

UV-C LED Water Disinfection System

—MP-UVC-48LC



Mercury-Free, Instant-Start, High-Efficiency Water Disinfection

The MASSPHOTON UV-C LED Water Disinfection System features independently developed high-performance UV-C LED devices and a unique structure. It outperforms traditional mercury-lamp solutions with higher disinfection efficiency, better stability, and faster response. It redefines domestic and commercial water safety through Technology — from efficient disinfection and durability to easy installation and smart energy saving. The system meets the continuous high-flow disinfection needs of whole-house water purification, commercial water supply, and food processing, achieving 99.999% bacterial inactivation with zero maintenance and mercury-free safety.

Key Features

- **Safe: Mercury-Free UV-C LED Technology** Eco-Friendly, non-toxic, and compliant with global regulations.
- **Effective:** Achieves up to **99.999% Pathogen Reduction** (5.0 log) against bacteria, viruses, and microbes.
- **Efficient:** Up to **90% energy savings** with low power operation, reducing costs.

Product Overview

- Designed for disinfection, the MP-UVC-48LC uses **mercury-free UV-C LEDs** (270-280 nm) to deliver **up to 99.999% pathogen reduction**, ensuring safe, clean water. Every module undergoes **100% efficacy and water tight testing**, ensuring quality and durability.



Effective Disinfection



Low Maintenance



100% Efficacy Test



Intelligent



Easy to Install



Eco-Friendly & Energy-Efficient



Whole-House Central
Water Purification System



Public Direct Drinking Water
& Pipeline Systems



Food Processing
Water Lines



Central Kitchens
& Restaurant Chains



Hospital General
Water Systems



Laboratory Water
Circulation Systems



MASSPHOTON LIMITED

Semiconductor Ultraviolet Technology and Applications Expert



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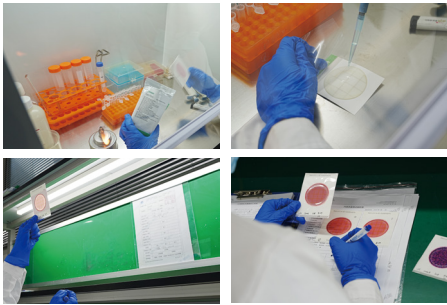
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Product Features

100% Disinfection Efficacy Test

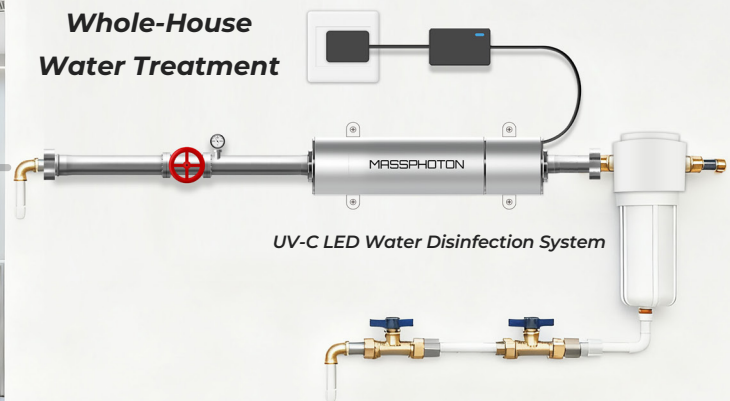


Control	5.7×10 ⁵ CFU/mL	3.6×10 ⁵ CFU/mL	3.1×10 ⁵ CFU/mL
Control Group Image(10,000 dilution)	57CFU	36CFU	31CFU
Test Group Image(Non Dilution)	0CFU	0CFU	0CFU
Test Summary	No E coli was detected in the experimental group samples	No E coli was detected in the experimental group samples	No E coli was detected in the experimental group samples

Disinfection Rate (%)		
First Test Value	Second Test Value	Third Test Value
>99.999%	>99.999%	>99.999%



Whole-House Water Treatment



Parameters	
Model	MP-UVC-48LC
Rated Flow Rate	48 L/min (12 GPM)
Water Pressure	0.1-0.8 MPa (Max 1.6 MPa)
Water Pipe Fitting	1"
Power Adapter Input	100~240 V 50/60 Hz
Power Adapter Output	24 V, 2.7 A
UV-C LED Emission Wavelength	270-280 nm
UV-C LED Lifespan	≥ 15,000 Hours
Exterior Material	Aluminum
Target Microorganisms	E. coli, among others
Disinfection Efficiency	(*) Up to 99.999% or 5.0 Log
Operating Temperature	5 °C to 40 °C
Product Dimensions	Φ70 mm * 338.5 mm (Φ2.8 in * 13.3 in)

(*) The actual disinfection efficiency subjects to the water quality.

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