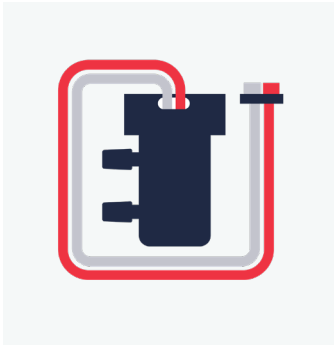
Klaran® WS Series Retrofit Kit

Plug and Play UVC LED Disinfection for Water Coolers and Dispensers



QUALITY DISINFECTION ON-DEMAND

Capable of providing 4 Log Reduction of pseudomonas aeruginosa at a flow rate of 2 liters per minute.

LONGER LIFE AND HIGHER RELIABILITY

On-demand Klaran UVC LEDs provide optimal useful lifetime, reduced energy consumption, and a replacement cycle that matches your business needs.

EASY AFTERMARKET INTEGRATION

Push fit water lines, AC wall plug adapter, and automatic flow detection make it easy to add on Demand UVC LED treatment to most dispensers.

Model Numbers

Model	Description
WS2-2T-EV	WS unit assembled with WR Reactor, 24VDC power input
WS2-2T-EV-UK	WS unit assembled with WR Reactor, UK power adapter supplied
WS2-2T-EV-EU	WS unit assembled with WR Reactor, EU power adapter supplied

Product Characteristics

Attribute	Unit
Size	158 x 93 x 55 mm
Flow rate	.5 – 2.8 Liters per minute
Inlet and outlet fittings	1/4" push fittings
Power options	UK or EU wall plug, or 24V DC input

Electrical Characteristics

Characteristic	Unit	Value	Note
Power Adapter Characteristics (Optional)			
Input voltage	VAC	90–230	
Wattage	W	12	
Cord length	M	1.5	
Plug configuration -UK		Type G Plug	
Plug configuration -EU		Type C Plug	
WS Unit Electrical Characteristics			
Barrel jack size	mm	5.5 x 2.1 Dia.	Female, plug size A
Unit voltage	VDC	24	
Unit amperage	A	0.4	Maximum
Power consumption (Stand-By)	mW	100	
Power consumption (UVC LED ON)	W	10	
LED indicator output header pins size	in	.1 x .1	
LED indicator voltage output	VDC	1.74	
LED indicator amperage output	mA	1.5	

Mechanical Characteristics

Characteristic	Unit	Value	Note
Major Dimensions	mm	158 x 93 x 55	
Inlet water fitting (Tube OD)	in	1/4”	Female Push-fit
Outlet water fitting (Tube OD)	in	1/4”	Female Push-fit
Pressure drop	kPa	15	At 2 LPM
Total internal water volume	mL	37.8	
Enclosure water resistance rating		None	
Maximum Ambient Temperature	C	40	
Mounting	40mm diameter filter clip included		

Inlet Water Specifications

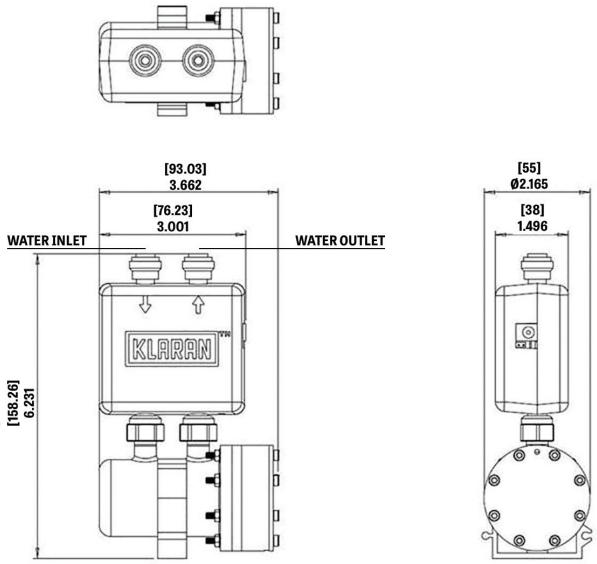
Characteristic	Unit	Value	Note
Flow rate range	LPM	.5 - 2.8	
Maximum pressure rating	PSI	100	
Minimum flow to trigger Disinfection On	LPM	.5	
Minimum UV Transmission	% / cm	95	
pH range		5.8 - 8.6	
Water Temperature Range	C	>1-50	Freezing must be prevented

** Inlet water should be filtered by an at least 5 micron or equivalent filtration cartridge before entering the Klaran WS unit.*

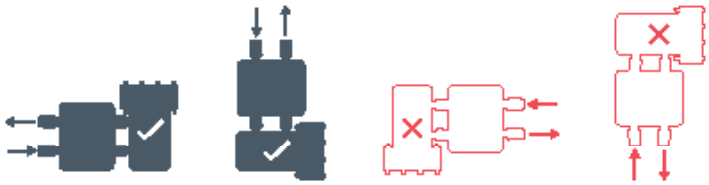
Biofilm Control Feature

Klaran validated UV pulsing protocol: Disinfection ON enabled for 2 minutes after 12 hours of continuous Stand-By time.

Mechanical Dimensions



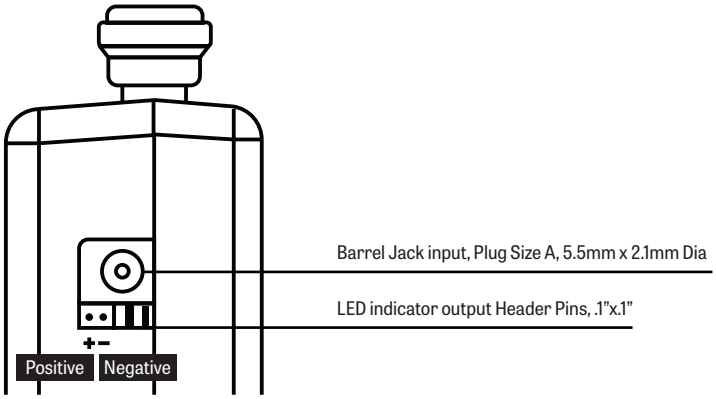
Installation Orientation:
Designs incorporating Klaran WS should use the reactor in one of the two acceptable orientations to ensure performance meets specifications. Failing to do so may result in inadequate disinfection performance or damage to the Klaran WS.



Correct Incorrect

All dimensions are in millimeters. Unless noted otherwise, all dimensions have a tolerance of ± 0.05 mm.

Electrical Connections Diagram



Indicator LED Output Logic

Status	Indicator LED Output
UVC Disinfection Off	LED Output off
UVC Disinfection On	LED Output 100%
End of Service Life, replacement required	LED Output blinking 1hz
Fault, restart required	LED Output blinking 5hz

Certifications

CE	RoHS

Packaging Contents

1X Klaran WS Unit
1X WR Unit (pre-installed)
1X LED on Wire Indicator
1X Product Manual
1X Mounting Bracket
1X #8 ¾" Self-drilling Screw
1X Klaran Sticker
Optional: 1X Power Adapter and Plug Fitting – Specified by Model Number Ordered

Packaging Dimensions

Contact Klaran for package, case, and pallet specifications

Handling and Operation Precautions

The Klaran WS is available for purchase, installation, and service by professional providers of water conditioning and plumbing systems and services. Klaran WS is not for consumer or stand-alone use and must be installed into a properly installed and operating water conditioning or plumbing system.

- The Klaran WS contains microelectronic components sensitive to shock, moisture, and operation in conditions beyond stated maximums. Care should be taken in handling the Klaran WS during shipping, handling, installation, and operation.
- The Klaran WS is ESD (electrostatic discharge) sensitive; static electricity and surge voltages seriously damage internal components and can result in product failure.
- Ensure that tools, jigs and machines being used are properly grounded and do not exert excessive force upon the Klaran WS.
- Dropping the product may cause damage. Drops from over 30 cm will cause permanent damage.
- Pre-filtration should be used before the Klaran WR that can assure inlet water is of sufficient quality to meet required specifications. Operating without pre-filtration may lead to a reduction of disinfection performance or damage to the Klaran WS.
- The Klaran WS should be filled with water during LED ON operation. Operating the Klaran WS dry for extended periods may cause permanent damage.
- The Klaran WS should be flushed with flowing water for a minimum of two minutes before use after initial installation or for any occurrences of electrical power loss longer than 12 hours.
- The Klaran WS should not be modified or disassembled in any way. Doing so may result in damage, hazardous operation conditions, and Ultraviolet (UV) light exposure hazards.

WE INVITE YOU TO LEARN MORE ABOUT OUR UVC LEDs.

KLARAN®

Crystal IS, Inc., an Asahi Kasei Company
70 Cohoes Avenue, Green Island, NY 12183
518.271.7375 | www.cisuvc.com | sales@cisuvc.com