UV-FORCE

SMARTCLEAN W Far-UV Tech

Continuous, Autonomous & Safe Surface Disinfection

MODEL#: UVFSC.12W

Module with Far-UVC activated.

SMARTCLEAN FAR-UVC MODULE SPECIFICATIONS

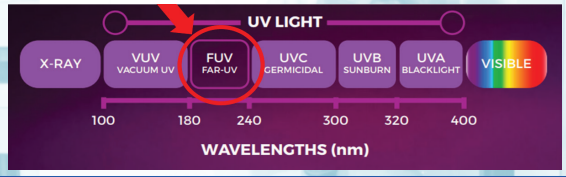
Working Dimensions 6" L x 9" W x 3" H Working Weight: 10 lbs
Shipping Dimensions: 10" L x 10" W x 10" H Boxed Shipping weight: 12 lbs
Turn the key to set the unit on for continuous automatic disinfection.
One 222nm Far-UVC lamp module delivers 100 mJ of disinfecting power to kill virus, bacteria and fungus during one standard cleaning cycle. Lamp is nano-filtered to just 222nm wavelength.
Completely safe with motion sensing controls to automatically deactivate the lamp when motion is detected. Peace-of-mind should someone be near or view the lamp.
Easily cleaned stainless steel housing.
Easy change lamp module with a 3,000 hour lamp life / Used daily = 1 year
Lamp replacement model # : UVFSC.RLMP.12W
Includes 3 ft. power cord for any standard 100 outlet.
Timed disinfection lowers operational costs.
Factory programmed for disinfection in occupiable but unoccupied spaces. Custom factory programming for other applications availabe
Mountable to any ceiling or wall surface. Mounting brackets sold separately
Shown here for use in our AnteRoom product but has a wide range ofeffective usages in healthcare, manufacturing, production and labratory environments.

Module powered-on and Far-UVC with cleaning cycle yet to be initaited

Auto motion sensing for safety and efficiency

Continuously disinfects using safe Far-UVC 222nm.

Far-UVC at 222 nm has a photon energy that is powerful enough to destroy the chemical bonds of pathogens and it is absorbed at higher levels for DNA and other proteins.



Under the microscope:

Pathogen inactivated by the Far-UVC 222 nm lamp.

Mercury-free lamp with instant-on effectiveness at a wide variance of temperatures.

Better regrowth prevention more signifcant reduction in some microbials than traditional mercury 254 UVC. Far-UVC is highly effective against C-Diff., coronavirus and others.

Most importantly: Several lab-tests, human trials and studies have confirmed that Far-UVC filtered to 222 nm is safe for exposure to human skin and eyes up to 1000 mJ.
UV-Force SmartClean with Far-UVC technology is filtered UVC light to exclude the more harmful UVC bandwidth that damage human skin and eyes.

SHOWN HERE MOUNTED IN THE HEPACART ANTEROOM

In the AnteRoom application, the SmartClean works in an autonomous cycle, providing hands off intelligent cleaning. The AnteRoom is used as normal.
Upon any motion inside the AnteRoom triggers the SmartClean to start the cleaning sequence and it will wait until it is safe to begin.

Once 8-hours of cycled cleaning is reached the unit will shut itself off and wait until motion triggers it again.
If at any point someone opens the door and enters, the unit will shut down and wait until the worker has exited for a safe start up cycle.

See more regarding dosage and effectiveness on reverse side.

HEPACART
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UV-FORCE SMARTCLEAN Far-UV Technology

Time and Dose:

The SmartClean's 8-hour cycled cleaning will provide 100mJ of germ-killing dose that will destroy most common viruses, bacteria, and spores. Based on lab-studies, **100mJ is twice the dose required to inactivate most common pathogens** including coronavirus, C-diff, measles, staph, tuberculosis and more.

Species		mJ dose for 3 log reduction
MRSA (Methicillin - Resistant *Staphylococcus aureus*)		15
Pseudomonas aeruginosa		8
Escherichia. coli O157		9
Salmonella Typhimurium		10
Campylobacter jejuni		4
Bacillus subtilis	Vegetative cell	7
Bacillus Cereus	Spore	**44**
Bacillus subtilis	Spore	**30**
Clostridum difficile	Spore	**30**
Candida albicans		24
Penichillium expansum		50
Aspergillus niger	Hypha	>1000
	Spore	>500
MS2		23
Feline Calicivirus		24

SmartClean AnteRoom:

Used in conjunction with the AnteRoom 48 Patient Access isolation module, the SmartClean provides autonomous, effective cleaning to all three AnteRoom walls and the entire floor. The 100mJ dose is the **minimum dose achieved everywhere** on the lower surfaces of the AnteRoom.

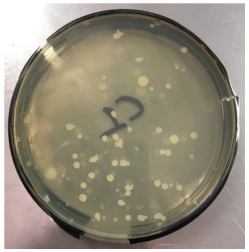
Test Results:

Two control swabs were taken from six different points inside of a HEPACART AnteRoom 48 Patient Access isolation model (pictured above) used frequently in a nearby facility.

Shortly after, the SmartClean autonomous cycle was initiated to deliver the dose of 100 mJ over 8 hours inside of the AnteRoom. Six different samples were taken from six different locations. The International Light Technologies ILT5000 Research Radiometer was used to validate dose rates and overall dose.

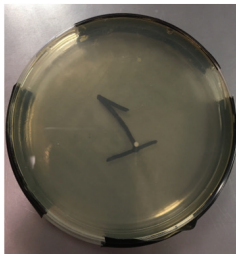
All plates were stored in a dark warm container with the control samples. The collected samples were counted at the 48- and 72-hour mark to determine cleaning effectiveness.

Control (no dose)



67 CFUs

Sample 100 mJ dose



2 CFUs

All showed similar results. The AnteRoom treated with the autonomous SmartClean prototype significantly inactivated a large number of pathogens found in the AnteRoom prior to treatment.

SmartClean will be providing this treatment and results on a daily basis as part of its cycle dosing of Far-UV nano-filtered at 222 nm.

Advantages of 222 nm

Bacteria Eradication

Multiple studies show that 222nm is more effective than conventional UV sources at certain types of bacterial eradication.

Spore Eradication

Studies show 222 light is more effective at eradicating most spores than 254nm.

Re-Growth Prevention

Studies of 222nm vs. conventional mercury lamps show more effective re-growth prevention and more significant reduction of microbials than 254nm.

Eco-Friendly

No mercury in 222nm means limited environmental impact and no issues with disposal. New mercury disposal and usage laws on the horizon that will make conventional UV lamps obsolete in the coming years.

Temperature

254nm lamps are very sensitive to the environment including heat and humidity. Temperatures colder than 20° C (or 68° F) and above 50° C (or 122° F) significantly reduce the effectiveness of the UV output and efficiency. At these temperatures, the microbial reduction capability is significantly reduced. 222nm lamps operate in much harsher conditions (from freezing temperatures and are not affected by humidity.

No Warm-Up Times: Instant On

222nm lamps achieve 100% output in less than a second while 254nm lamps start at50% output and take several minutes to achieve 100% output. This allows for quicker disinfection.

Potential for Occupied Spaces

222nm is presently used for unoccupied spaces. The nature of 222nm light and initial studies show that large doses of 222 pose less potential health risks to the skin and eyes. These studies are ongoing but 254nm is well documented to cause skin and eye damage.

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