

UV-C LED Water Disinfection Module

—MP-UVC-45LB



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

The MASSPHOTON UV-C LED Water Disinfection System leverages proprietary high-performance UV-C LED technology and an innovative structural design, delivering exceptional performance that surpasses traditional mercury lamp systems. Key advantages include:

- **Superior Disinfection:** Achieves up to 99.999% pathogen reduction, ensuring safe water.
- **Instant Activation:** No preheating required, enabling immediate startup for rapid response.
- **Stable & Reliable:** Optimized for consistent, long-term performance with minimal maintenance.
- **Eco-Friendly:** Mercury-free design eliminates toxic waste and supports sustainable water treatment.

Ideal for whole-house water purification, the system eliminates pathogens seamlessly at the main water inlet, providing comprehensive protection for all household water points, including kitchens, bathrooms, and laundry rooms. It offers a modern, efficient alternative to mercury-based systems, safeguarding against waterborne integrates with unmatched reliability.

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-45LB 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
Water Treatment



Catering and
Food Processing



Medical-Purified Water



Laboratory Water



Aquaculture and
Agriculture



MASSPHOTON LIMITED

Semiconductor Ultraviolet Technology and Applications Expert



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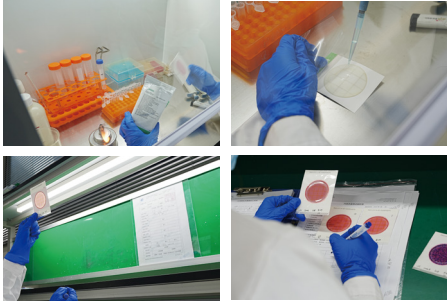


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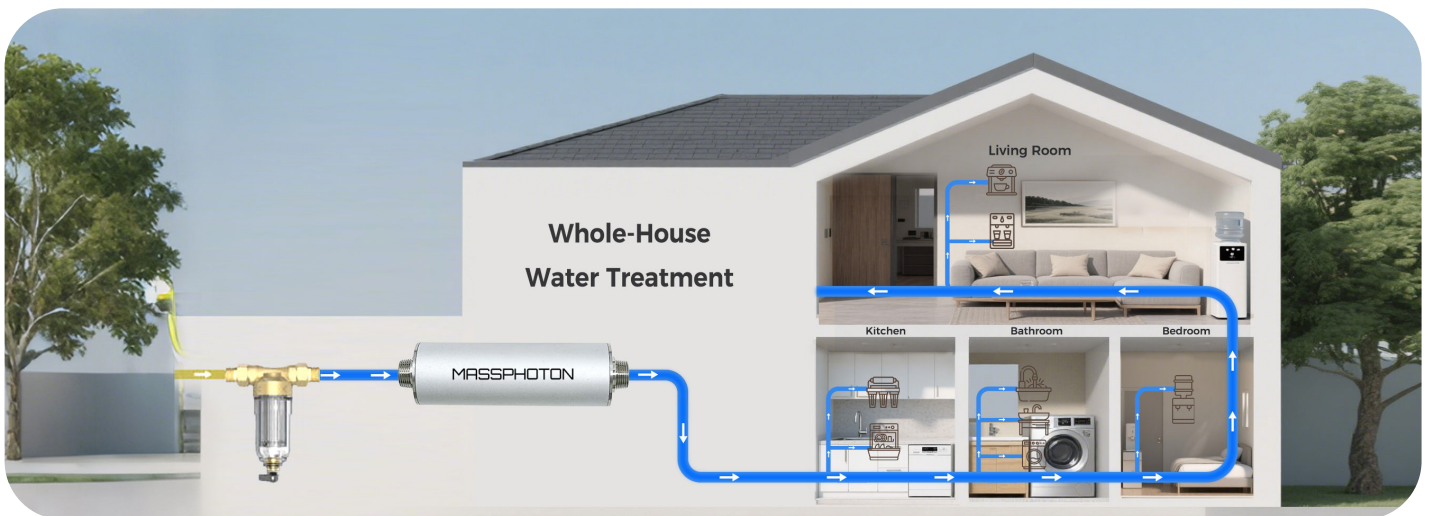
100% Disinfection Efficacy Test



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)			
Test Group Image(Non Dilution)			
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

SGS Test Report Factory Inspection and Testing Report Disinfection Efficacy Test Report Version: A.0			
Influent spiked water	Effluent filtrated water	*Removal rate(s) %	
5.7×10 ⁵	<1	>99.999	
Disinfection Rate (%)	First Test Value	Second Test Value	Third Test Value
	>99.999%	>99.999%	>99.999%

Applications



Key Product Parameters

Parameters	
Model	MP-UVC-45LB
Rated Flow Rate	45 L/min (12 GPM)
Power Adapter Input	100-240 V 50/60 Hz
Total Power	43 W
Power Supply Method	Adapert
UV-C LED Wavelength	270-280 nm
UV-C LED Lifetime	≥ 15,000 Hours
Disinfection Efficiency	Up to 99.999% or 5.0 Log Reduction (*)
Flow Switch	Optional
Water Pipe Interface Specification	1 Inch Thread
Inlet/Outlet Material	Stainless Steel
Maximum Inlet Pressue	0.8 MPa (120 psi)
Operating Temperature Range	5 °C to 40 °C
Product Dimensions	Φ70 mm * 253 mm (Φ2.8 in * 10 in)
Exterior Material	Aluminum

(*) 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 × 10⁴ to 5 × 10⁵ 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