

5x
faster
than other
UV-C Devices¹



VIOLET

by **clinell**[®]

Room Sanitiser

UV-C device for
complete disinfection
and rapid turnaround



powered by **UVDI** technology

MACHINE SPECIFICATIONS

Rapid turnaround

3x quicker turnaround than Hydrogen Peroxide Vapour² and 5x faster than other UV-C devices¹.

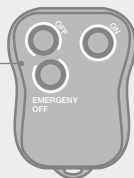
Complete disinfection

Kills >99.99% of microorganisms including *C. difficile* spores and MRSA; effective from 5 mins.

Powerful UV-C technology

Maximum output UV-C lamps and reflector for optimum radiation distribution.

Remote control (not to scale).



Digital display

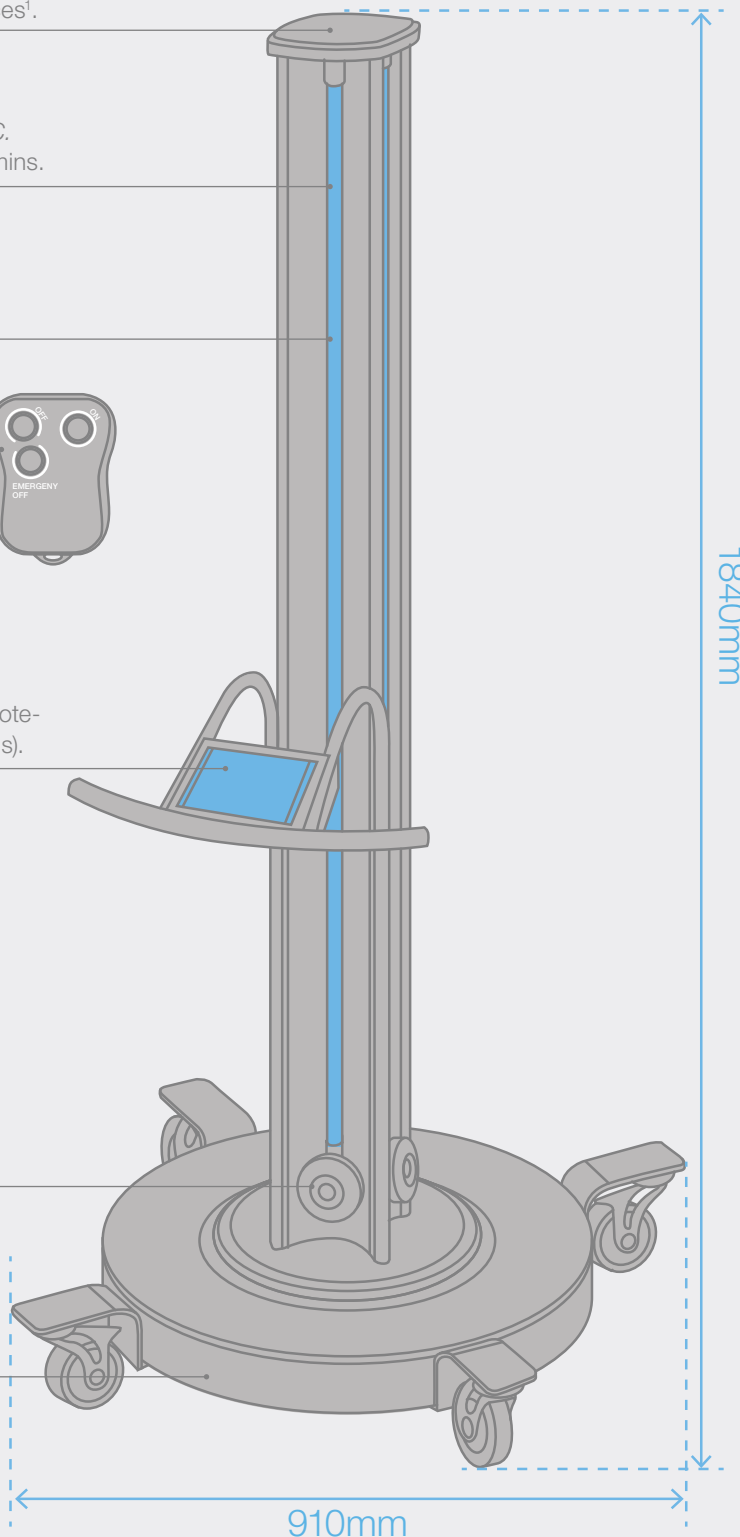
User-friendly touchscreen interface with remote-control operation within 50 feet (through walls).

Built in safety

4x infrared motion sensors prevent use if movement is detected in the room.

Functional engineering

Lightweight, moveable & durable design that fits through hospital room entrances.



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Violet by Clinell offers powerful UV-C room disinfection. 3x faster than HPV² and 7x more powerful than competing UV-C devices, it provides complete disinfection and additional peace of mind to manual cleaning protocols.

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Brought to you by GAMA Healthcare

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NO-TOUCH ULTRAVIOLET RADIATION TECHNOLOGY

Ultraviolet radiation is highly effective at disinfection.

Violet by Clinell kills microorganisms using a precise wavelength of ultraviolet radiation, UV-C.

How it works

Our sun emits radiation at different wavelengths (measured in nanometres, nm), each with different characteristics. Ultraviolet (UV) radiation forms part of the electromagnetic spectrum and exists in 3 forms: **UV-A, UV-B and UV-C.**

UV-C radiation has the shortest wavelength and kills microorganisms which are exposed to it. This wavelength is used by Violet to provide enhanced disinfection at an affordable cost.

Ultra-powerful

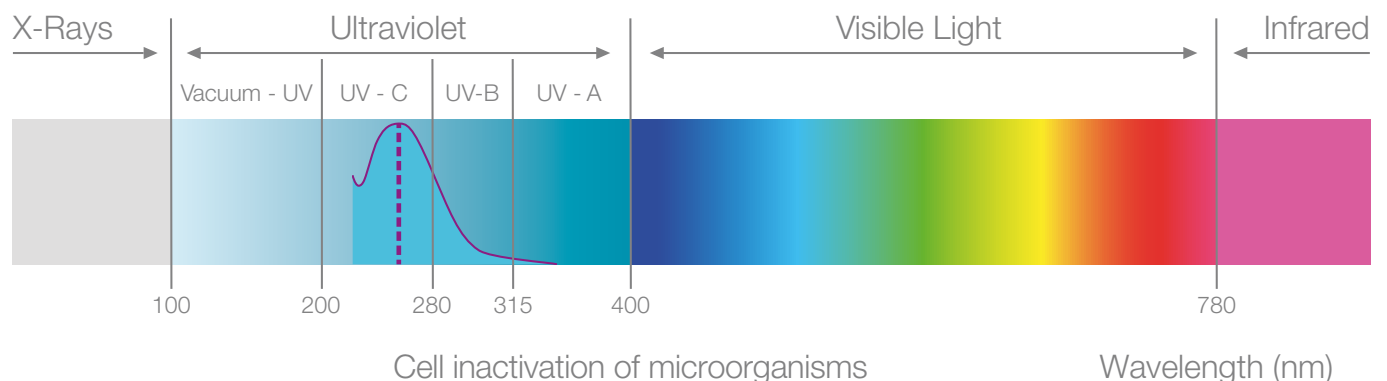
Violet generates artificial UV-C radiation. Four specialist lamps ionise mercury at a low pressure, producing UV-C at a specific wavelength that is effective against microorganisms. Violet UV-C lamps are 7x more powerful than competing lamps, and their effect is maximised by the central aluminium reflector mast which optimises UV-C distribution.

Ultra-killing

Violet is proven to kill >99.99% of microorganisms including multi-drug resistant organisms (MDRO) such as methicillin-resistant *Staphylococcus aureus* (MRSA). At predominantly 254nm, Violet generates UV-C that is ideal for the complete disinfection of surfaces. Boosting healthcare workers' and patients' confidence in their environmental hygiene.

Ultra-quick

Violet is designed to make efficient infection prevention fast. Using a UV-C device is 3x quicker than Hydrogen Peroxide Vapour (HPV) and removes the risks associated with toxic gas. Routine use of Violet only adds 20 minutes to standard room disinfection protocols and provides additional protection for healthcare workers and patients.



UV-C is a safe and effective way to reduce or remove microorganisms³.

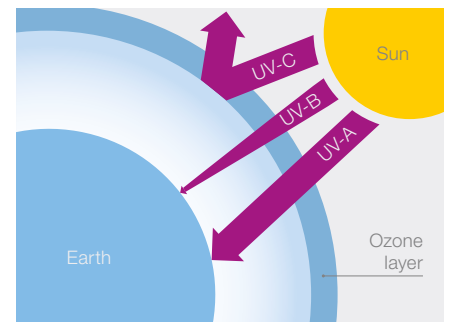
Violet by Clinell offers an effective UV-C solution that reduces surface contamination by >99.99%.

UV-C in healthcare

Naturally occurring radiation

UV-C radiation has broad spectrum antimicrobial properties. While UV-A and UV-B can be damaging, both are ineffective antimicrobial agents. UV-A can be used for tanning lamps and is harmful to eyes; and UV-B is responsible for sunburn and skin cancer.

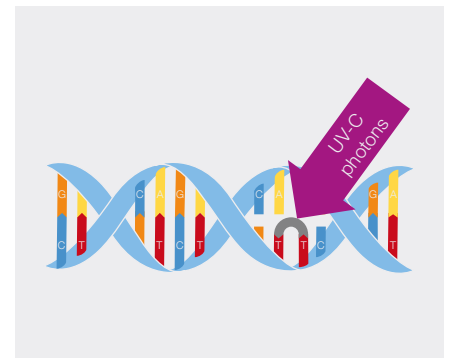
Naturally occurring UV radiation emitted from the sun is controlled by the Earth's ozone layer. Skin-damaging UV-B rays are partially absorbed by the ozone, while UV-C is almost completely blocked.



Adaptation and application

Violet generates artificial UV-C at a wavelength of 254nm, this is ideal for killing microorganisms living on surfaces. At this wavelength, radiation interacts with the molecular structure of DNA and RNA in single cell organisms.

UV-C is absorbed into DNA, causing it to form irregular molecular interactions. These changes to the base pairings in DNA, prevent the microorganism from reproducing, killing the cell and rendering it non-pathogenic - unable to cause further infection.



Microbial susceptibility

Most microorganisms are highly susceptible to UV-C radiation, including coronaviruses such as the COVID-19 causing SARS-CoV-2 virus. Coronaviruses are easily inactivated by UV-C⁴, making Violet an excellent candidate for the prevention and control of COVID-19 infection.

Violet has proven efficacy against key healthcare-associated infection (HCAI)-causing pathogens including MRSA, *C. difficile*, human coronavirus, carbapenem-resistant Enterobacteriaceae, MDROs and more, all validated by third-party laboratories.

Advanced technology ensures Violet is safe during use. Violet can be operated via remote-control, plus 4 infrared motion sensors can detect motion in the room to prevent misuse. Keeping healthcare workers and patients safe at all times.

COST-EFFECTIVE ROOM DECONTAMINATION

No-touch technologies are ideal for rapid room decontamination.
Violet by Clinell provides a 3x faster turnaround than HPV systems.

No-touch technology comparison

Less than 50% of hospital room surfaces are adequately cleaned and disinfected⁵. Room decontamination units such as UV-C and HPV systems help to reduce environmental contamination after terminal room cleaning and disinfection⁴. However, HPV presents several challenges to healthcare workers and patients.

HPV: Occupational hazards

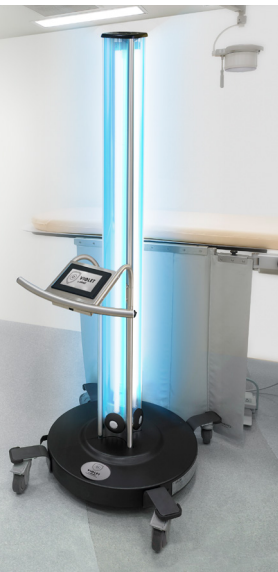
Vapourised hydrogen peroxide gives rise to occupational health and safety concerns and should be used under strict instruction. To minimise the risk of inhalation, the room must be sealed before use, ventilation systems & smoke alarms deactivated during use, and checked for residual HPV contamination after use – laborious tasks for healthcare workers to complete before and after each cycle.

Using Violet:

- 3x faster turnaround than HPV systems
- Room can be used immediately after cycle completion
- Ventilation system does not need to be disabled
- Smoke alarm does not need to be disabled
- No residual contamination or by-products are produced, reducing health and safety concerns
- No material compatibility concerns
- No consumable products, low operational cost

UV-C radiation generated by Violet is blocked by ordinary glass and plastic, so healthcare workers and patients are completely safe when Violet is in use. The machine will not start working unless the room is completely vacant, its infrared motion sensors are able to detect movement.

Rooms can be used immediately after Violet by Clinell cycle completion





Disinfection with Violet by Clinell, which uses UV-C, is a faster process (only 20 minutes) in comparison with 4 hours with Hydrogen Peroxide Vapour (HPV). We use Violet when we need a deep clean. We employ it for bacterial infections including with methicillin-resistant *Staphylococcus aureus* or viral infections including SARS-CoV-2.”

Emma Jobbins, Assistant Operational Facilities Manager, Grange University Hospital
- Aneurin Bevan University Health Board

Reducing the microbial burden

It is now accepted that contamination of environmental surfaces in hospital rooms plays an important role in the transmission of several key healthcare-associated pathogens^{6,7}. Many of these microorganisms will continue to exist in the environment for days and some even for months⁸.

Without sufficient environmental decontamination, the next patient admitted to the room is at risk of acquiring a HCAI. One study found that admission to a room previously occupied by a patient with MRSA or *C. difficile* increases the risk for the subsequent patient admitted to the room to acquire the pathogen⁴.

Research shows UV-C technology can reduce the microbial burden and thus lower the risk of HCAIs.

Providing powerful UV-C decontamination, Violet allows healthcare workers to carry out rapid decontamination easily. Being mobile and compact, Violet can be operated where and when needed.

What is Violet is suitable for?

- Patient rooms after terminal cleaning or daily for high-risk patients
- Patient bathrooms/toilets after terminal cleaning or daily for high-risk patients
- Operating rooms after terminal cleaning
- Accident & emergency units
- Outpatient clinics
- Consultation rooms after high-risk patients
- Sluice rooms
- Haematology and oncology room suites in between patients
- Visitor bathrooms/toilets after each shift
- High turnaround rooms
- Training/meeting rooms after use
- Laboratories after each shift
- Other rooms

Details on How to position Violet can be found at www.gamahealthcare.com

CLINICAL EVIDENCE, EFFICACY & EVALUATION

Used in more than 26 NHS Trusts in the UK and 100 top US hospitals, Violet by Clinell provides healthcare workers and patients with peace of mind.

Clinical evidence

Study 1: Violet reduced viral infection incidence by 44% in pediatric long-term care.

Pavia et al. *Am J Infect Control*. 2018; In Press⁹

Viral infection incidence among pediatric patients in a long-term care facility was measured to determine the effect of adding UV-C to standard cleaning protocols. Cumulative infection incidence suggested that each month's UV-C use built on the benefit of use in the previous month.

After a 12-month period, a 44% unadjusted reduction in overall viral infection was found.

Study 2: Violet reduced *C. difficile* rates by 25%, saving an estimated \$348,528-\$1,537,000.

Pegues et al. *Infect. Control Hosp. Epidemiol*. 2017¹⁰
Pegues et al. *In IDWeek*. 2015¹¹

C. difficile rates in Haematology/Oncology Units were evaluated over a 12-month period following the addition of UV-C to manual surface disinfection. Violet was found to cause a 25% decrease in *C. difficile* infections, saving an estimated \$348,528-\$1,537,000 in annual direct medical costs by preventing up to 16.6 *C. difficile* infections per 10,000 patient days on the study units.

Study 3: Violet freed bed/isolation capacity faster than HPV, contributing to improved patient flow through emergency admissions.

Beviz et al. *J. Infect. Prev*. 2018²

The use of UV-C versus HPV was compared in an Acute Admissions Ward. HPV was previously delaying patient flow, affecting accident and emergency waiting times. The average turnaround time for UV-C was 3x faster than HPV. The UV-C unit was also found to be more suitable for use in spaces that were too small for HPV. Overall, Violet was found to offer effective decontamination and was positively evaluated by all parties involved.

Third party testing results for Violet Independent testing investigated the time taken to achieve log4 reduction in surface contamination at increasing distances. It found that Violet kills >99.99% of *C. difficile* endospores and MRSA in one 10-minute cycle.

Microorganism	Distance (feet)	Time (mins)	% Reduction compared to control	Log reduction compared to control
<i>Clostridium difficile</i> (endospores)	3	4	>99.995	>4.32
	8	5	>99.992	>4.09
	12	8	>99.995	>4.32
Methicillin Resistant <i>Staphylococcus aureus</i> (MRSA)	3	1	>99.999	>5.69
	8	2	>99.999	>5.69
	12	3	>99.999	>5.69

Be confident in your results.

UV-C radiation delivered by Violet can be verified with the UVCense Bluetooth Dosimeter.

Dosimeter

A study showed that 89% of surfaces cleaned by clinical staff fail the ATP*-assessment benchmark for cleanliness¹². Using a dosimeter gives you legitimate proof of disinfection results, cutting out any margin of error and promoting infection prevention excellence.

The implementation of enhanced education, checklists, and methods to measure the effectiveness of room cleaning with immediate

feedback to environmental service personnel has been found to improve cleaning and lead to a reduction in HCAs¹³.

Verified dose, assured disinfection

The UVCense dosimeter provides laboratory-grade performance for highly accurate UV-C measurements. Tailored to specifically capture 254nm wavelength UV-C radiation generated by

Violet, the UVCense dosimeter can confirm whether a sufficient antimicrobial UV-C dose has reached the targeted surface.

Highly accurate

Calibrated to measure UV-C with 254nm wavelength generated by Violet.

Clear display

Always-on LCD screen displays total UV-C dose in mJ/cm².

Remotely-operated

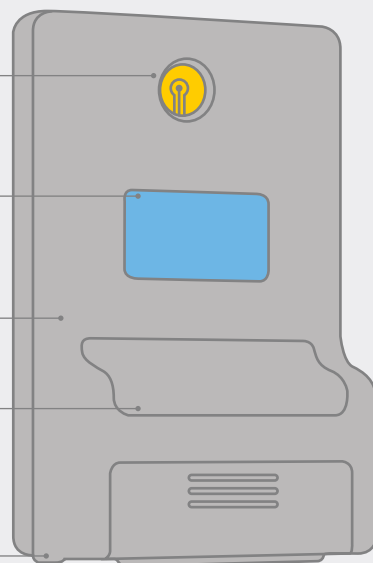
Operating modes and alarms can be configured remotely via Bluetooth.

Easy-to-use

Dose measurement resets with the press of a button.

Eliminate insecurities

Confirms efficacy of Violet dose, verifying disinfection of pathogenic microorganisms.



*Adenosine triphosphate

BROUGHT TO YOU BY GAMA HEALTHCARE

Additional technologies are needed to improve disinfection efforts.
Violet by Clinell completes room decontamination protocols, reducing the risk of HCAs.

Complete cleaning & disinfection

Routine and terminal disinfection is vital to decrease HCAI acquisition. However, completion is frequently inadequate⁶. No-touch techniques, including UV-C technologies have been developed to improve disinfection efforts, to reduce surface contamination and therefore HCAs⁴.

In the UK, the Joint Healthcare Infection Society (HIS) and Infection Prevention Society (IPS) guidelines recommend using UV-C as an additional measure to terminal cleaning for the prevention and control of MRSA in healthcare facilities¹⁴. Manual cleaning removes organic matter and

dirt from contaminated surfaces and is crucial for effective disinfection. After cleaning & disinfection, Violet can be used to complete a fast, effective and affordable environmental decontamination, creating a safer environment for healthcare workers and patients.

Routine cleaning & disinfection



Clinell Universal Wipes
Clean and disinfect
in a single step.

Patented formulation kills >99.99% of pathogens. Effective against common causes of HCAs from 10 seconds. Ideal for use on surfaces and non-invasive medical devices.

Outbreak disinfection



Clinell Peracetic Acid Wipes
Enhanced cleaning
and disinfection.

Ideal for preventing & resolving outbreaks. Patented formulation is more effective than chlorine against high-risk and hard to kill organisms, spores and biofilms.

Complete disinfection



Violet by Clinell
Powerful UV-C
room disinfection.

3x faster than HPV² and 5x more powerful than competing UV-C devices¹. Provides complete disinfection and additional peace of mind to routine protocols.

Violet by Clinell is brought to you by GAMA Healthcare, infection prevention specialists and providers of Clinell Universal Wipes.

About GAMA Healthcare

Founded in 2004 by two NHS doctors, GAMA Healthcare is at the forefront of infection prevention technology, driving scientific innovation in surface & air disinfection, skin hygiene and patient isolation products.

We provide market-leading clinical training and award-winning aftersales support. So, whatever your needs, talk to us about our purchasing and support options.

To find out more, speak to your
GAMA Healthcare Area Manager
or visit www.gamahealthcare.com

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