolute Maximum Ratings

Parameter	Min	Max	Unit
Operating Pressure	1.5(21.76)	7(101.52)	bar (psi)
Water Temperature	0(32) ⁽¹⁾	80(176)	°C(F)
Ambient Temperature	4(39.2)	60(140)	°C(F)

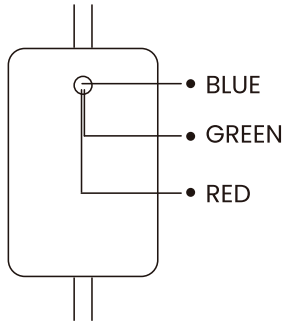
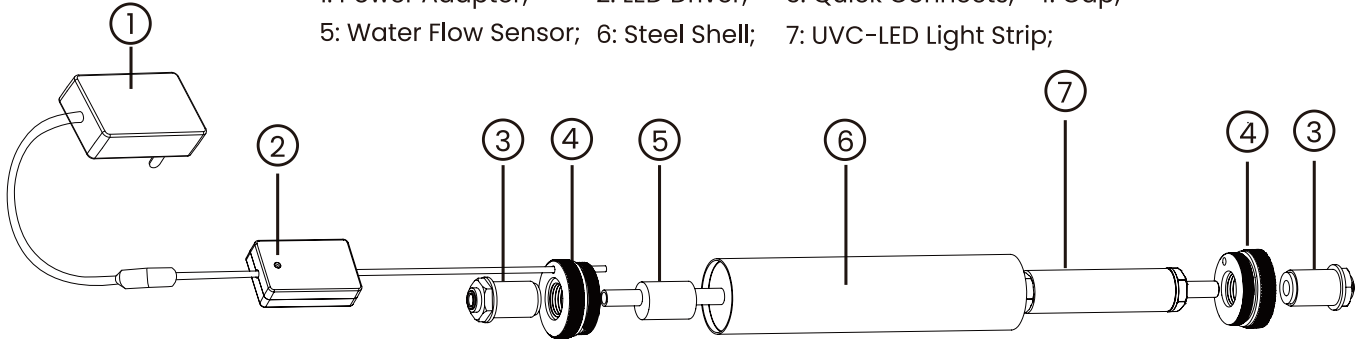
Operating the device outside these conditions may cause permanent damage.

Note: Do not allow water to freeze inside the device – risk of rupture.

Regulation/Guideline	Status
CE (EMC: 2014/30/EU Electromagnetic Compatibility Directive; LVD: 2014/35/Eu Low Voltage Directive)	Certified
ROHS2.0(RoHS 2.0 Directive 2011/65/EU Annex II (EU) 2015/863 as last amended by Directive (EU) 2017/2102.)	Compliant
REACH (EC No.1907/2006)	Compliant
ISO 9001:2015	Certified
Halogens(Fluorine, Chlorine, Bromine, Iodine)Content – IEC/EN61249-2-21:2003)	Compliant

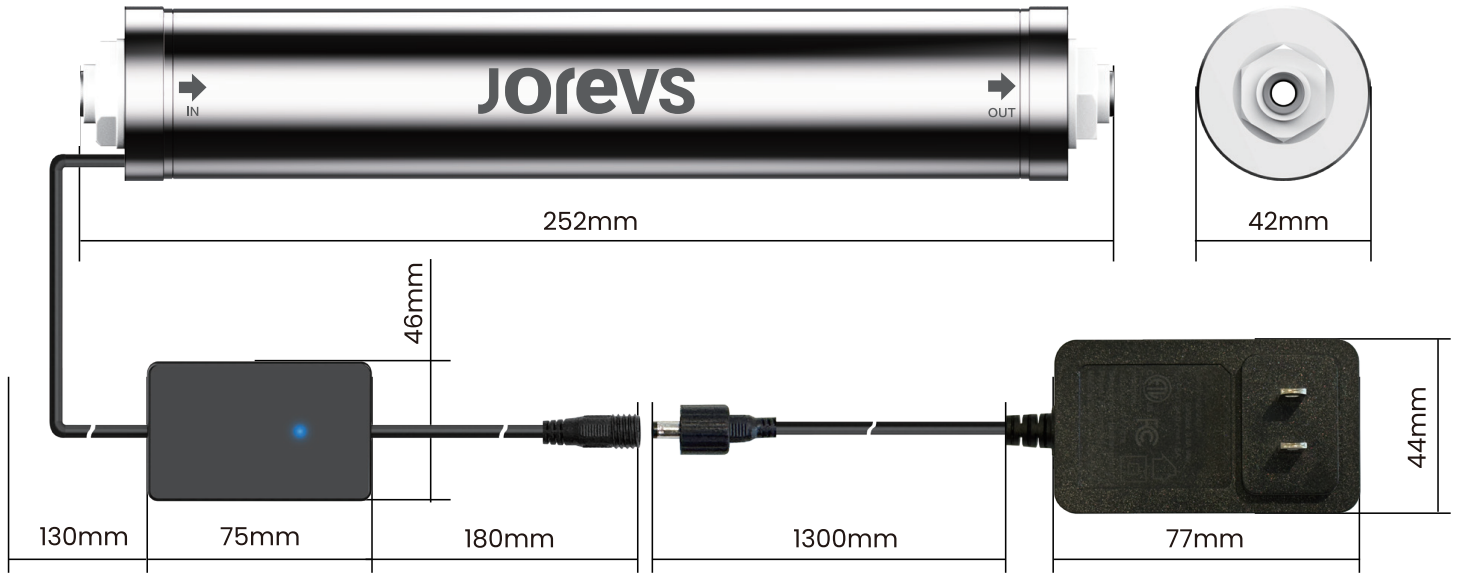
(3) PRODUCT DIAGRAM

1: Power Adapter; 2: LED Driver; 3: Quick Connects; 4: Cap; 5: Water Flow Sensor; 6: Steel Shell; 7: UVC-LED Light Strip;



- BLUE Power supply is on, no water flow, UVC-LED is off.
- GREEN The water module is working properly with water flowing. UVC-LED is on for water disinfection.
- RED LED fault—contact the manufacturer for support.

(4) DIMENSIONS



(5) TROUBLESHOOTING

Troubleshooting

Issue	Possible Cause	Possible Solution(s)
Device does not power on	Loose power connections.	Check if all electrical connections are secure.
	Low voltage or low current condition.	Verify input voltage is within recommended ranges.
Device shuts down intermittently	Device is overheating.	Ensure water is flowing before powering on.
Device is leaking	Unsecure plumbing connections.	Verify all connections are properly tightened.
	Improper connector sizing.	Ensure connector size matches unit's fluid Inlet/Outlet. Check metric vs Imperial units.

(6) INSTRUCTIONS FOR USE

Installation:

- Install the device in accordance with local plumbing and electrical codes.
- Connect the device to a pre-filtered water supply.
- Ensure the water pressure is between 0.1 MPa and 0.3 MPa (max 0.4 MPa).
- Securely connect the power adapter (24 V, 1.5 A) to a stable power source.

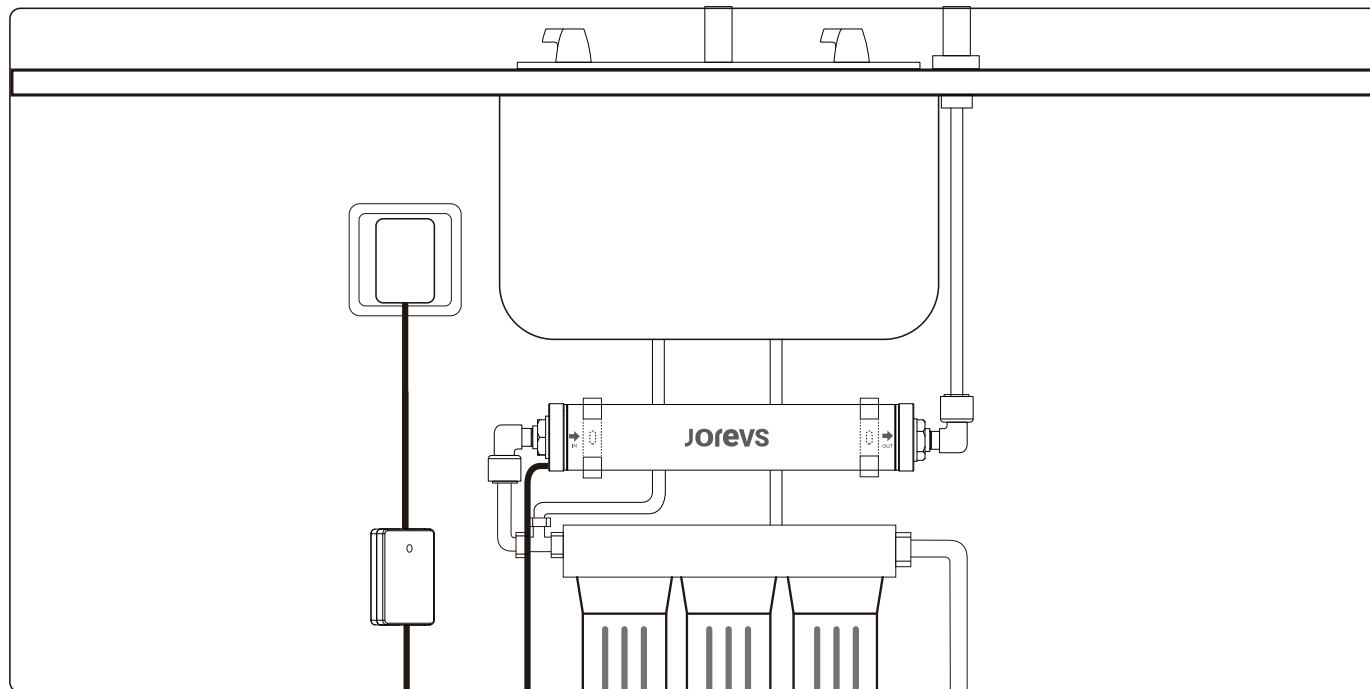
Operation:

- Turn on the water supply firstly and allow water to flow through the device before powering on.
- Power on the device. The green indicator should illuminate, indicating normal operation.
- Use the treated water within 4 hours for best quality.

Maintenance:

- Disconnect the power supply before performing any maintenance.
- Regularly inspect the device for signs of damage or water leakage.

Installation:



(7) UVC-LED FOR WATER DISINFECTION

UVC Water Disinfection

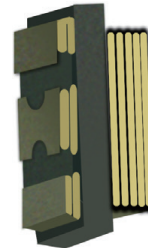
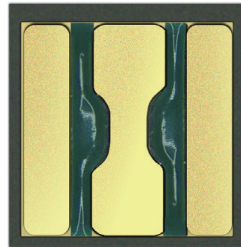
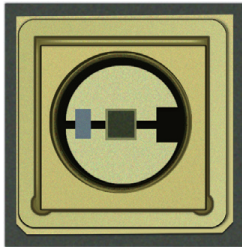
Ultraviolet (UV) water disinfection has gained prominence as a chemical-free water treatment method. UV light falls between visible light and X-rays on the electromagnetic spectrum, with the UVC range (270 nm - 280 nm) being most effective for disinfection. UVC photons penetrate microbial cells, damaging their nucleic acids (DNA/RNA) and rendering them incapable of reproduction, thus inactivating pathogens. This physical process ensures effective disinfection while leaving no chemical residues, making it safe for human consumption and the environment.

UVC-LED

UVC-LED technology represents a cutting-edge advancement in disinfection, utilizing light-emitting diodes (LED) to emit UVC light in the 270 nm to 280 nm wavelength range. Unlike traditional mercury-based UVC lamps, UVC-LED offer numerous benefits:

1. **Eco-Friendly Design:** UVC-LED are mercury-free, eliminating the risk of hazardous leakage and ensuring safe, sustainable operation.
2. **Instant Operation:** They provide immediate on/off functionality with no warm-up time, enabling efficient and convenient use.
3. **Long Lifespan:** With a rated lifespan of over 30,000 hours, UVC-LED outlast conventional lamps, reducing maintenance frequency.
4. **Compact and Versatile:** Their small size allows seamless integration into various systems, from household water purifiers to industrial applications.

The JOREVS UVC water disinfection product leverages this advanced technology to deliver reliable and environmentally friendly water sterilization.



(8) WARRANTY & CUSTOMER SERVICE

JOREVS provides 3-year warranty covering free returns and replacements for the UVC-LED Water Disinfection Product, ensuring customer confidence in the product's quality and performance. Simply contact our support team (**email: support@instauv.com**) for seamless service if any issues arise.

(9) PACKING LIST

No.	Product Name	Qty	Unit	Remark
1	UVC-LED Water Disinfection System	1	Unit	
2	24VDC 1.5A Power Supply Adapter	1	Unit	
3	Pipe Cutter	1	Piece	
4	1 ft, 1/4" White PE Pipe	2	Piece	
5	1 ft, 3/8" White PE Pipe	2	Piece	
6	1/4" To 3/8" Adapter	2	Unit	
7	1/4" To 3/8" Elbow	2	Unit	
8	1/4" To 1/4" Elbow	2	Unit	
9	Pipe Clamp	2	Unit	
10	Testing Report	1	Sheet	
11	Product Manual	1	Piece	

(10) DISCLAIMERS

The following disclaimers apply to the use of the JOREVS UVC-LED Water Disinfection products. Please read carefully to understand the limitations and safety considerations associated with this product:

1. Intended Use Limitation

This product is not designed for applications where its failure or misuse could result in death, personal injury, harm to animals, or environmental damage.

2. Professional Installation and Replacement

The JOREVS product must be sold, installed, and replaced exclusively by professionals in strict compliance with applicable safety and legal requirements. Unauthorized personnel are prohibited from disassembling or replacing the device.

3. No Health Protection Guarantee

JOREVS Limited does not claim or guarantee that the use of this product will protect users from, or prevent, infection or contamination by bacteria, protozoa, fungi, diseases, or illnesses. The effectiveness of disinfection depends on water quality and proper usage as outlined in this manual.

4. UVC Safety and Unauthorized Access

This device incorporates a high-intensity UVC disinfection module. Unauthorized disassembly is strictly prohibited. Direct exposure to UVC radiation can cause severe eye and skin injuries. Certified maintenance technicians must wear professional UV-protective goggles and gear during servicing.

5. Liability Limitation

Unless otherwise stipulated in a specific agreement regarding the sale, distribution, or provision of ultraviolet lamps, fixtures, or equipment, InstaUV Limited shall not be liable for any claims, damages, or losses arising from the use of UVC-LED modules, fixtures, or equipment beyond their intended purpose or in violation of the installation and operating instructions provided in this user manual or related documentation.

6. Water Leakage Protocol

In the event of water leakage, immediately disconnect the power supply, turn off the water source, and contact your local dealer or JOREVS's service. Repairs must be conducted by professional staff designated by JOREVS Limited. Unauthorized repairs are not permitted, and JOREVS Limited will not be liable for any damages, injuries, or legal responsibilities resulting from self-repair attempts or component damage caused by such actions.

7.UV-LED Safety Guidelines

For the purposes of this document, “UVC-LED” refers to any light-emitting diode that emits ultraviolet light with a peak wavelength shorter than 400 nm. The following safety guidelines must be followed when using JOREVS UVC-LED products:

- **Avoid Direct Exposure:** Do not look directly at UVC-LED during operation. The emitted ultraviolet (UV) light is intense and can cause eye damage, even with brief exposure. UV light is invisible to the human eye, so exposure may occur unnoticed.
- **Protective Gear:** Always wear UV-protective eyewear and clothing to prevent eye and skin exposure. UV light can cause skin damage, including an increased risk of skin cancer.
- **User Education:** Provide clear instructions, labels, and warnings to all intended users regarding the proper handling of UVC-LED and associated hazards. At a minimum, these must comply with the standards set forth by the International Electrotechnical Commission (IEC). Ensure that UVC-LED are used in a manner that prevents direct exposure to human eyes or skin.
- **Child Safety:** Keep products containing UVC-LED out of reach of children and untrained individuals.
- **Adherence to Instructions:** Strictly follow all safety instructions and warnings, including those outlined in the product specifications.
- **System Integration:** Users are responsible for providing adequate thermal management, electrical power, and safe mechanical integration as specified in this manual.
- **Risk Acceptance:** If the product or its components are used outside the specified or recommended conditions, the user assumes all risks for damages, injuries, or ineffective performance.

8.Company Acknowledgment

By using JOREVS UVC-LED products and components, the user acknowledges that all relevant officers and employees of their company have reviewed and understood the safety instructions and warnings provided in this manual. Furthermore, the user agrees not to hold JOREVS Limited or its partners liable for any damage, injury, or loss caused by the use, misuse, or mishandling of JOREVS UVC-LED products or components.

Jorevs