

## Ultra Violet High Output (HO) Water Disinfection Systems

Model Number: UV151



### Applications

Davey UV151 High-Output UV water disinfection system is a safe and effective means of eliminating harmful bacteria from drinking water supplies. They can also be used for small scale waste water disinfection at reduced flow rates.

- No chemicals
- No by-products
- No taste
- Impossible to overdose

### Benefits of Microlene's UV Water Disinfection Systems

UV is a common practice used for water disinfection on a wide range of water sources. Used by many local councils, food, dairy and brewing industries, UV is a very effective means of ensuring water is safe for consumption.

The UV light generated by the lamp in a Microlene UV disinfection unit penetrates most micro-organisms present in the water supply, damaging their ability to reproduce and cause illness. Organisms exposed to UV are no longer viable to cause infection nor can they be counted on a culture plate.

Water treated by the Microlene UV systems should be very clean and free of particulate matter. This can be achieved by incorporating two stage pre-filtration down to one micron if used for drinking water supplies. Cysts such as Giardia and Cryptosporidium are best managed using this pre-filtration and disinfection process.

The Microlene UV system is designed to provide many years of reliable operation at an economical price. Suitable for potable water and food industry use, all wetted components are also USFDA listed.

The Microlene UV151 System is designed for continuous operation treating water up to 40°C. Provided the chamber is full of water, the unit can handle flows from zero up to the design flow rate, based on very good water clarity. If water clarity cannot be improved, flow should be reduced accordingly or a larger flow UV model selected.

The L shaped chamber design offers improved water flow characteristics and is manufactured from 316 stainless steel for cleanliness and durability, handling water pressures up to 860kPa.

The Microlene UV system can be installed horizontally or vertically and pipework should ensure that the chamber stays

full of water. If horizontal, the outlet should point upwards, if vertical the outlet should point horizontally. Mounting brackets are provided for easy installation.

### Pre-treatment (drinking water)

Pre-filtration is normally required to ensure particles do not shield micro-organisms from the UV light. Minimum sand filtration or 20 micron cartridge filtration is preferred. If cysts like Giardia or Cryptosporidium are present 1 micron filtration is required for drinking water taps.

### Product Features

- Available with integral lamp life monitor, with both audible and visual indication of lamp life
- Axial flow, 316 stainless steel polished chambers
- Visual sight port for "lamp-on" verification
- Designed & manufactured to ASME pressure vessel standards
- Flow rates stated at 95% UVT at a dose of 30mj/cm2
- True gland seal retaining nut with positive stop
- User friendly bayonet style lamp connector (quick ¼ turn removal with no extra tools needed)
- Reliable, industry proven, proprietary low pressure high output coated UV lamps with ceramic bases for durability and long life (10,000 hours)
- Constant current electronic controller (one controller for all systems) in a splash proof case, fully potted ballast virtually eliminates common water damage issue
- Audible & visual lamp failure indicators
- Tactile selector button

Technical data on following pages >

# Microlene UV Disinfection Systems

SPECIFICATIONS	
Model	UV151
Flow Rate 16mj/cm <sup>2</sup> @ 95% UVT	295 lpm
	78 gpm
	17.7 m <sup>3</sup> /hr
Flow Rate 30mj/cm <sup>2</sup> @ 95% UVT	151 lpm
	40 gpm
	9.1 m <sup>3</sup> /hr
Flow Rate 40mj/cm <sup>2</sup> @ 95% UVT	120 lpm
	31 gpm
	7.0 m <sup>3</sup> /hr
Port Size	1½" MNPT
Electrical Input	90-265V/50-60Hz. 1 phase 1A Max.
Plug Type	Australian/New Zealand, Standard male plug to suit standard 10A GPO in compliance with AS/NZS 3112, 3-wire for all 230V (MC-CONT-PC)
Lamp Power (Watts)	101
Power (Watts)	108
Replacement Lamp	UV151LAMP
Replacement Sleeve	UV151SLEEVE
Chamber Dimensions	8.9 x 103.4 cm (3.5 x 40.7")
Chamber Material	316L Stainless Steel, A249 Pressure Rated Tubing
Controller Dimensions	21.7 x 10.8 x 10.2 cm (8.6 x 4.2 x 4")
Operating Pressure	69 - 860 kPa (10 - 125 psi)
Operating Water Temperature	2-40° C (36-104° F)
UV Monitor	Upgrade available for use with upgraded controller MCXS-CONT (NOT available on UV24, UV57, UV80 UV models)
Solenoid Output	YES (optional solenoid module (DMMOD-SOL1) sold separately)
Dry Contacts	YES (remote alarm module (DMMOD-RAM) sold separately)
4-20mA Output	YES (4-20mA module (DMMOD-420) sold separately)
Temperature Mgmt. Valve	OPTIONAL (DM130034 sold separately) Recommended for any applications where ambient temperatures will regularly exceed 35°C
Cooling Fan	OPTIONAL (DM130014 sold separately)
Lamp Change Reminder	YES
Lamp Out Indicator	YES
Shipping Weight	9.6 kg (21.1 lbs)

## Conditions For Use

Your system will provide years of use provided the system is maintained on a regular basis as per the specifications outlined in the Installation & Operating Instructions. For the following system to perform as tested, the following water quality parameters must be met.

Parameter	Level
Hardness	< 120 mg/L (120 ppm)
Iron (Fe)	< 0.3 mg/L (ppm)
Manganese (Mn)	< 0.05 mg/L (ppm)
Tannins	< 0.1 mg/L (ppm)
Turbidity	< 1 NTU
Transmittance	> 75% UVT

## Waste-Water Application

Suitable for small scale waste-water disinfection at reduced flow rates.

Prerequisites:

Maximum discharge flow = 43 lpm UV151

Maximum BOD = 15ppm (Biochemical Oxygen Demand)

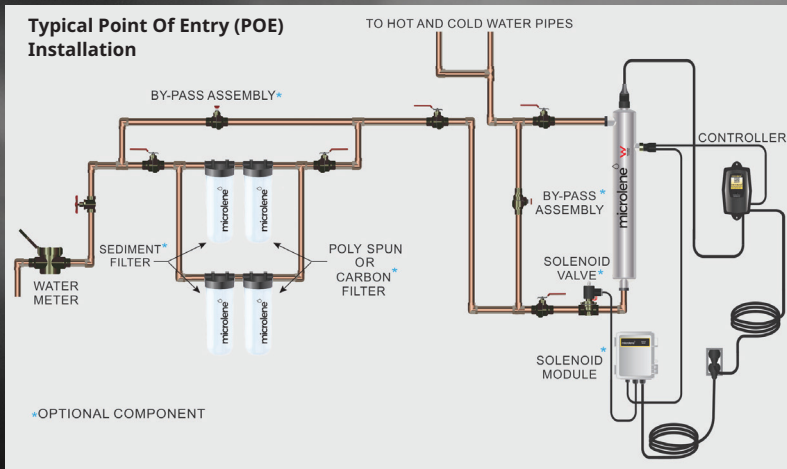
Maximum TSS = 15ppm (Total Suspended Solids)

Expected result of UV treatment if prerequisites are met:

<200 Faecal Coliforms per 100ml @ UVT >30%

## Warranty

Chambers	Ten (10) year Limited Warranty
Electronics	Three (3) year Limited Warranty
UV Lamps	One (1) year Limited Warranty
Quartz Sleeves	One (1) year Limited Warranty



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This literature is not a complete guide to product usage. All images provided in this document are for illustration purposes only. Further information is available from your Davey Dealer, Davey Support Centre and from the relevant product Installation and Operating Instructions. Must be read in conjunction with the relevant product Installation and Operating Instructions and all applicable statutory requirements. Product specifications may change without notice. © Davey and Microlene are registered trademarks of Davey Water Products Pty Ltd. © Davey Water Products Pty Ltd 2022.