



UV Disinfection for Everyday Spaces

www.cablex.com.au

Our Story

Violet Defense was founded in 2012 after our founder, Mark Nathan set out on a journey to find a better way to disinfect everyday spaces after falling ill one too many times from frequent traveling on airplanes and in hotels.

With the mindset that there had to be a better way to protect our world from germs, our founder made a breakthrough discovery that led to the patented technology behind Violet Defense.

After years of research, our founder discovered a unique way to combine UV and visible light sources with a highly transmissive lens material to produce greater photonic energy.

Because the lens can withstand direct and immediate contact with the light source, we have the ability to miniaturize the technology deployment. Violet Defense secured extensive worldwide patent protection for this breakthrough discovery.

Clinical-Level Disinfection for Everyday Spaces

Our technology allows us to incorporate the germ-killing power of ultraviolet light into nearly any product or environment, allowing us to help protect against harmful bacteria and viruses in the places that we live, work, and play everyday.

Proven to kill up to 99.9% of *E. coli*, coronavirus, Salmonella, MRSA, norovirus and even *C. diff*, our technology can add a layer of protection against these germs that spread unnecessary illnesses and infections in the places we live, work, and play every day.

Violet Defense can bring its UV technology to:

- Healthcare Facilities
 - Office Buildings
 - Government & Military Facilities
 - Public Transportation
 - Emergency Management Vehicles & Buildings
 - Athletic Facilities
 - Schools & Universities
 - Hotels
 - Restaurants & Food Service Areas
 - Assisted & Senior Living
 - Residential Spaces
 - And more...
- 

Founder of Violet Defense, Mark Nathan viewing paramesium killed by early prototype of Violet Defense product.



Sunlight has been effectively killing bacteria, viruses, mold and fungi since the beginning of time. Violet Defense's patented technology harnesses the power of sunlight into our products to bring this proven level of disinfection to every day spaces.

Benefits of Ultraviolet Light:

- Ultraviolet light is environmentally-friendly & chemical-free.
- It kills rapidly by targeting the DNA & RNA of microbes, resulting in inactivation and failure to reproduce.
- It's been proven with over 100 years and millions of dollars in research that it is effective at destroying bacteria, fungi, mold, and viruses.
- Microbial cells cannot develop resistance to this technology, as opposed to traditional cleaning methods.
- Studies have demonstrated the use of ultraviolet light not only effectively kills bacteria, mold, fungus, and viruses in the environment, but can significantly reduce infection rates (up to 30%) in healthcare settings.

//
Sunlight is said to be the best
of disinfectants.

Louis Brandeis, Supreme Court Justice



How It Works

Ultraviolet light is electromagnetic energy with a wavelength from 10 nm to 400 nm, though for our germ-killing purposes, we focus on the specific wavelengths of UV-C (200-280 nm), UV-B (280-320 nm), and UV-A (320-400 nm) light.

Certain portions of visible light in the violet-blue portion of the spectrum (particularly 405 nm and 470 nm) have also been proven to have anti-bacterial properties.

Studies have demonstrated the use of ultraviolet light effectively kills bacteria, mold, fungus, and viruses in the environment and can significantly reduce infection rates by up to 30% in healthcare settings.

Violet Defense uses a **powerful, broad spectrum, pulsed Xenon light** to deploy a combination of UV-C, UV-B, UV-A, and violet-blue wavelengths.

The electromagnetic energy of these wavelengths actually modifies the genetic material of microorganisms.

- UV-C causes photochemical reactions in DNA & RNA resulting in inactivation of microbes and failure to reproduce.
- UV-B and UV-A light causes oxidation of proteins and lipids causing cell death.
- Broad spectrum UV lamps have also been shown to inhibit photoreactivation, the process that can result in self-repair of damaged microbes.
- UV-A light when distributed using pulsed UV systems can cause additional cell wall rupturing from sudden heating.



Clinical Validation

Ultraviolet light has been researched for over a hundred years for its ability to effectively kill pathogens in the air and on surfaces. UV light actually attacks the DNA and/or RNA of pathogens and as such, microbes have not developed any resistance to this approach, unlike certain chemical disinfectants.

A University of Wisconsin-Milwaukee study found that the addition of a pulsed Xenon ultraviolet disinfection device was “**superior to cleaning alone**” for decreasing microbes on environmental surfaces, as well as decreasing infection rates, and the rates of hospitalization for infection.”

Another study conducted by the Duke University School of Medicine and the UNC School of Medicine found the combination of Quat with UV resulted in a 94% reduction in epidemiologically-important pathogens, which led to a **35% reduction in the infection rate**.

Clinical testing demonstrated that our technology can effectively kill key pathogens of great concern at long distances, making the technology ideal for whole room disinfection.

Independent Lab Studies

Violet Defense's technology has been proven to **kill up to 99.9%** of the following pathogens:

- Methicillin-Resistant Staphylococcus Aureus (MRSA)
- Escherichia Coli (*E. coli*)
- Salmonella Enterica (*S. enterica*)
- Norovirus
- Clostridium Difficile (*C. diff*)
- Candida auris (*C. auris*)



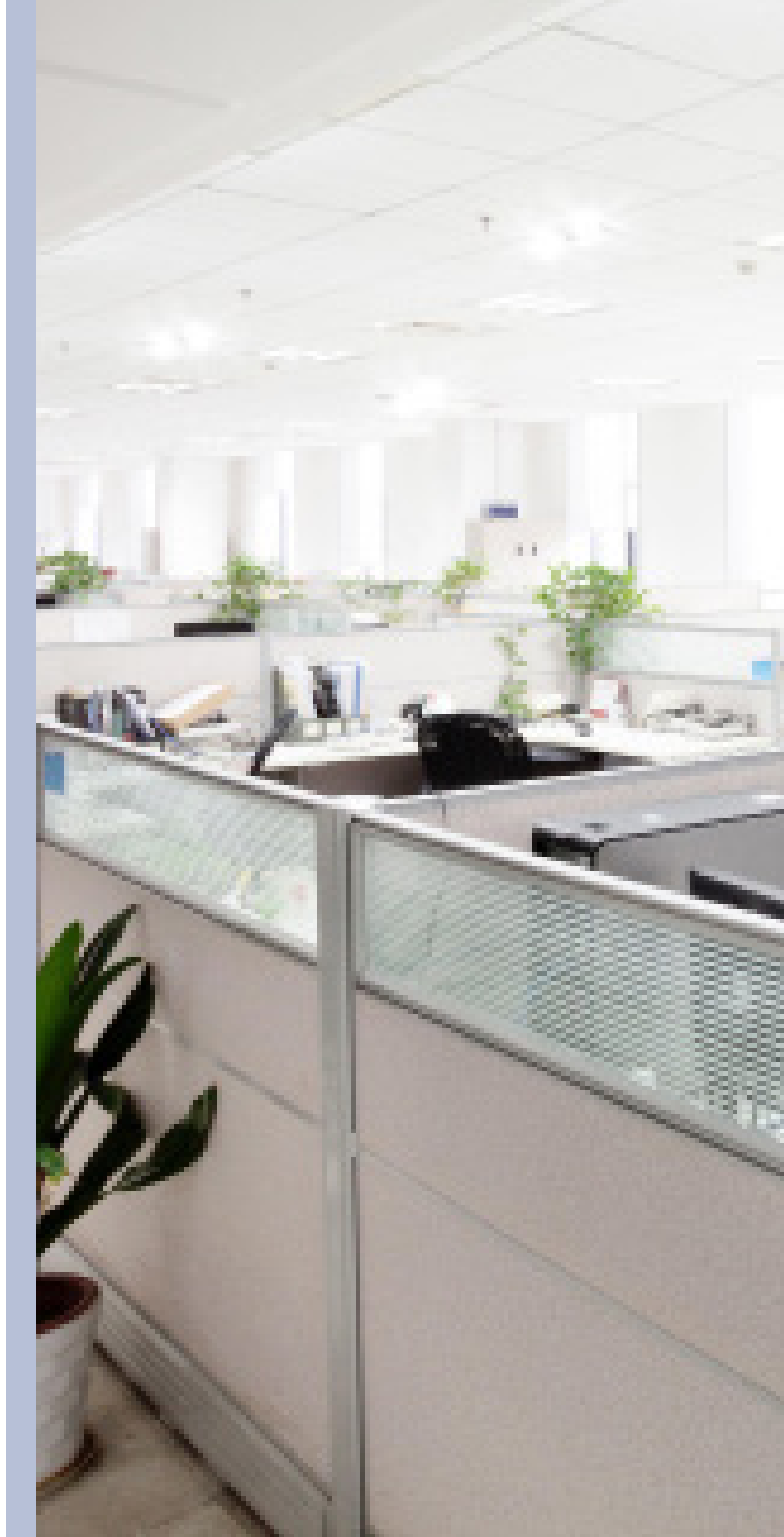
Violet Defense: The Power of UV

S.A.G.E. UV by Violet Defense utilizes the **germ-killing power of ultraviolet light to help protect spaces**, using a combination of UV-C, UV-B, UV-A, and violet-blue light.

S.A.G.E. offers **high-powered UV disinfection of surfaces and air**, designed for whole room disinfection, as well as solutions specific to bathrooms or smaller spaces, such as storage closets.

Designed to make disinfection easy for everyday spaces, Violet Defense offers the only known pulsed Xenon UV solution that can be installed into a room full-time, creating a continuous way to address disinfection needs in all types of settings.

The patented technology behind Violet Defense makes it possible to **cost-effectively incorporate the solution into nearly any environment**, including healthcare, K-12 education, higher education, athletic facilities, hospitality, government buildings, and emergency transport vehicles.



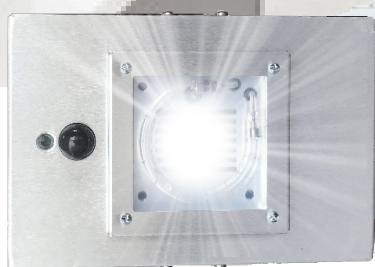
S.A.G.E. by Violet Defense is the only known pulsed Xenon UV disinfection system that can be installed in a room.



Product Features

- **Clinically proven to kill up to 99.9%** of coronavirus, *E. coli*, *Salmonella*, norovirus, MRSA, *C. diff*, and *C. auris*.
- Advanced programming capabilities to deliver whole room disinfection when and where it's needed through **autonomous control and scheduling capabilities** or integration with building automation systems via BACnet
- **Integrated motion sensor technology** designed to allow units to only operate when space is unoccupied
- **Highly flexible deployment options**, including in-ceiling installations, wall-mounted, or via mobile stands
- Two primary footprints provide either 10' x 10' coverage for small rooms and bathrooms with **Micro** or up to 15' x 15' coverage for larger rooms with overlapping **Whole Room Units**

Micro



Whole Room Unit





On the Move: Mobile Disinfection

The S.A.G.E. UV Mobile Series is designed to **bring the powerful Pulsed Xenon technology to any space** where installation proves challenging. Units are all height adjustable with different configurations to meet your disinfection needs, ranging from **Bolt**, the most powerful mobile unit with dual-sided coverage with its two included S.A.G.E. units; **Beam** with a compact, stable design on wheels; **Flash**, our lightweight tripod series with multiple configurations, including full 360° coverage options, to **Micro**, our portable unit perfect for countertop or desktop disinfection.

Mobile units can be programmed to run different cycles as needed, with a typical run time of 30-minutes to disinfect all types of settings.



Bolt



Flash Tripod Series

Micro

Beam



Product Options

Installed Solutions

Product	Model Number	Description
S.A.G.E. UV Whole Room Unit	SUWRU-23	Double UV light sources with 12' x 12' coverage; up to 15' x 15' coverage with overlapping units
S.A.G.E. UV Micro Unit	SUMIC-23	Single UV light source with 10' x 10' coverage; available with a variety of adapter plates for drop- or hard-ceiling installations

Mobile Solutions

Product	Model Number	Description
S.A.G.E. UV Flash Tripod Series	SUM-F-23-W1 SUM-F-23-W2 SUM-F-23-M1 SUM-F-23-M2 SUM-F-23-M3	Tripod mounted solutions with up to 2 Whole Room Units or up to 3 Micro units
S.A.G.E. UV Bolt Unit	SUM-B-23	Mobile solution on caster wheels with 2 Whole Room Units (May also be configured to accommodate 4 Whole Room Units or Micros)
S.A.G.E. UV Beam Unit	SUM-BEAM-23	Compact solution on caster wheels with 1 Whole Room Unit
S.A.G.E. UV Micro Unit	SUMIC-23	Single UV light source with 10' x 10' coverage with portable docking stand

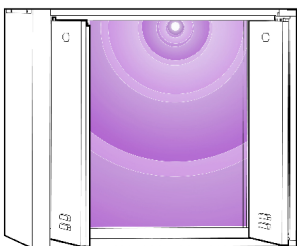


UV Decon

Our vision is to create healthy spaces where we live, work, and play everyday, free from harmful germs, but also to find ways to **disinfect the critical items we use everyday.**

The UV Decon series by Violet Defense leverages the same patented technology to create a series of self-contained lockers and trailers that can disinfect a variety of items, including personal protective equipment and other gear for healthcare workers, first responders, and military; sports equipment for athletic teams and schools; and even children's toys.

Mini



An easily transportable locker ready for numerous environments with single UV targeting source.

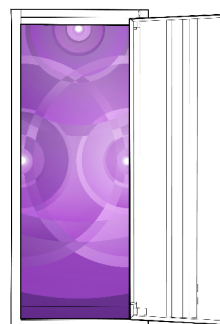
Disinfects up to 2,500 small items/day

//

This is going to save lives on the patient side, but it's also going to allow healthcare workers to stay in the fight longer."

Eric Peterson, Leader of Growth Strategies,
Advance Concepts

Meso



A hard-walled multi-purpose-built locker with modular panels for custom UV placement.

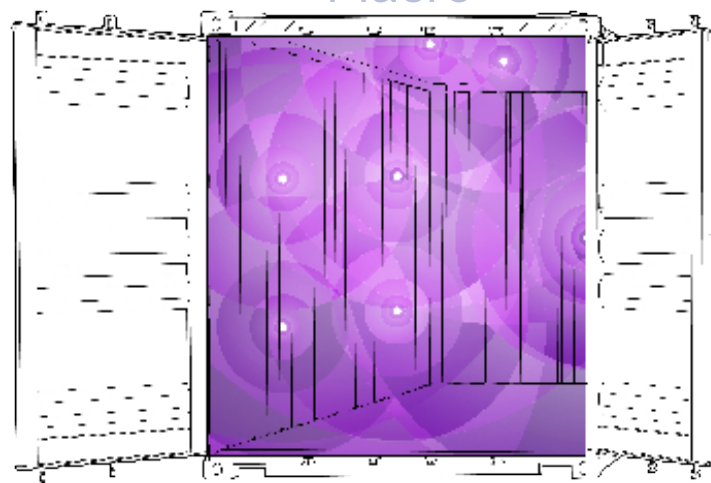
Disinfects up to 5,000 small items/day



Product	Model Number	Description
UV Decon Mini	UVD-MINI	50" Locker with 3 UV light sources
UV Decon Meso	UVD-MESO	84" Locker with 4 UV light sources
UV Decon Macro 20	UVD-MACRO20-T	20' Trailer with 10 UV light sources
UV Decon Macro 40	UVD-MACRO40-C	40' Container with 15 UV light sources

Even more UV disinfection solutions
coming your way soon!

Macro



A standalone mobile ecosystem with multi-side UV deployment and removable metal racks for placing items. Provides up to 360° of disinfection coverage.

Disinfects up to 40,000 small items/day



CABLEX PTY LTD
8/236-262 E Boundary Rd,
Bentleigh East,
VIC 3165, Australia

03 9575 3088
www.cablex.com.au
uvclean@cablex.com.au