

# UV-C LED Water Disinfection System

## —MP-UVC-4LC



### Compact Size • High Performance • Worry-Free Installation

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. Ideal and safer (mercury-free) for under-sink use, it kills 99.999% of bacteria with no need for maintenance.

### 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-4LC 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



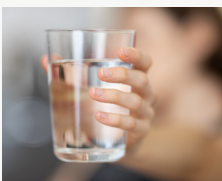
Intelligent



Easy to Install



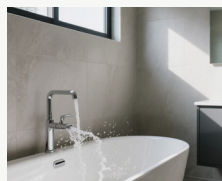
Eco-Friendly & Energy-Efficient



Daily Drinking Water



Kitchen



Bathroom



Catering Industry



Food and Beverage Processing



Medical and Laboratory Water



MASSPHOTON LIMITED

Semiconductor Ultraviolet Technology and Applications Expert



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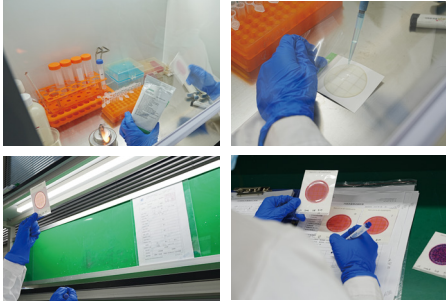


[info@massphoton.com](mailto:info@massphoton.com)



Unit 542, 5/F, Building 5W, Hong Kong Science Park

## 100% Disinfection Efficacy Test



|                                       |                                                          |                                                          |                                                          |
|---------------------------------------|----------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
| Control                               | 5.7×10 <sup>5</sup> CFU/mL                               | 3.6×10 <sup>5</sup> CFU/mL                               | 3.1×10 <sup>5</sup> 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 |

|                                                                                                                               |  |  |
|-------------------------------------------------------------------------------------------------------------------------------|--|--|
| <b>Disinfection Rate (%)</b><br>>99.999%<br>First Test Value Second Test Value Third Test Value<br>>99.999% >99.999% >99.999% |  |  |
| Version: A.0                                                                                                                  |  |  |

## Applications



## Key Product Parameters

| Parameters                         |  |
|------------------------------------|---------------------------------------------------------------------------------------|
| Model                              | MP-UVC-4LC                                                                            |
| Rated Flow Rate                    | ≤ 4 L/min                                                                             |
| Power Adapter Input                | 100-240 V 50/60 Hz                                                                    |
| Total Power                        | 5 W                                                                                   |
| Power Supply Method                | Adapter                                                                               |
| 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                        | Integrated                                                                            |
| Water Pipe Interface Specification | 1/4" Quick Connect                                                                    |
| Inlet/Outlet Material              | Food-Grade Plastic                                                                    |
| Maximum Inlet Pressure             | 0.4 MPa                                                                               |
| Operating Temperature Range        | 4 °C to 60 °C                                                                         |
| Product Dimensions                 | Φ42 mm * 252 mm                                                                       |
| Exterior Material                  | Stainless Steel                                                                       |

(\*) 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<sup>4</sup> to 5 × 10<sup>5</sup> 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 |