



# ClorDiSys

Infection Control from A to UV



## Ultraviolet Light Disinfection

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Equipment and Services



# Benefits of Ultraviolet Light

## Ultraviolet Light is effective against a wide range of organisms

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

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## Ultraviolet light works quickly

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

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## Ultraviolet Light is easy to use

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

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## 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.

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## Ultraviolet Light does not leave residues

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

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## No room preparation is needed

Ultraviolet light is unaffected by temperature, pressure, or humidity level. No sealing of doors, vents, or windows is necessary as UV-C light cannot shine through most plastics or glasses.

# ClorDiSys Solutions, Inc

ClorDiSys Solutions, Inc. was established in 2001 in Lebanon, NJ 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, where we quickly found ourselves in the middle of the Ebola epidemic with our products being used on patient rooms at the Nebraska Biocontainment Unit upon discharge of Ebola patients and also at various other hospitals and facilities around the world. Our line of UV systems continues to grow and evolve to further support infection control efforts worldwide.



# the TORCH and TORCH+

## Portable UV Disinfection Systems

the TORCH and TORCH+ are inexpensive, easily transportable, powerful disinfection systems designed to provide a rapid and highly effective method to disinfect surfaces, components, room surfaces and common touch points to reduce the transfer of dangerous organisms.

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 efficient UV-C output of 12 mJ/minute ( $200 \mu\text{w}/\text{cm}^2$ ) to get a calculated 99% reduction of MRSA in seconds and Clostridium difficile spores in minutes.

The TORCH+ features wireless tablet control and incorporates data logging of Parameters, UV Dosage, Operator Name, Room Number, as well as time and date. Run records are automatically emailed for documentation of the disinfection process as part of your Infection Control program. ClorDiSys can also provide a weekly or monthly report generation service (optional).



### Specs

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

Weight: 72 lbs

Power: 110-240VAC, 6 Amps

### Time required for 99% reduction\*

Organism	Time
Bacillus anthracis	1 min
Escherichia coli	1 min
Klebsiella pneumoniae	2 min
Mycobacterium tuberculosis	2 min
Pseudomonas aeruginosa	2 min
Staphylococcus aureus	1 min
Hepatitis A	2 min
Influenza	1 min
Poliovirus 1	2 min

\*within 10 ft distance

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 support 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, automatic data logging and email capability (TORCH+ Only)

Operational costs below 2¢ per exposure

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

## Portable UV Disinfection System

The Torch-Flex is an easily transportable, ultraviolet light (UV-C) generator designed to provide a rapid and highly effective method to disinfect items and surfaces to reduce the transfer of dangerous organisms. The Torch-Flex provides UV-C from a flexible arm in order to highlight certain surfaces or items that are more difficult to reach with traditional cleaning methods or other ultraviolet light disinfection systems.



### Specs

Overall Size: 12" W x 18" D x 46" H

Weight: 20 lbs

Power: 115 VAC, 60 Hz, 4 Amps

Flex arm rotation: 200°



The Torch-Flex produces an efficient UV-C output of  $180 \mu\text{w}/\text{cm}^2$  to get a calculated 99% reduction of MRSA in seconds and *Clostridium difficile* spores in minutes.

## Portable UV Disinfection System



The Lantern UV Disinfection System is an easily transportable UV-C generator with emphasis on use within emergency response vehicles. It is used to provide a rapid and highly effective method to disinfect surfaces and components to reduce the transfer of dangerous organisms.

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

The Lantern produces an efficient UV-C output of 9 mJ/minute ( $150 \mu\text{w}/\text{cm}^2$ ) to get a calculated 99% reduction of MRSA in seconds and Clostridium difficile spores in minutes..



## Portable UV Disinfection System

The TORCH-Aire Disinfection Tower is an inexpensive, easily transportable, powerful disinfection system designed for use in any healthcare, laboratory, or research setting. It is used to provide a rapid and highly effective method to disinfect the room air of hazardous organisms. Since the bulbs are shielded, the unit can operate around the clock even with people present. The TORCH-Aire contains two high powered UV-C lamps, plugs into regular wall outlets, and operates almost silently.



### Specs

Overall Size: 12" W x 12" D x 70" H  
Power: 115 VAC, 2 Amps

The TORCH-Aire provides a dosage of  $13.8 \text{ mJ/cm}^2$  ( $230 \text{ } \mu\text{W/cm}^2$ ) during each pass through the interior chamber to supply a 99.99% reduction of most viruses and bacteria.



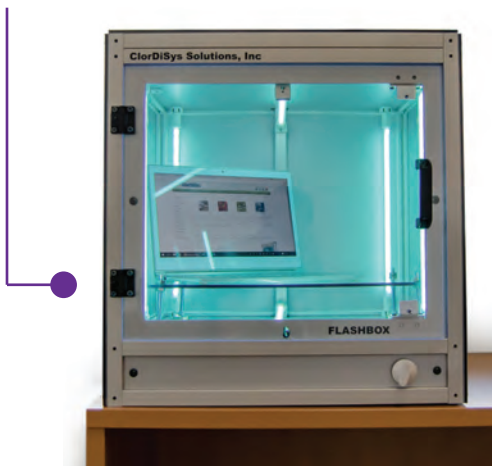


# Flashbox and Flashbox-mini

## UV Disinfection Chambers

The Flashbox and Flashbox-mini UV Disinfection Chambers are easy to use and provide a rapid and highly effective method to disinfect laptop and tablet computers, keyboards, phones, remote controls, miscellaneous electronics and components to reduce the transfer of dangerous organisms. It also offers a way to disinfect components without removing them from the room, which helps minimize the chance for cross-contamination. The Flashbox and Flashbox-mini both contain 1 shelf to support items being disinfected and simply plug into any standard 120v wall outlet.

Flashbox



### Specs

Overall Size: 22.5" W x 22.25" D x 23.5" H

Usable Size: 17.5" W x 17.5" D x 14" H

The Flashbox produces an efficient UVC output of 60 mJ/cm<sup>2</sup> (1000 μW/cm<sup>2</sup>) to get a calculated 99% reduction of MRSA in seconds and Clostridium difficile spores in minutes..

Flashbox-mini



### Specs

Overall Size: 14.5" W x 11" D x 8.25" H

Usable Size: 9.75" W x 8.5" D x 4" H

The Flashbox-mini produces an efficient UVC output of 30 mJ/cm<sup>2</sup> (500 μW/cm<sup>2</sup>) to get a calculated 99% reduction of MRSA in seconds and Clostridium difficile spores in minutes.

# UV Sensor and Other Products

## Data Logging UV Sensor

Our UV Sensor allows for the continuous monitoring of UV-C intensity during a disinfection cycle. The UV Sensor reads UV-C intensity and provides a cumulative UV-C dosage that is being exhibited at that distance. The 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

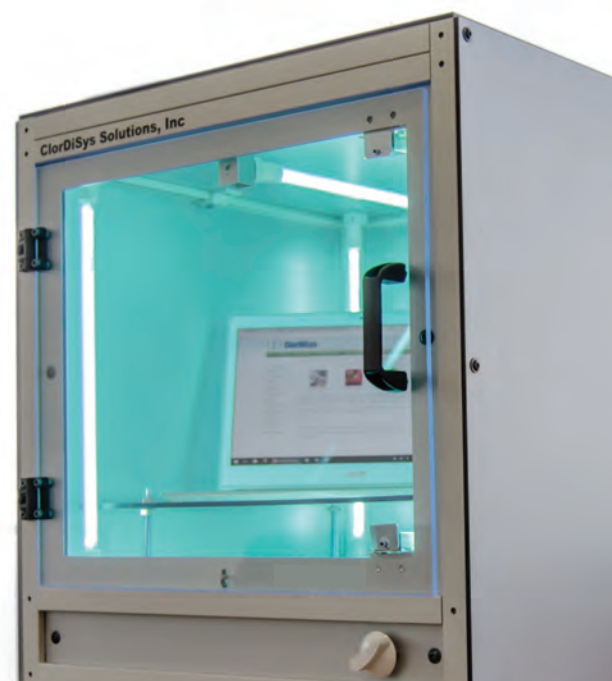
Overall Size: 13.5" W x 6" D x 12" H

#### Sensor

Overall Size: 6" W x 9" D x 9" H

## UV Tunnel and Passthrough Box

Our UV Tunnel and Passthrough Boxes allow for the disinfection of items being brought into a clean area. Our Flashthru-Tunnel offers continuous disinfection of items, while our Flashthru-Box provides batch disinfection. Both can be made to fit any application or size requirement and provide 99% reduction of most organisms within 1 minute.



## What is UV Effective Against?

UV 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 light. Spores are also susceptible to UV. With the longstanding use of UV 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. 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. The UV bulbs do not require special handling or disposal either, 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 fast 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 systems is very low, as systems are powered by regular wall outlets. With that, a typical UV-C treatment costs under 2 cents. UV systems also require little maintenance and upkeep due to their simplistic nature. UV bulbs last thousands of hours at their peak output, limiting the need for routine consumable change out and maintenance.

## Applications

UV 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. It provides a chemical free method of disinfecting soundproofing materials that are traditionally chemically incompatible.

## Simple

All of our UV-C products are made for simple operation, and are able to be used out of the box within minutes.

## Inexpensive

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 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 pricetag



The TORCH



The Lantern

**CD ClorDiSys**

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