

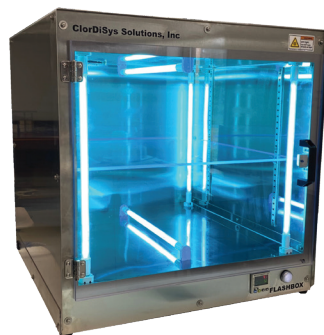


ClorDiSys

Infection Control from A to UV



Ultraviolet Light Disinfection



ULTRAVIOLET LIGHT DISINFECTION

Ultraviolet light is effective against a wide range of organisms

Ultraviolet light is able to provide high level disinfection of many viruses, bacteria, fungi and spores.

Ultraviolet light works quickly

High level disinfection occurs very quickly, allowing for fast treatment and turnover times of rooms, vehicles, and other spaces.

Ultraviolet light is easy to use

Ultraviolet light systems are extremely easy to use. Simple and quick to learn, the systems can be used within 5 minutes of opening the box.

Ultraviolet light is inexpensive to use

Ultraviolet light systems are extremely affordable to use, with each exposure costing only pennies. Our systems have no required maintenance costs and UV bulbs all have long lifespans to further decrease the cost of use.

Ultraviolet light does not leave residues

Ultraviolet light is chemical free and does not leave a residue after use. Once the light has turned off, the space is perfectly safe to enter and does not require any additional cleanup or waiting time.

No room preparation is needed

No sealing of doors, vents, or windows is necessary as UV-C light cannot shine through regular plastics or glasses.

The logo for ClorDiSys features a stylized 'CD' in green and blue, followed by the company name 'ClorDiSys' in a bold, dark blue sans-serif font.

CD ClorDiSys

ClorDiSys Solutions, Inc was established in 2001 in New Jersey by our founders who had developed chlorine dioxide gas sterilization technology while at Johnson and Johnson. We are a proud, woman owned small business focused on providing reliable, highly effective products and services along with excellent customer service. We provide personal attention to ensure customer satisfaction in all services and equipment we supply.

In 2014, we launched our line of ultraviolet light disinfection systems. We quickly found ourselves in the middle of the Ebola epidemic with our products being used at the Nebraska Biocontainment Unit upon discharge of Ebola patients and at various other hospitals and facilities around the world. In 2020 during the SARS-CoV-2 pandemic, our products helped disinfect N95 masks, EMS vehicles, patient rooms, testing centers, and many other areas within and outside of the healthcare environment. Our line of UV-C systems continues to grow and evolve to further support infection control efforts worldwide.

Room Scale UV-C Disinfection

TORCH™ and TORCH+™ Portable UV-C Disinfection Systems

the TORCH and TORCH+ are easily transportable, powerful disinfection systems designed to provide rapid and highly effective disinfection of surfaces, components, rooms and common touch points to reduce the transfer of pathogens.

the TORCH and TORCH+ contain eight high-powered UV-C lamps to provide quick disinfection times. They plug into standard wall outlets and produce an average UV-C output of $200 \mu\text{w}/\text{cm}^2$ ($12 \text{ mJ}/\text{cm}^2$ per minute) at an 8 ft distance to get a calculated 99% reduction of MRSA in seconds and C. difficile spores in minutes.

The TORCH+ provides the same quality results as the TORCH while featuring wireless iPad™ control and incorporates data logging of process parameters, UV-C dosage, operator name, room number, as well as time and date. Cycles can be set to run for a set amount of time, or until a target dosage has been met to provide flexibility and superior process control.



Specs

Overall Size: 23" W x 23" D x 68" H

Weight: 72 lbs

Power: 110-240VAC, 6 Amps

Bulb Lifespan: 16,000 hours

Average UV-C Dosage by Distance

Distance (ft)	Dosage per minute (mJ/cm ²)
2	41
4	23
5	19
6	18
8	12
10	8
15	3.5

Bulbs rated for
16,000 hour lifespan at max
UV-C output

Angled bulbs direct more
light towards the ceiling
where it is harder to provide
manual cleaning

No required
maintenance contracts

Local and remote controlled
cycle start

Delayed start to allow
for safe exit of a room once
start button has been
pressed



No center core allows for
360° coverage of all 8
high-powered bulbs

Variable length exposure
timer to optimize operation
and minimize room
turnover time

Tablet-based control with
real-time dosage monitoring
and automatic data logging
(TORCH+ Only)

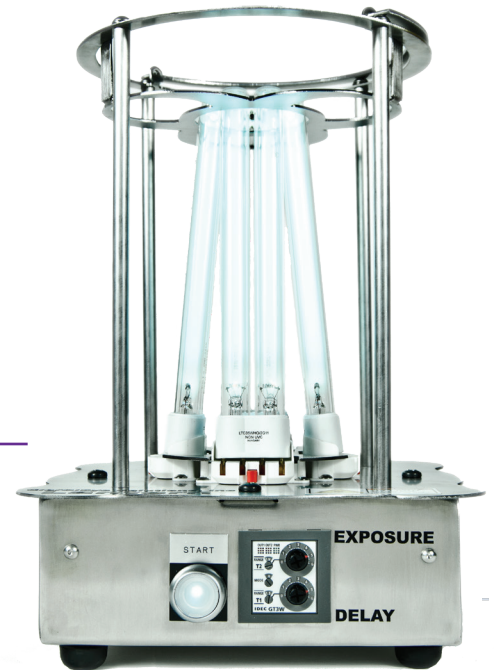
Operational costs below 2¢
per exposure

Motion sensors on all four
sides abort cycle when
activated, allowing for
safe operation

LANTERN™ Portable UV-C Disinfection System

The Lantern is an easily portable UV-C disinfection system which can be used in any setting. Originally designed for use within emergency response vehicles, the Lantern provides rapid and highly effective disinfection of smaller environments, surfaces and components to reduce the transfer of dangerous organisms. Larger areas can be disinfected with longer exposure times or by repositioning and running additional cycles, allowing for operation in any sized space.

The Lantern can be used in both the upright and inverted positions such that it can be hung from railings or hooks.



Specs

Size: 10" W x 10" D x 14" H

Weight: 12 lbs

Power: 115 VAC, 4 Amps

Bulb Lifespan: 9,000 hours



Average Dosage by Distance

Distance (ft)	Dosage per minute (mJ/cm ²)
2	25
4	8
5	6
6	4
8	2
10	1.35

LIGHTNING VOLT™ Portable UV-C Disinfection System



The Lightning Volt delivers the benefits of UV-C disinfection without the restriction of needing available power. Battery operated and easily portable, the Lightning Volt allows for added flexibility as it can be positioned anywhere. The Lightning Volt's 2.5 hour battery life can disinfect many different areas before needing to recharge as typical treatment times are only 2-5 minutes.

Applications Include:

- Elevators
- Vehicles/Trailers
- Bathrooms
- Rooms
- Coolers/Freezers

Specs

Size: 13.5" W x 24" L x 54.25" H

Weight: 150 lbs

Power: 115 VAC, 7 Amps

Bulb Lifespan: 9,000 hours

Average Dosage by Distance

Distance (ft)	Dosage per minute (mJ/cm ²)
2	50
4	16
5	12
6	8
8	4
10	2.7

Disinfection Chambers

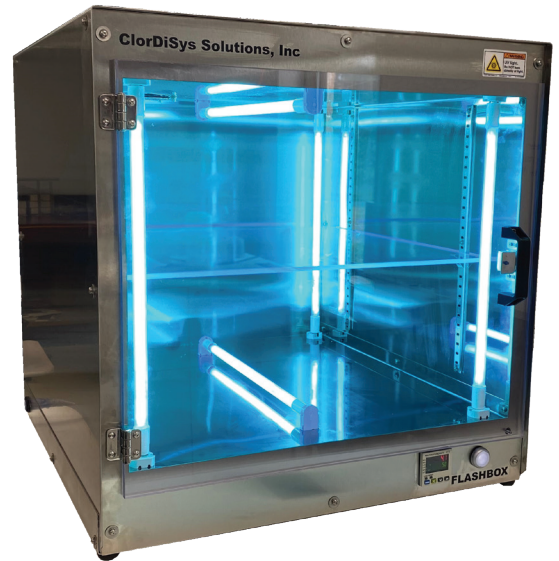
Flashbox™

UV-C Disinfection Chamber

The Flashbox is an easy-to-use UV-C disinfection chamber designed for use in any setting. It provides a rapid and highly effective method to disinfect laptops, tablets, blood pressure cuffs, stethoscopes, RFID tags, shared tools and equipment, masks, and other items. The Flashbox also offers a way to disinfect components without removing them from the room, helping to minimize cross-contamination.

The Flashbox contains a quartz glass shelf to support items. Quartz glass is unlike most materials as it permits UV-C to pass through rather than blocking it, allowing for complete disinfection of the surface resting on the shelf. For safety, the bulbs turn off if the door opens during a cycle. The Flashbox is ideal for entrances, security desks, nurses' stations, breakrooms, and other areas of congregation.

The Flashbox produces an average UV-C output of $1000 \mu\text{W}/\text{cm}^2$ ($60 \text{ mJ}/\text{cm}^2$ per minute) to get a calculated 99% reduction of MRSA in seconds and spores like *C. difficile* in a minute.



Specs

Useable Space: 18.5" W x 23" D x 14" H

Overall Dim.: 24" W x 24" D x 25.75" H

Power: 115 VAC, 2 Amps

Bulb Lifespan: 16,000 hours

Optional Second Shelf Available

Custom Sizes Available



Flashbox-mini™

Small UV-C Disinfection Chamber

The Flashbox-mini is a UV-C disinfection chamber used to disinfect items such as cell phones, remote controls, shared supplies, pens, electronics, masks and other small equipment. Similar to the Flashbox, it offers a way to disinfect items without removing them from the room. The Flashbox-mini contains one quartz glass shelf to support items and allow for complete disinfection of all visible surfaces. It includes a safety switch which turns the bulbs off if the door opens during a cycle. The Flashbox-mini is ideal for entrances, security desks, nurses' stations, NICU's, breakrooms, and other areas of congregation.



Specs

Useable Space: 12" W x 6" D x 5" H

Overall Dimensions: 14" W x 8" D x 9" H

Power: 115 VAC, 0.5 Amps

Bulb Lifespan: 11,000 hours



The Flashbox-mini is preset to deliver a 30 second disinfection cycle every time the Start button is pressed. It delivers an average UV-C dosage of 60 mJ/cm², capable of providing a greater than 99.9% reduction of most viruses, bacteria, and spores.

Passthrough Chamber

Flash-Thru™

UV-C Passthrough Disinfection System

The Flash-Thru is a UV-C disinfection passthrough chamber offering a controlled way to disinfect items entering a room. Typically needing only 30 seconds to provide high-level disinfection, the Flash-Thru allows a chemical-free way to disinfect supplies and tools entering a critical environment. The Flash-Thru contains a quartz glass shelf to support items and allow for complete disinfection of all visible surfaces. It utilizes a digital timer to set the disinfection time, and includes a safety switch which turns the bulbs off if the door opens during a cycle.



Specs

Useable Space: 14" H x 23" D x 18.5" W

Overall Dim.: 25.75" H x 24" D x 24" W

Power: 115 VAC, 2 Amps

Bulb Lifespan: 16,000 hours

Optional Second Shelf Available



The Flash-Thru outputs over 1000 $\mu\text{W}/\text{cm}^2$ (60 mJ/cm^2 per minute) to get a calculated 99% reduction of MRSA in seconds and spores like *C. difficile* in minutes.

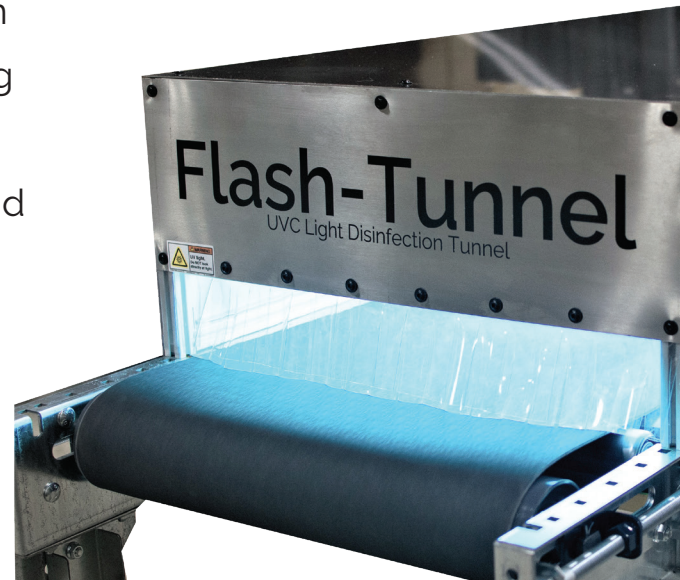
Flash Tunnel™

UV-C Conveyor Disinfection System

The Flash Tunnel offers a continuous, conveyor based method of disinfecting items entering a critical care area. This chemical and liquid-free disinfection process allows for the quick disinfection of incoming supplies, electronics, and other sensitive items. The Flash Tunnel is customizable to fit your time, size, and speed requirements.

Specs

- Useable Space: Customizable
- Power: 115 VAC, 15 Amps (Typical)
- UV-C Intensity: Customizable



UV-C Sensor

Our UV-C Sensor allows for the continuous monitoring of UV-C intensity during a disinfection cycle. The UV-C Sensor reads intensity and provides a cumulative dosage that is being exhibited at that distance. The operator and room number can also be entered for documentation purposes. These values, along with the corresponding time and date stamp, are saved via USB drive so that the data file can be used for infection control and housekeeping logs.



Specs

Sensor Box

Overall Size: 13.5" W x 6" D x 12" H

Sensor

Overall Size: 3.25" W x 2.5" D x 4.75" H

UV-C Light Fixtures

Flashbar™

UV-C Light Fixture

Ideal for Operating Rooms, the Flashbar is a UV-C light fixture which can be mounted onto a ceiling or wall to disinfect the surrounding area. It provides a cost-effective method of providing routine disinfection of surfaces, beds, tools, and anything else within the space.

Flashbars can be wired to a switch for simple operation, controlled by timers, or connected to more sophisticated systems utilizing motion sensors and other advanced control mechanisms.

Flashbars can be mounted within rooms to provide routine disinfection when unoccupied, or can help turn a room into a disinfection or passthrough room.

The Flashbar is available in multiple sizes and styles, from 18" to 48" and can utilize 1, 2, or 4 bulbs in its design depending on your application and requirements.



Specs

Overall Dim.: Varies by model
Power: 115 VAC, amperage varies
Bulb Lifespan: 13,000 hours
UV-C Intensity: Varies by model

Flashbar Dosage by Distance*

Distance (ft)	Dosage per minute (mJ/cm ²)
2	48.5
4	21
5	15.25
6	11.25
8	5.5
10	4

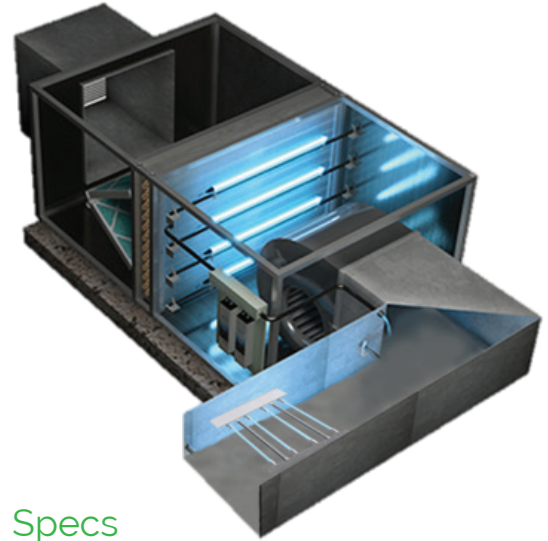
*2-bulb, 48" model data shown

AirGlow™

HVAC Disinfection System

The AirGlow is an in-duct UV-C disinfection system that can be installed into any HVAC system to reduce and/or eliminate the growth and spread of bacteria, mold, spores and other airborne pathogens.

When used on cooling coils, the AirGlow reduces biofilms that can accumulate over time. Biofilms are known to increase static pressure and cause the HVAC system to work harder and less efficient. Clean coils can deliver a 30% increase in cooling capacity which in turn reduces energy consumption and costs.



Specs

Overall Dimensions: Varies by model
Power: 115/230 VAC
Bulb Lifespan: 13,000 hours (541 days)

Torch Aire-Recessed™

Room Air Disinfection System

Ideal for surgical suites, waiting areas and other common areas, the Torch Aire-Recessed is a UV-C room air disinfection system. Designed to replace a standard ceiling tile, it installs easily to help reduce airborne pathogens. Air is drawn into the fixture, filtered and disinfected within the center chamber. This design prevents UV-C exposure to those in the room by restricting light from passing into the occupied room, making it safe for people to be present at all times.



Specs

Overall Dim.: 46.625" L x 22.125" W
Power: 115 VAC, 4.2 Amps
Airflow: 210 ft³/minute
Bulb Lifespan: 10,000 hours (416 days)

UV-C Efficacy Chart

UV-C is effective against a wide variety of organisms. Below are UV-C dosages required to achieve both a 2-log (99%) and 3-log (99.9%) reduction of some of the most common pathogens.

Dosage (mJ/cm²) Required to Achieve a:

Target	99% Reduction	99.9% Reduction
<i>Aspergillus Niger</i>	264	396
C. Diff Spore	12	18
<i>E. Coli</i> O157:H7	4.7	5.5
<i>E. faecalis</i> ATCC 51299 (VRE)	7.5	13
<i>Hepatitis A</i>	9.8	15
<i>Influenza</i>	6.8	10.2
<i>Legionella pneumophila</i>	5	6.9
<i>Mycobacterium tuberculosis</i>	12.4	18.6
MRSA	6.4	9.6
<i>Norovirus</i>	16	22
<i>Penicillium expansum</i>	26	39
Poliovirus 1	17	28
<i>Pseudomonas aeruginosa</i>	11	16.5
<i>Salmonella enteritidis</i>	8	12
SARS-CoV-2	5	Not Tested
<i>Shigella dysenteriae</i>	4.4	6.6

References available upon request

What is UV-C Effective Against?

UV-C has been proven effective against a broad spectrum of microorganisms. Viruses contain RNA or DNA and are thus susceptible to irradiation. Bacteria and fungi both contain DNA and are similarly vulnerable to UV-C light. Spores are also susceptible to UV-C. With the longstanding use of UV-C for disinfection, there is a plethora of information regarding dosages necessary to inactivate different microorganisms. Bacteria are generally easier to inactivate than viruses, with fungi and spores being even harder to inactivate with UV-C. Please contact us for more information.

Safety

As UV-C provides radiation, it is not safe to be in the room while UV-C disinfection is taking place. UV-C is classified as "reasonably anticipated to be a human carcinogen" by the National Toxicology Program. It presents a hazard to skin and eyes, so direct exposure to UV-C is always to be avoided. UV-C is blocked by a number of materials, including glass (but not quartz glass) and most clear plastics, so it is possible to safely observe a UV-C system if you are looking through a window. UV-C provides residue free disinfection, so there is no concern over dangerous residues that need to be wiped down or neutralized after the disinfection occurs. The process is environmentally friendly in that there are no dangerous or toxic chemicals that require specialized storage or handling. Since no chemicals are added to the air/water, there are no process byproducts to be concerned with, making the system a green alternative to chemical disinfectants.

Benefits

While there are definite limitations to UV-C disinfection technologies, there are many benefits as well. Disinfection times are fast, which allows for extremely quick turnover times for rooms or other spaces being disinfected. Due to its simplicity, UV-C disinfection is extremely easy to understand. All surfaces within a certain distance will observe an assured level of disinfection in a certain amount of time as long as the light is not blocked from shining on that surface. It becomes very easy to plan the use of a UV-C disinfection system when the parameters and limitations are easily established and understood.

There is no need to establish air flow patterns with UV-C as you would with a fogging system. Nor is there a need to isolate rooms from HVAC systems or seal doors. This, along with the lack of chemical mixture, makes the preparation time quick to setup and start a UV-C disinfection cycle.

The cost to run UV-C systems is very low, as systems are powered by regular wall outlets. With that, a typical UV-C treatment costs under 2 cents. UV-C systems also require little maintenance and upkeep due to their simplistic nature. UV-C bulbs last thousands of hours at their peak output, limiting the need for routine consumable change out and maintenance.

Applications

UV-C light can safely be used for a variety of disinfection applications. Systems are available to disinfect rooms and high touch areas, ambulances and other emergency service vehicles, ductwork, tools equipment inside a disinfection chamber, continuous UV-C passthrough conveyors, and many other applications. It has long been available for Biological Safety Cabinet disinfection and home water treatment as well.

Simple

All of our UV-C products are easy to operate and can be used out of the box within minutes.

Affordable

Our UV-C systems are affordable to purchase and even more affordable to use, with each exposure costing only pennies. Our systems have no required maintenance costs and UV-C bulbs all have long lifespans and low replacement costs.

Reliable

All of our products are made with high quality components and construction to offer long lasting, reliable disinfection.

Safe

Our UV-C products incorporate various safety features to protect users and nearby personnel including motion sensors, delay timers, and emergency stops.

High-level disinfection
without the high-level price tag



The TORCH



The Lantern

CD ClorDiSys

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