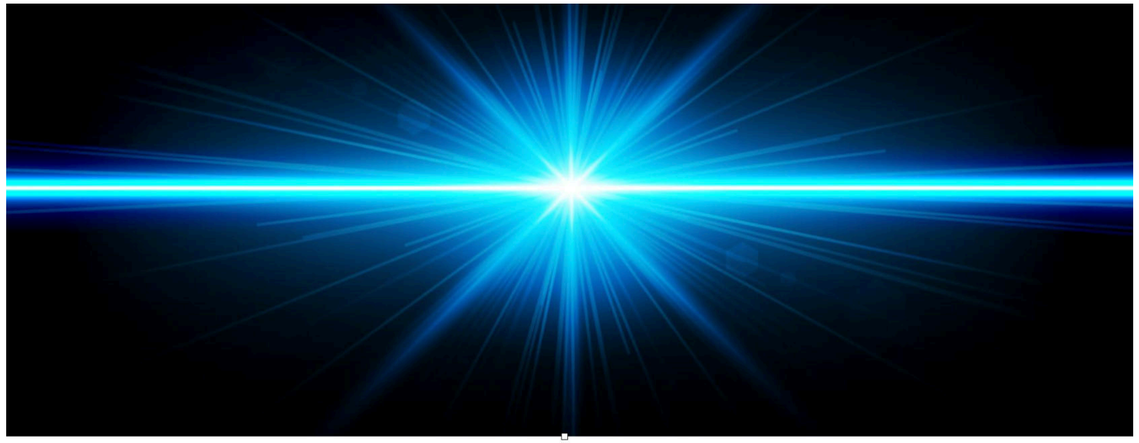
# THE NEW ADVANCED TECHNOLOGY OF UV-C PURIFICATIONS

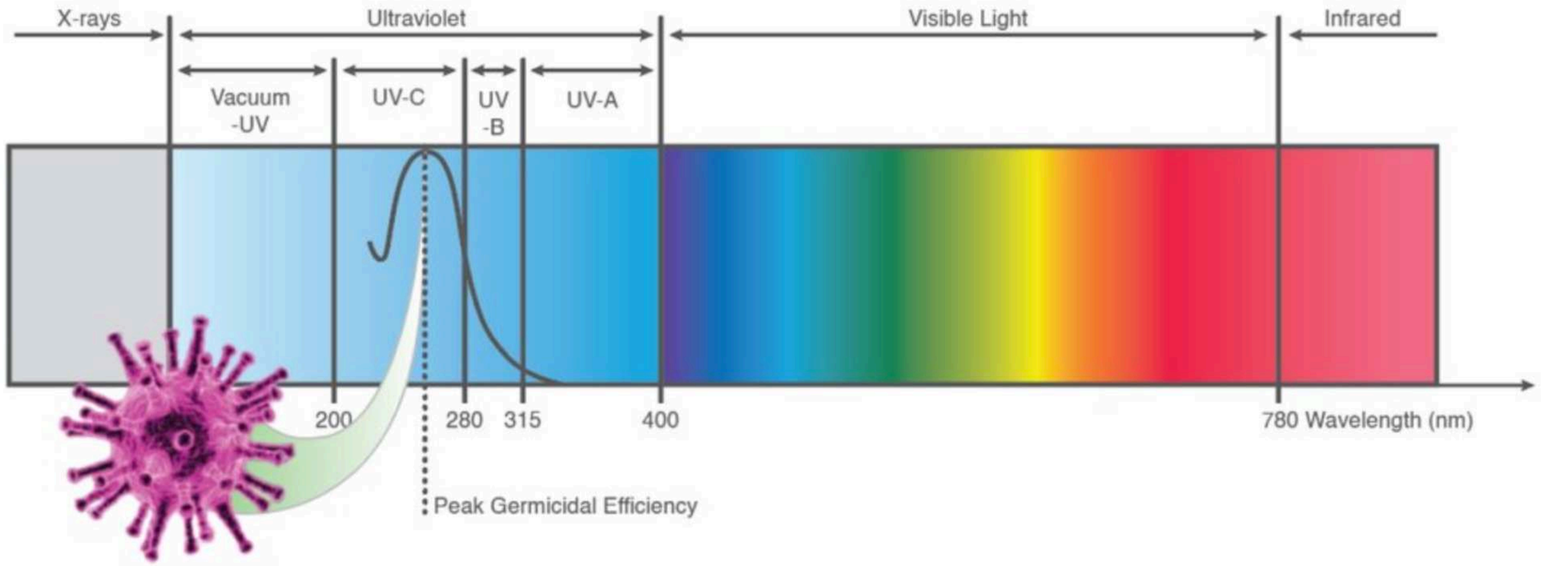


IMARI UV-C LIGHT DISINFECTION

**We are committed to helping facilities operate in a safe and effective way that puts employees, occupants and customers at ease.**

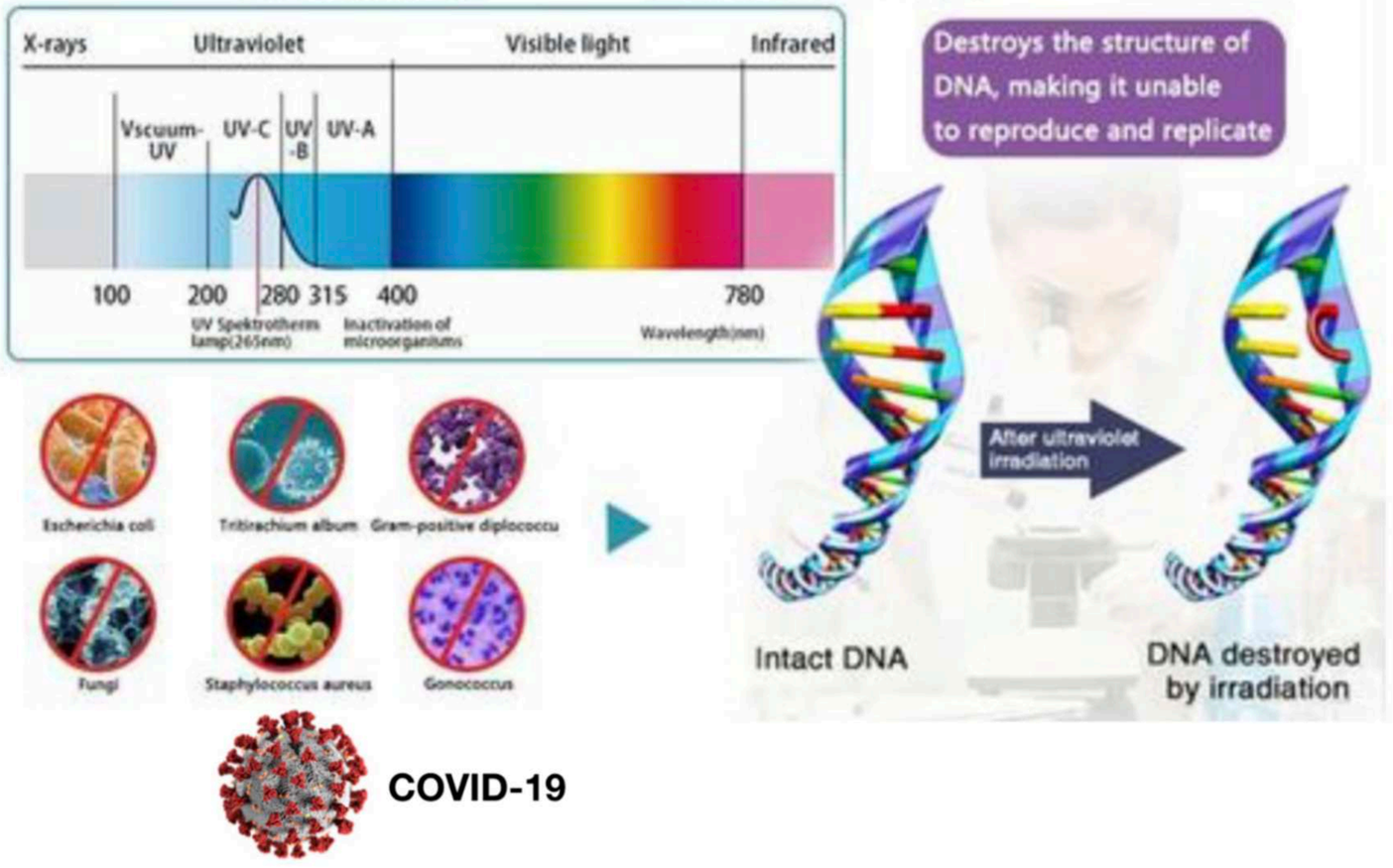
# The Science Behind UV

## UVC (Ultraviolet-C)




# UVC Ultraviolet Sterilization Technology

## Kills Up To 99.9% Of All Bacteria, Molds, Viruses And All COVID Strings



## What is UV-C light?

**UV-C (also called germicidal UV) is part of the ultraviolet spectrum that can inactivate pathogens like bacteria and viruses. UV-C utilizes specific wavelengths of the ultraviolet spectrum, typically between 200 to 280 nanometers.**

**UV-A and UV-B light can also kill some bacteria and germs, but are mostly ineffective against viruses like SARS-CoV-2. The Illuminating Engineering Society (IES) recently released a report on germicidal UV that says UV-C is the most effective part of the spectrum.**

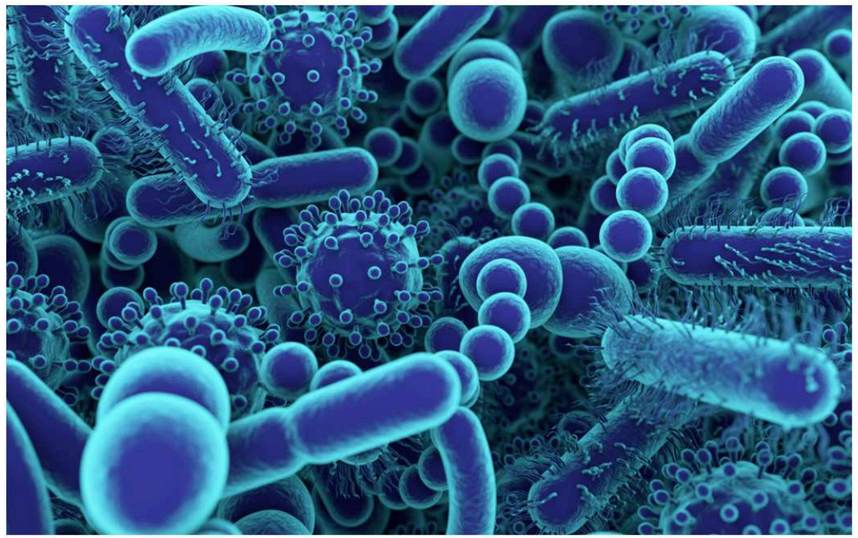
**Although it is commonly called "UV light," ultraviolet wavelengths fall just outside of the visible light spectrum. Scientists usually refer to UV as radiant energy, but "UV light" has become more commonly accepted. You will not see visible light produced from UV products.**

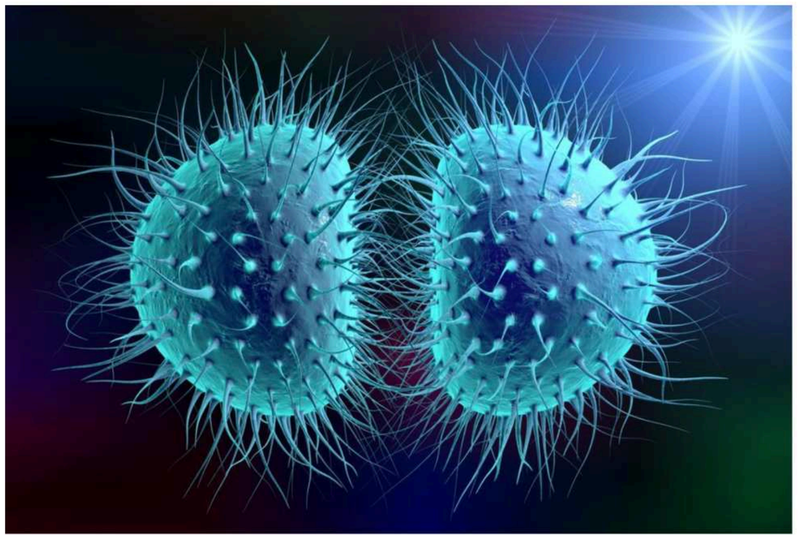
Germicidal irradiation, benefits, and differences of
**ULTRAVIOLET LIGHT**

| **UV** type | **NANOMETERS** (nm) | **SAFE** for skin and eyes | **RAPID DEGRADATION** on materials like plastic and rubber | **PRACTICAL USES** |
|---|---|---|---|---|
| **VUV Far-UV** | 100-200 | YES | YES | Medical equipment |
| **Far-UVC** | 207-222 | YES | YES | Germicidal, **most effective for disinfecting**, sensing |
| **UV-C** | 200-280 | NO | YES | Germicidal, **most effective for disinfecting**, sensing |
| **UV-B** | 280-315 | NO | YES | Curing, tanning, medical applications |
| **UV-A** | 315-400 | NO | NOT TYPICALLY | Curing, printing, lithography, sensing, medical applications |

# Viruses, Bacteria and Fungi

**Each of us shares our air, food, water and shelter with tiny colonies of microorganisms that include viruses, bacteria and fungi. Most of these microbes are harmless, but some are pathogens—the kind that can make you sick, such as the novel coronavirus that causes COVID-19.**





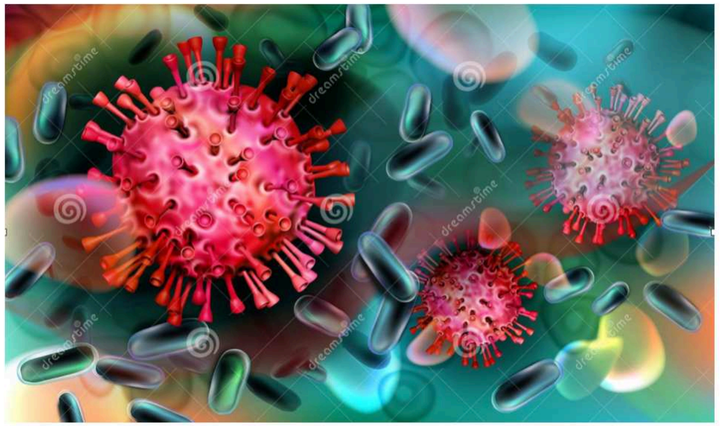
## What are bacteria and viruses?

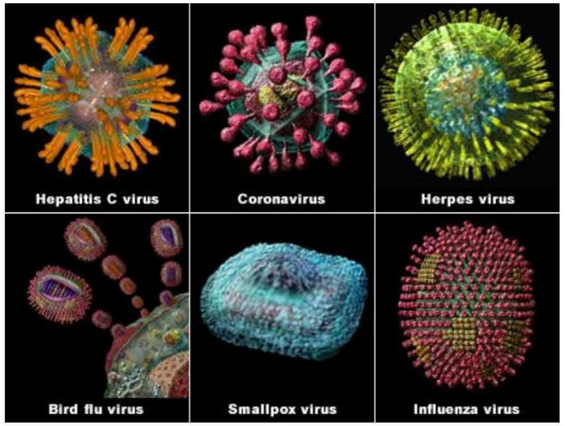
**Bacteria and viruses are living organisms that cause diseases, like the common cold or influenza. They also can make some diseases, like asthma, worse**

## How can airborne viruses, bacteria affect health?

**Bacteria and viruses can travel through the air, causing and worsening diseases. They get into the air easily. When someone sneezes or coughs, tiny water or mucous droplets filled with viruses or bacteria scatter in the air or end up in the hands where they spread on surfaces like doorknobs. Inhaling these viruses or bacteria can spread coughs, colds, influenza, CoV-19 and other infectious agents.**

**Crowded conditions with poor air circulation can promote this spread. Some bacteria and viruses thrive and circulate through poorly maintained building ventilation systems, as with Legionnaires' disease.**





## Airborne Diseases

You can catch some diseases simply by breathing. These are called airborne diseases. Airborne disease can spread when people with certain infections cough, sneeze, or talk, spewing nasal and throat secretions into the air. Some viruses or bacteria take flight and hang in the air or land on other people or surfaces.
When you breathe in airborne pathogenic organisms, they take up residence inside you. You can also pick up germs when you touch a surface that harbors them, and then touch your own eyes, nose, or mouth. Because these diseases travel in the air, they're hard to control. Many diseases are spread through the air, including Coronavirus and COVID-19. A rapidly spreading coronavirus, SARS-CoV-2, and the disease it causes, COVID-19, has been responsible for millions of infections and millions of deaths globally in 2020.

### Disinfection Has Always Been Important

# But Now It's Critical

**Through a published studies , we learn how UV-C light technology was superior to standard chemical disinfection. In a education facilities and clinical setting, on complex patient care equipment, standard chemical disinfection was only 38% effective but with IMARI UVGI disinfection efficacy improved to 96% in a 90-second treatment cycle.This light-based technology uses IMARY BLUE-WAVE rays to cut turnaround time to mere minutes so you can keep your classrooms and other room moving quickly — perfect for treating equipment + spaces for the purposes of disinfection.**

## *UV-C Light Is The Only Way To Kill Virus In Minutes*

# UV light Could Reduce Hospital-Acquired Infections

**A new study shows that ultraviolet disinfection technology eliminates up to 97.7 percent of pathogens in the operating room. Using this light wavelength might help defeat superbugs.**

## Healthcare-associated infections

**The last thing anyone wants to experience is getting some sort of infection in a healthcare environment, such as an hospital or operating room, while they're already seeking medical care.**

**This type of infection, called a Healthcare-Associated Infection ( HAI), happens frequently. According to the Office of Disease Prevention and Health Promotion, around 1 in 25 inpatients has an infection that's directly related to hospital care.**

**Certain factors can raise someone's risk of developing an HAI; these include catheters, having surgery, getting a shot, and being in a healthcare setting that has not been properly disinfected. The U.S. Department of Health and Human Services estimate that over 1 million HAIs develop within the country's health system every single year.**

**HAIs can result in severe complications, and outcomes are often poor. These infections cost billions of dollars each year in healthcare spending and other costs, and HAIs remain a focus for people who work in public health.**

# IMARI S.H.I.E.L.D

## WE Will Shield You From Air Pollution
## Bacteria,Viruses And COVID-19

# What Is The Solution

## The Only Solution Is To Use IMARI UV-C Ultraviolet Light Disinfection Products To Protect Your Family Or your Employee

# Benefits of UV Disinfection

**Given the health risks of chemicals, as well as the inability to consistently achieve the necessary disinfection levels, many hospitals and other healthcare settings have begun incorporating additional automated decontamination devices.**

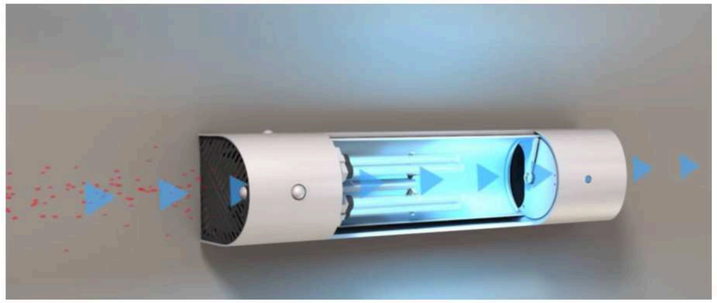
**While not a “new” disinfecting technology, UV light has rapidly been growing in use in hospital settings as it is a proven disinfectant for surfaces, instruments, and air. With over 140 years of research behind it, UV light has been proven effective at killing bacteria, viruses, mold, and fungi.**

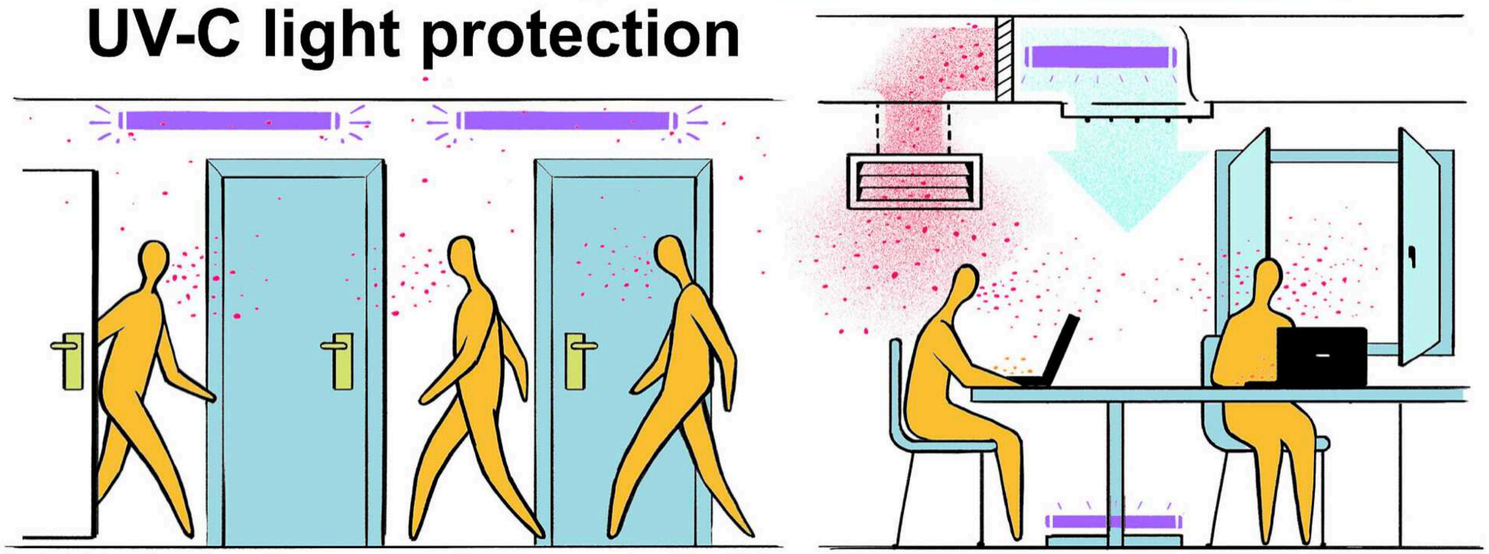
**Ultraviolet light attacks microorganisms at the DNA and RNA level. Microbes are not able to develop resistance to ultraviolet light, compared to their ability to form resistance to certain types of chemical disinfectants.**

**Research has show UVC to be effective at inactivating a range of viruses including the COVID-19 Coronavirus**

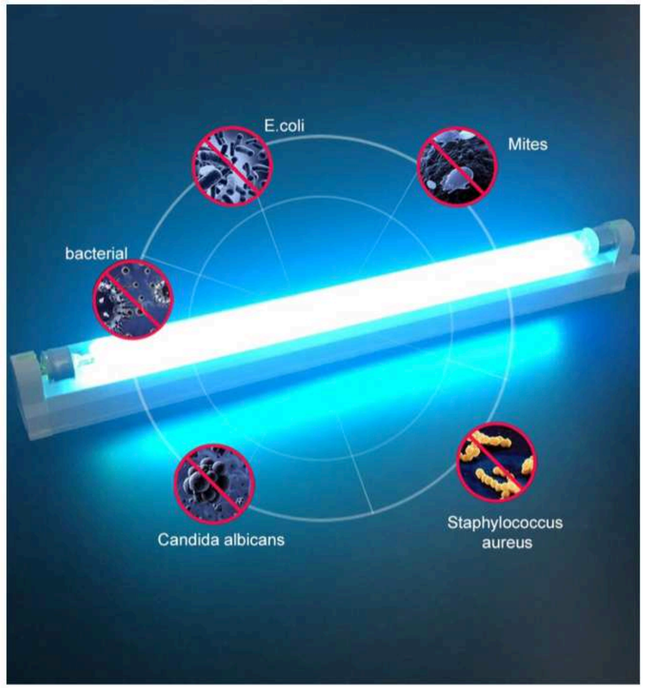
**Another potential benefit is the ability to reduce the labor and/or cost of chemical cleaning**

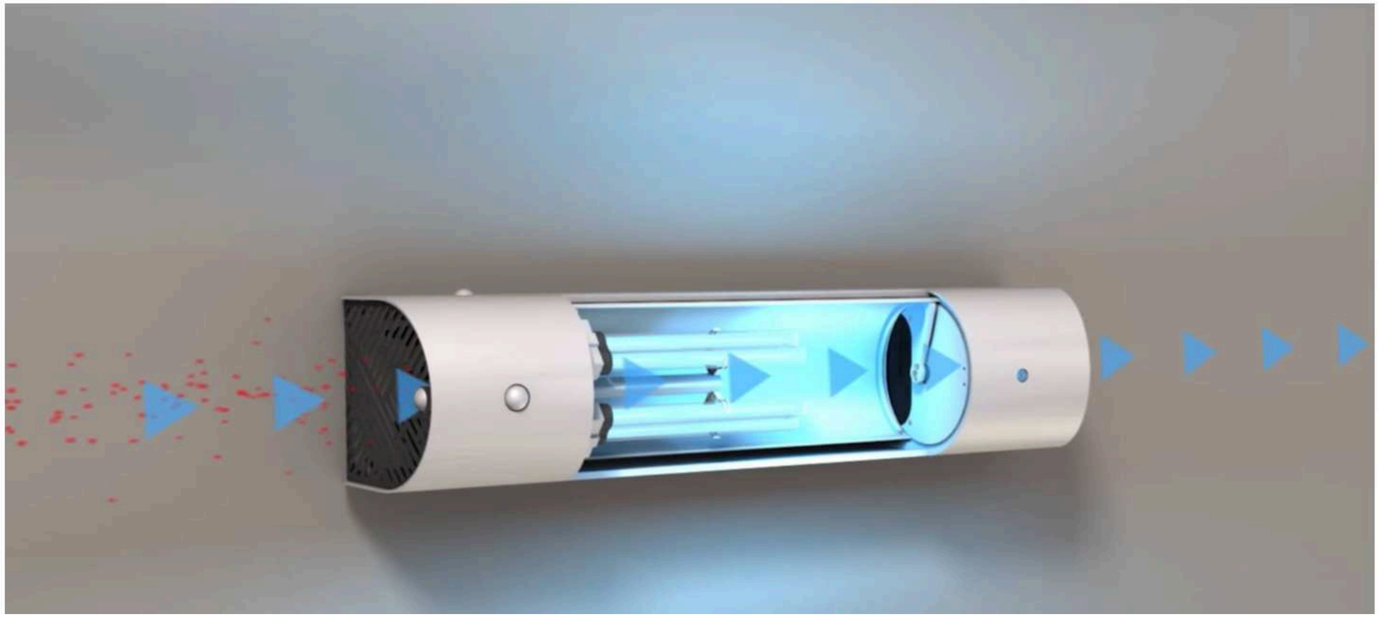
# UV-C Light Disinfection Protection Technology
# The Main Solution Against COVID-19



# UV-C Lamps For Germicidal Homes, Offices, Schools



# Ceiling And  Room Corner Mount

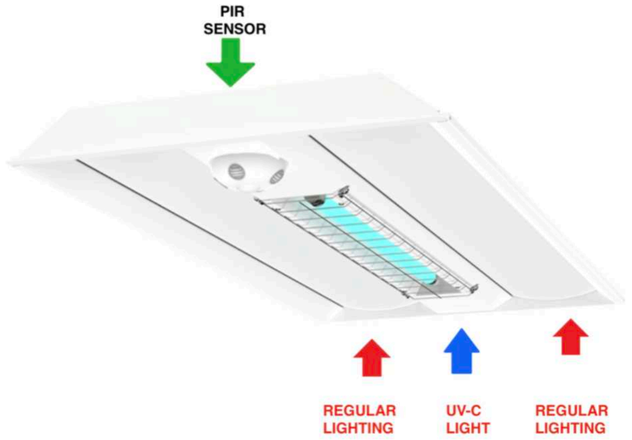
## UVC Disinfection Surface Ceiling And Wall Mounted

**This powerful UV-C disinfection surface wrap is as versatile as its name. Perfect for any space that is unoccupied for any time frame.  The 254 nm lamps stop viruses and pathogens in their tracks.  This fixture comes in two distinct styles: a ceiling surface mount or a corner mount.**

# THE ULTRA-PURE UV-C PRODUCTS

## Hybrid Regular LED Light Plus UV-C Disinfection Light Troffer Operating With PIR Sensor (Passive Infrared Motion Sensor)

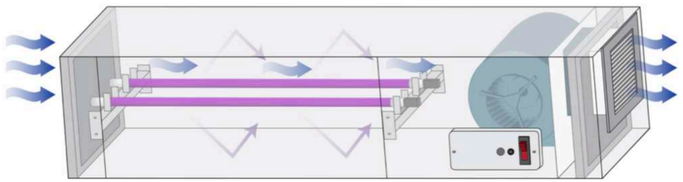
2x4 foot UVC High Power Ultraviolet/LED Hybrid Troffer combats the spread of pathogens and microorganisms by inactivating them. The UV-C High Power Ultraviolet Hybrid Troffer is ideal for many applications and it quickly eradicates germs on multiple surfaces.
This single troffer fixture delivers both UV-C disinfection and white LED light with comfortable, low glare illumination.
Occupancy sensor lighting control with both PIR and ultrasonic sensors up to 100 sqm
Applications: Medical Facilities, Schools, Daycare Facilities, Gyms, Spas/Salons, Furniture, Beds, Kitchens, Retails/Office Space, Healthcare and Hospitals




## 600X1200mm Ceiling Drop IMARI ULTRA-PURE Air Purification UV-c Units

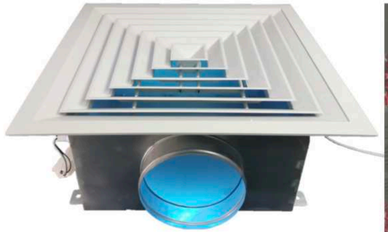
### Commercial UV Air Purifier

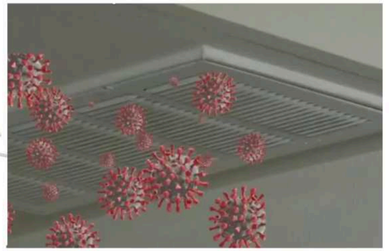
Commercial UV Air Purifiers utilize UV-C light technology to improve indoor air quality and provide protection against germs, bacteria viruses and COVID-19. These powerful air purification systems use circulating blower and UV-C lamps to deactivate microorganisms by damaging their DNA and RNA and remove their molecular makeup from the air stream.



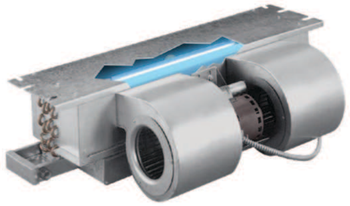
# UV-C Light Disinfection In Hospitals

## INTEGRATED UV-C DISINFECTION IN HVAC AIR DIFUSERS
## KILL GERMS, BACTERIA AND VIRUSES



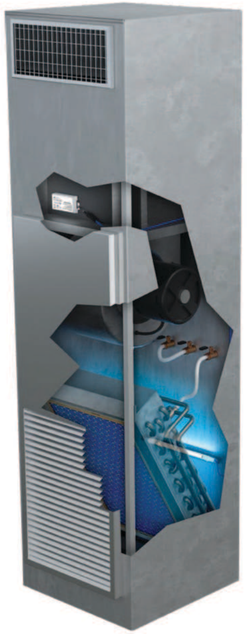


PTAC Application
(No light is visible when properly installed)



Fan Coil Application

Vertical Fan Coil
Application



## HVAC,Fan Coil Units With Integrated Pre - Filters, Carbon Filter, HEPA filter And UV Lamps

**Filters out dust, pollen and other particles to make the air healthier by removing more than 99.85% of particles down to 0.3 microns Filters air without emitting ozone, a toxic gas that can irritate lungs Effective against common bacteria and viruses that can aggravate asthma and respiratory illnesses. and no additional power source is needed to keep it running Helps prolong the life of heating and cooling system by keeping it free from dirt and dust buildup Installs easily into ductwork to deliver fresher, cleaner air throughout whole home**

## IMARI PURO -TEC Drop Ceiling Air Purifier And Sterilization

**Main Features**

1)Air Purification And Sterilization With Integrated Pre Filter, Carbon Filter, HEPA Filter And UV-C Lamp

2) High Sterilization Effect: natural bacteria in the air eliminated rate ≥99.00%

3) High Purification Effect: remove PM2.5 ≥99.00%

4) Widely sterilization: Bacteria, mold, escherichia coli COVID-19, ect.

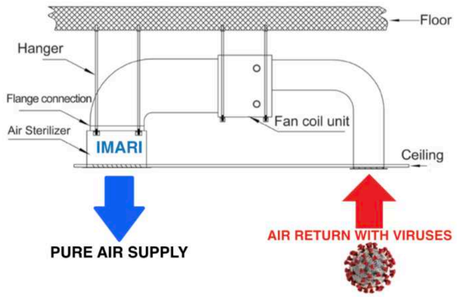
5) Energy Saving and environment protection: the device designed in module (1000m3/h) pre-filters can be cleaned after dust accumulation

6) Modules Combination: Dimensions and handling air volume can be combined according to customer requirements.

7) Install In Drop Ceiling 600X600mm Or 600x1200mm

Down To 0.3 Micron, And COVID Viruses

Air Return Type
Air Purification Central Air Conditioning Installation Diagram

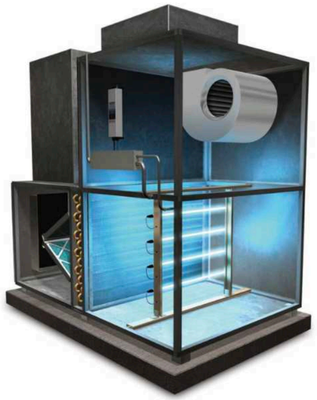


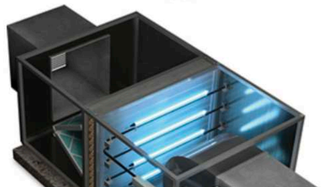

# UV Lights for HVAC

## How Do UV Lights Help?

**Fungal contamination in HVAC units is a widespread issue that shouldn't be ignored as it often contributes to building-related diseases, like infectious diseases, allergic rhinitis, asthma, hypersensitivity pneumonitis and lately COVID-19 spread according to the National Center for Biotechnology Information. Ultraviolet light helps kill a variety of harmful bacteria and mold, UV systems should prevent the organic build up on the surfaces of your HVAC system's coils, and in your ducts. An additional benefit of UV lights is that they improve airflow and the energy efficiency of your HVAC system, as well as eliminating the need for regular duct cleaning.**

**Ultraviolet (UV) lights for air purification are more important for folks who reside in humid**



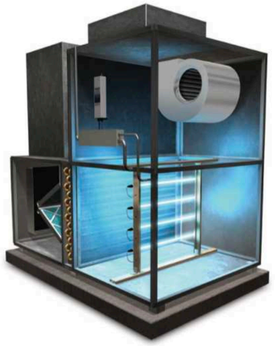


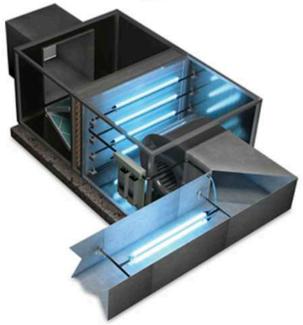
# Application Of UV-C  In Building HVAC

## UV Lights for HVAC

### How Do UV Lights Help?

Fungal contamination in HVAC units is a widespread issue that shouldn't be ignored as it often contributes to building-related diseases, like infectious diseases, allergic rhinitis, asthma, hypersensitivity pneumonitis and lately COVID-19 spread according to the National Center for Biotechnology Information. Ultraviolet light helps kill a variety of harmful bacteria and mold, UV systems should prevent the organic build up on the surfaces of your HVAC system's coils, and in your ducts. An additional benefit of UV lights is that they improve airflow and the energy efficiency of your HVAC system, as well as eliminating the need for regular duct cleaning.
Ultraviolet (UV) lights for air purification are more important for folks who reside in humid areas prone to mold growth or for those with severe health issues. You might argue that filters are sufficient for you, but the best HVAC UV lights do a better job at disinfecting and sterilizing the air in your home.

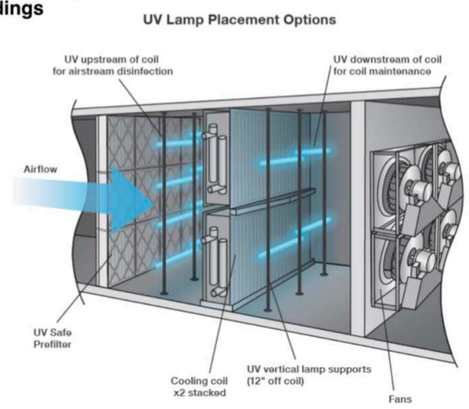




## Eliminate Particles, Bacteria, Viruses And COVID-19 From Your Building

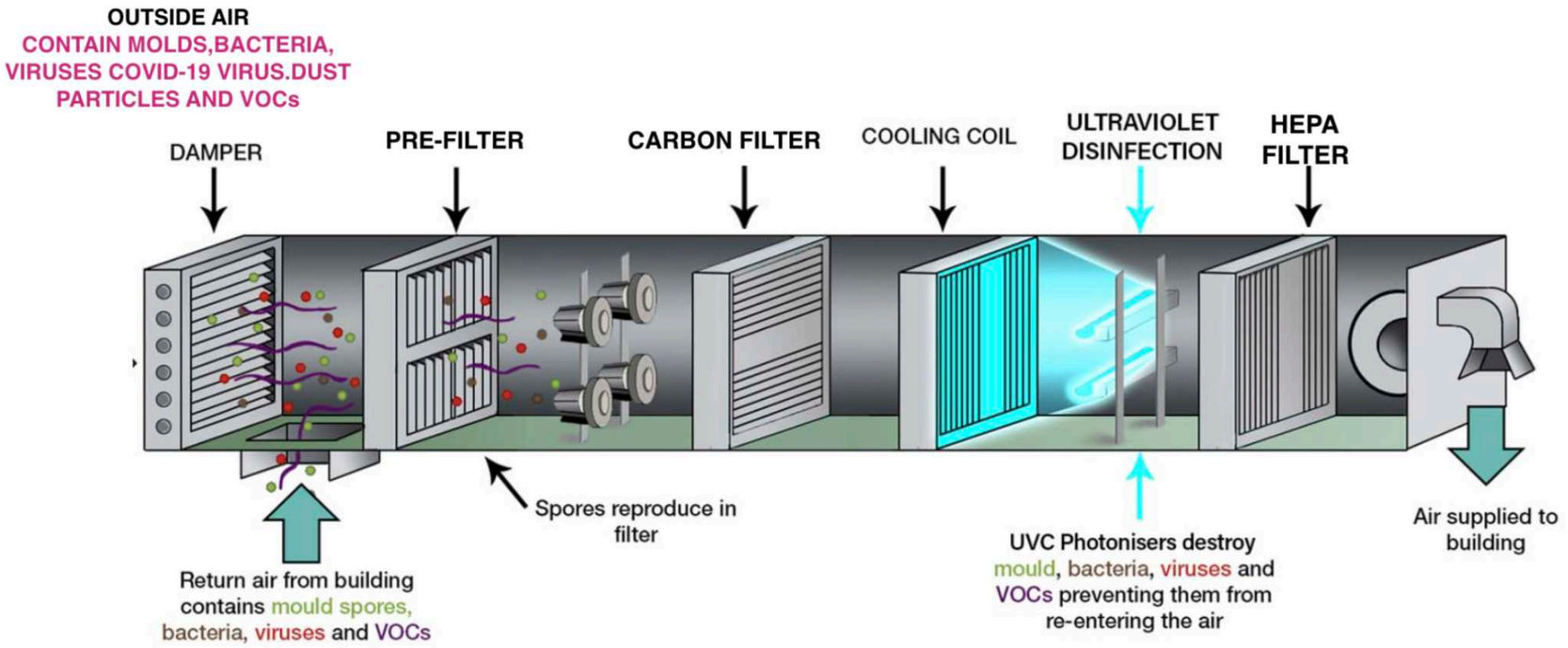
The IMARI HEALTH-PRO UVGIAIR HANDLING UNITS designed to reduce biofilm growth within HVAC systems in a practical and affordable way. The air handling units are equipped with micro filtration system consists pre filters, carbon filters and HEPA filters to eliminate particles contamination down to 0.3 micron, the units are equipped with specialized UV-C ultraviolet disinfection lights these UV germicidal emitters kills all bacteria, molds, viruses and COVID-19 strain. This HEALTH-PRO units are suitable for hospitals, malls, universities, schools, commercial and industrial buildings

**IMARI HEALTH-PRO UVGI AIR PURIFICATION AND DISINFECTION UNITS**

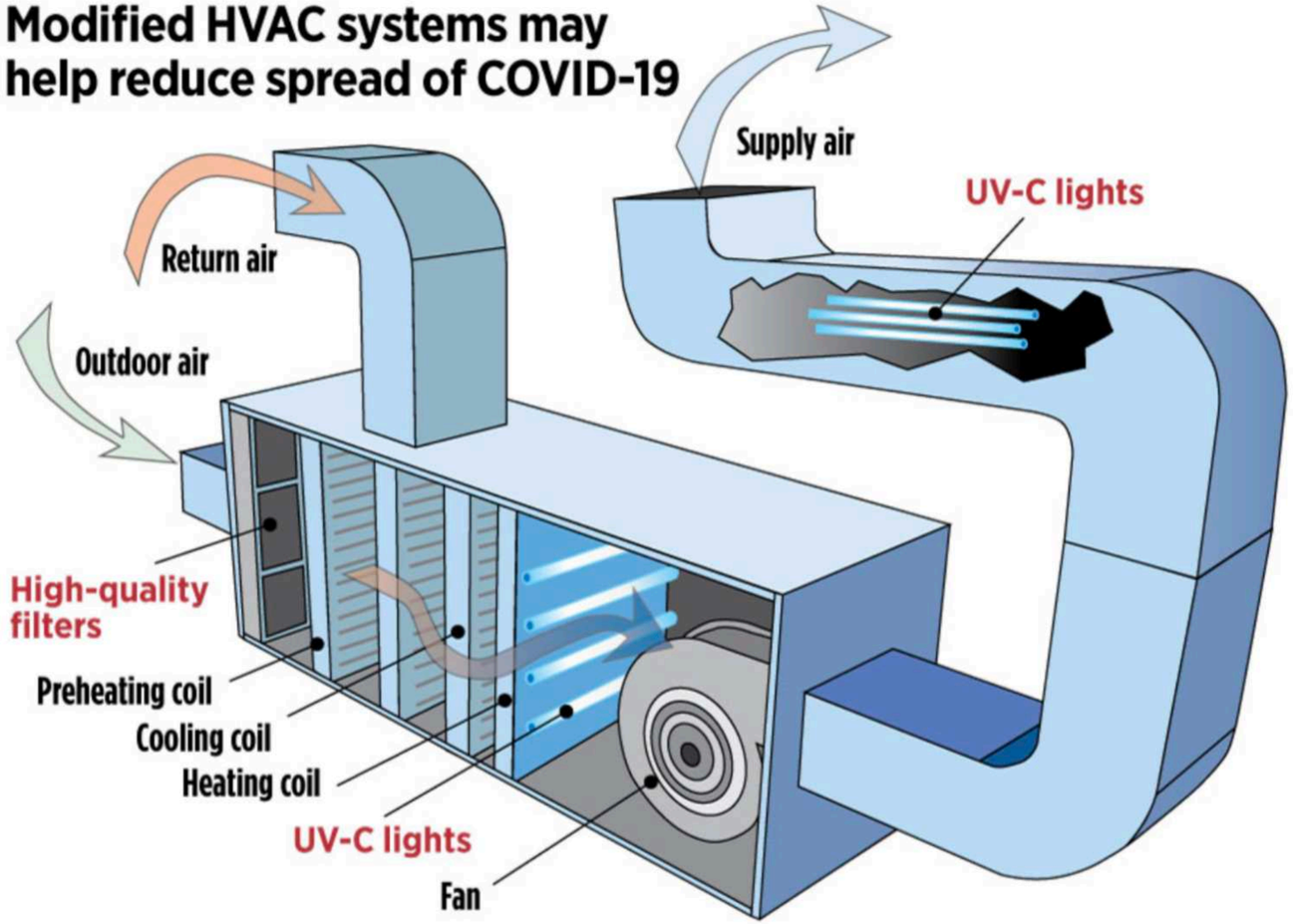


# Custom Made HVAC Air Handlers To Fight COVID-19 And Any New Strain

**Inefficient air-handling equipment may struggle to achieve the required indoor conditions During COVID pandemic, resulting in rising energy bills and increased maintenance requirement – not to mention an uncomfortable, unproductive and unhappy workforce. Contact IMARI And We Will Provide You With The Best Economic Solution**

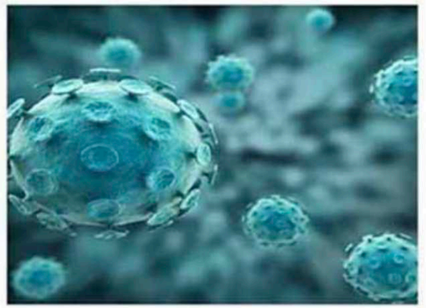


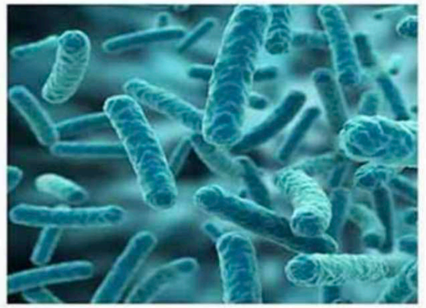
## Modified HVAC systems may help reduce spread of COVID-19

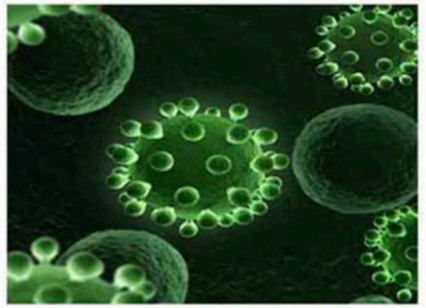



To reduce the potential spread of coronavirus inside buildings, IMARI will upgrading the heating, ventilation and air conditioning (HVAC) systems in schools, offices and other businesses. The goal is to dilute contaminants by increasing air flow from outside, catch microscopic particles with high-quality filters and kill or deactivate the virus with ultraviolet light or ionization systems.

# Home And Office UV-C  Disinfection Lamps
# Eliminate All Bacteria,Viruses And COVID-19





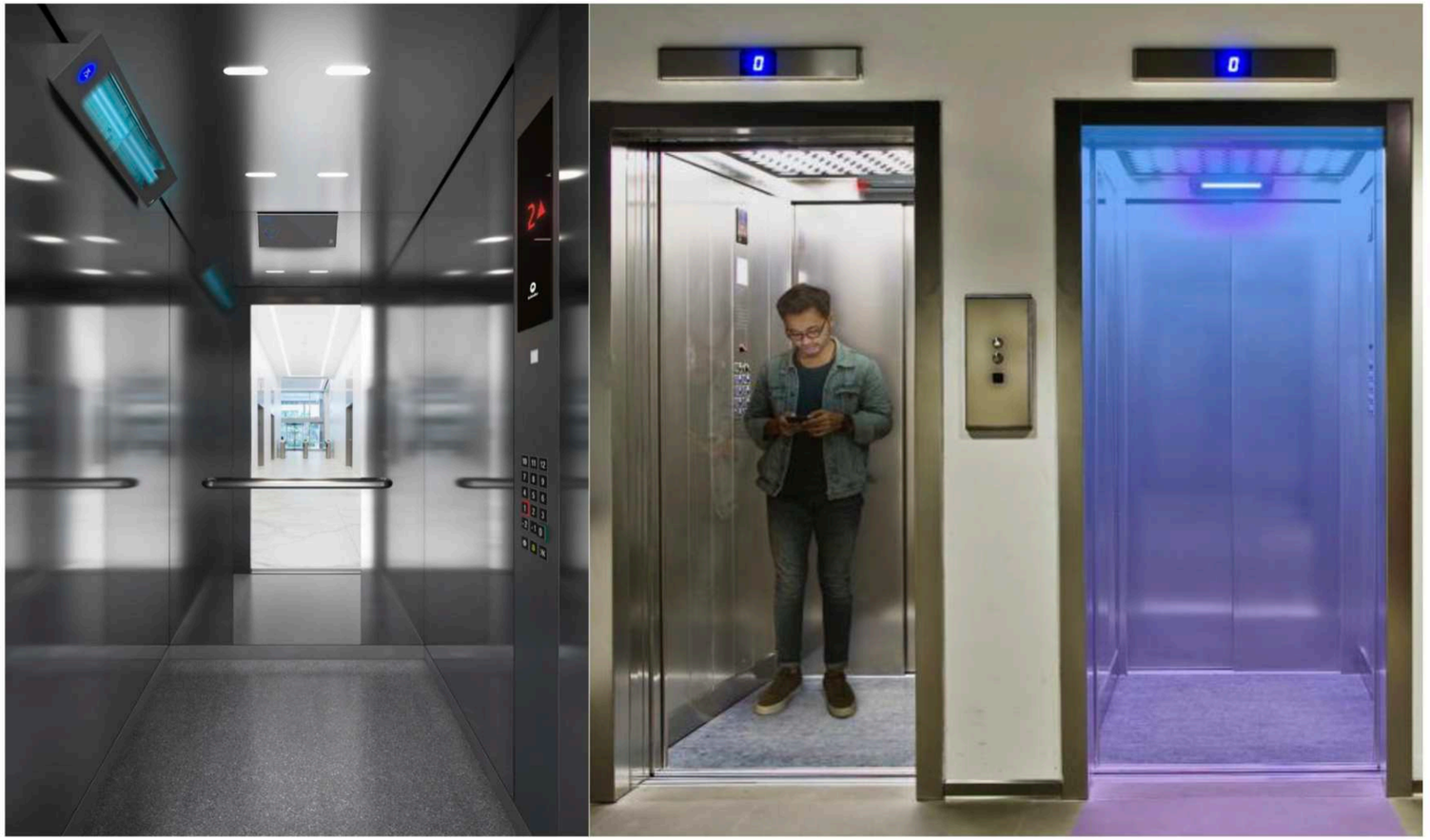


# Disinfect Entire Rooms with The IMARI-KILL GERM UV-C Surface Sanitizer Tower

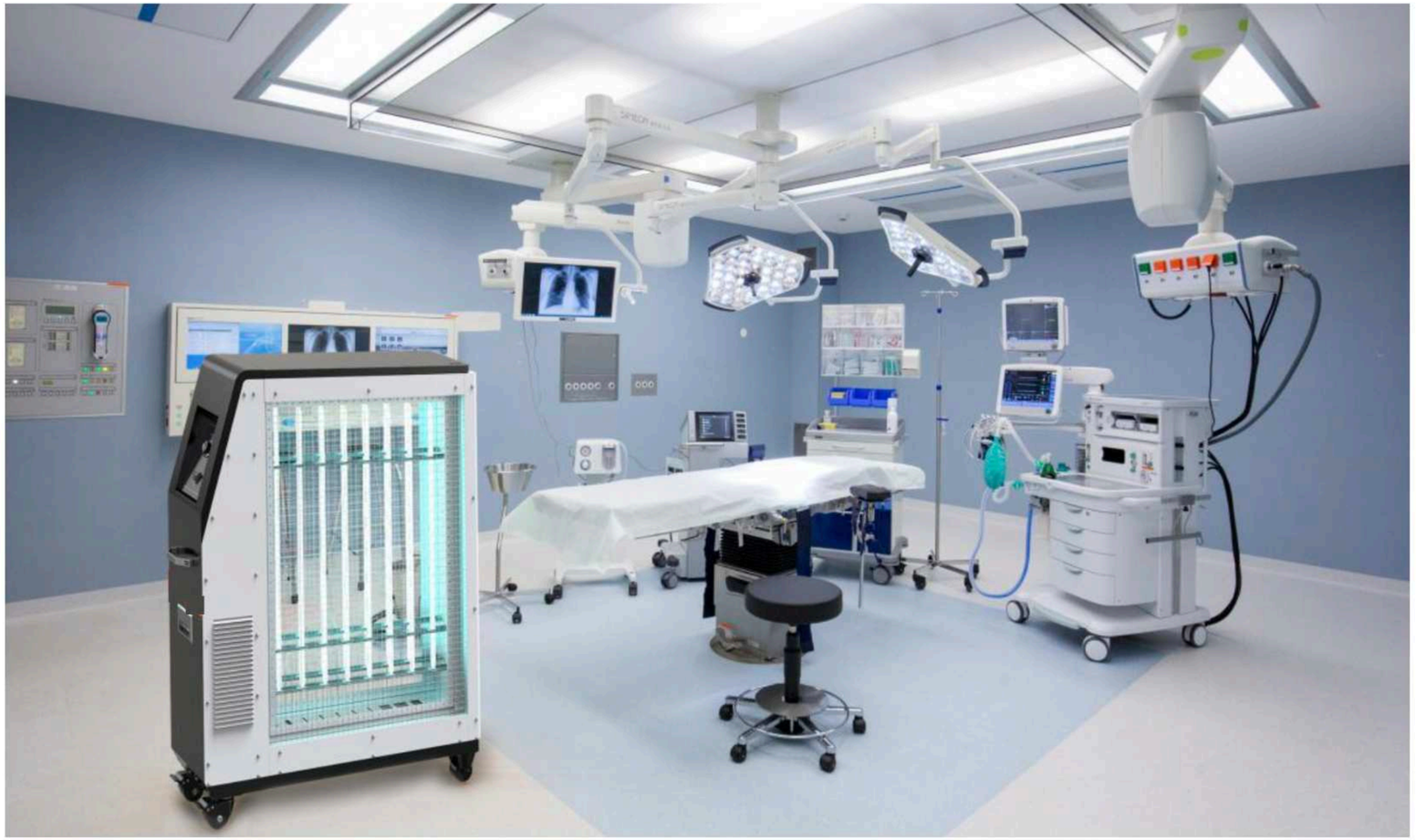
**The IMARI lamp tower  shines UVC disinfecting light in a 30 ft. circle to sanitize large rooms (up to 1000 ft²) in 360°**
**Simply place the unit in a room, choose your disinfection time, and turn the unit on. This prepare up the disinfection cycle, and will only start after you leave the room.**

**Once you leave, the tower turns on and the disinfection cycle begins. The UVC light disinfects the room for the duration of your chosen cycle. Then, when finished Apollo turns off and you come back to a clean and safe room.**


# The New Technology Of Elevator Disinfection
# Non Occupied Elevators Disinfection With UV-C

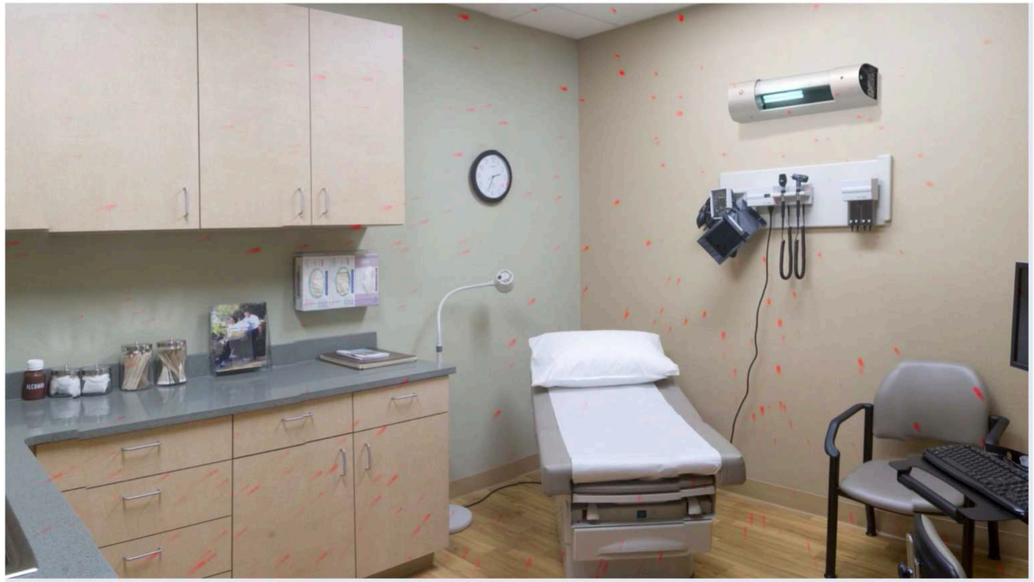


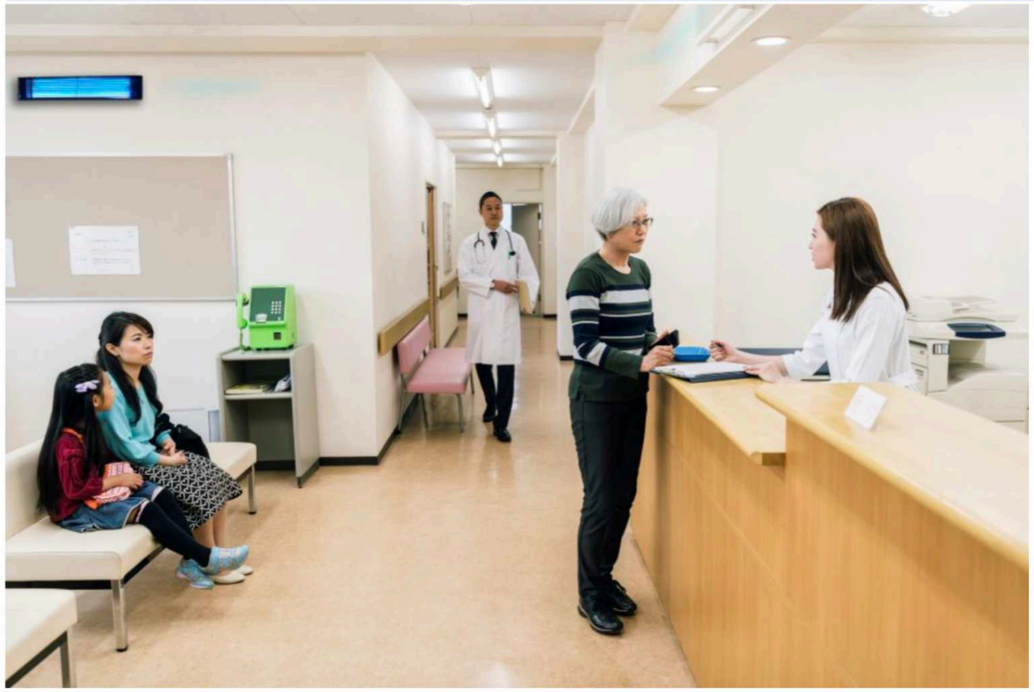
# Imari Mobile Hospitals UV-C Disinfection Trolly



# Hospitals And Doctors Offices Must Be Protected

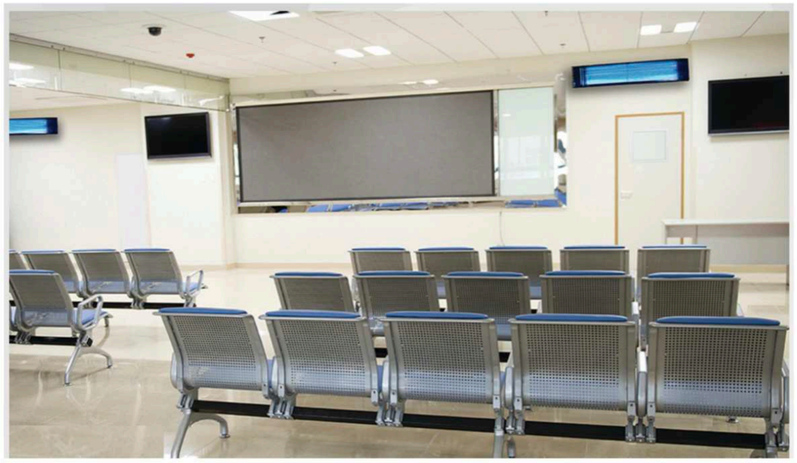
# UV-C DISINFECTION IN DOCTORS OFFICES





## UV-C Light Disinfection In Hotel Room

## UV-C Light Disinfection In Waiting Rooms

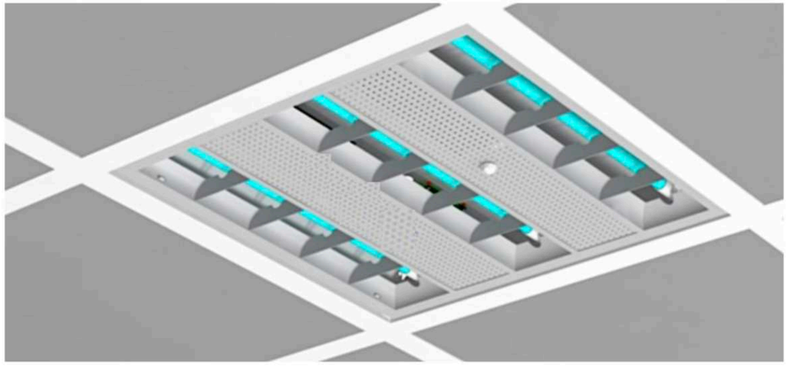


## Automated UV-C Hospital Rooms Disinfection

## Ultraviolet Radiation in the Operating Room

# IMARI New Concept

## Ceiling Mount UV-C Disinfection + HVAC Air Outlet

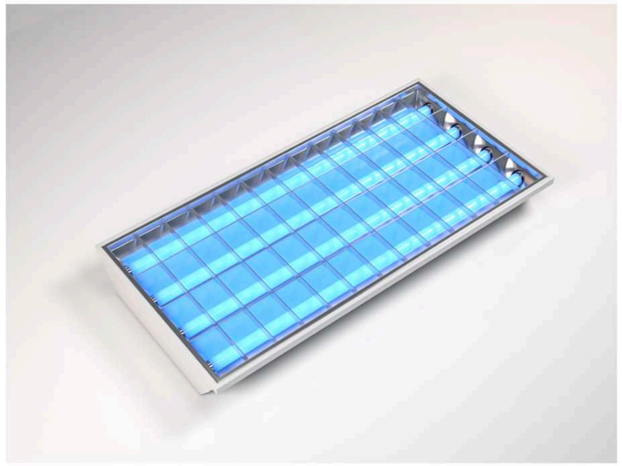


MARI air diffuser is a device that is designed to provide two main functions in the same time, UV-C disinfection lamps to destroy all bacteria, viruses and COVID-19 inside the rooms and air conditioning supply flow throughout the room. It works to increase the efficiency of air conditioning units by dividing and distributing cooled air. When an even airflow is maintained, drafts and hotspots in a room are eliminated, providing greater comfort to occupants, while increasing energy efficiency and reducing cost


## IMARI BLUE-WAVE CELLING MOUNT HVAC AIR DIFFUSER WITH INTEGRATED UV-C IRRADIATION DISINFECTION

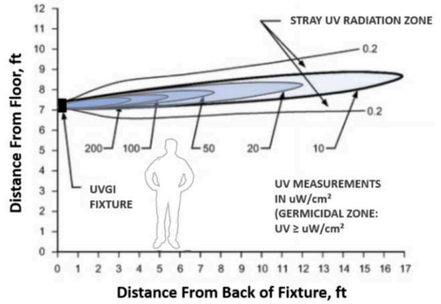
air diffuser is a device that is designed to provide uniform air flow throughout a room. It works to increase the efficiency of air conditioning units by dividing and distributing cooled air. When an even airflow is maintained, drafts and hotspots in a room are eliminated, providing greater comfort to occupants, while increasing energy efficiency. The Integrated ULTRAVIOLET LIGHT will disinfect the air from all germs, bacteria, viruses and COVID-19


## 4-UVC IRRADIATION LAMPS LIGHT FIXTURES WITH INTEGRATED MOTION SENSOR



# UV-C ROBOTS

Upper Air Room Disinfection

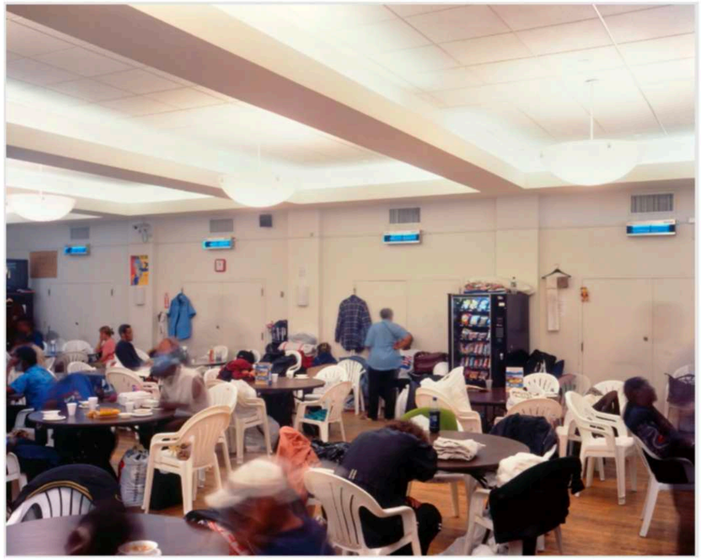



## IMARI Upper Ceiling Disinfection FixturesWith Germicidal UV Light

**The upper ceiling in-room UV-C devices can acutely treat vulnerable or high traffic rooms, such as healthcare waiting rooms, K-12 classrooms and university campuses to kill germs, bacteria, viruses and COVID-19. The natural conductive flow of air in the room circulates the sanitized air, from the existing HVAC system as well as the opening and closing of doors and human movement.This device series comes in three different sizes to match the approximate size of the rooms, multiple devices are recommended for areas larger than 300 sq ft.**

# UPPER ROOM UV- C DISINFECTION FIXTURES

## Upper Room Germicidal UV-C Light Fixtures For Eliminating Bacteria, Viruses And COVID-19 In Occupied Spaces



# Disinfect All Hospital Wheelchairs Using IMARI BLUE-RAY UV-C Disinfection Technology

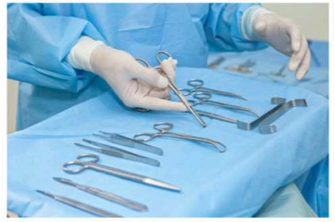
## IMARI UV-C Ultraviolet Irradiation chambers

The UV-CHAMBER is a high-efficiency chamber designed to create ultraviolet light irradiation conditions known to safely decontaminate contents while providing a safe work environment for the operator. High intensity UV-C lamps are positioned within the cabinet producing short wave ultraviolet light at 254 nm creating light emission conditions known to destroy exposed surface DNA of germs, bacteria and viruses, leaving evidence free of contamination prior to other forensic tests, analysis or procedures.

UV Chamber is suggested for its different utility in a wide range of medical clinics and labs

UV CHAMBER BENEFITS

Ultra violet Sterilizer can be effectively installed at different places like Operation rooms , ICCU, ICU, NICU. Post operative wards, trauma wards, mortuary etc. It is suitable for small laboratories where bacteria and virus -free air is desired to guard against cross infections from patients.



## SUN-RAY UV-C Hand Sanitizing Solutions

### Reduce the Spread of Viruses and Bacteria in Seconds

People fail to correctly wash their hands 97% of the time, even in a healthcare setting, healthcare providers clean their hands less than half of the times they should. Healthcare-Associated Infections (HAIs) continue to spread, leading to extended patient length of stays, death and steep financial penalties for healthcare facilities.
Improve hand sanitation best practices by using the clinically proven effectiveness of UV-C light. Handy UV-C Hand Sanitizing Solutions sanitize hands and other small objects such as eyeglasses and cell phones by killing microorganisms at the cellular level in seconds. The Handy products are a touch-free way to kill germs without messy and costly gels and alcohol refills that leave behind a residue. The Handy UV-C lamp provides 99.9% sanitation efficacy in three seconds.

## UV-C Disinfection Cabinets

Many industries are turning to UV-C light disinfection, for healthcare applications. The benefits of utilizing a germicidal ultraviolet light sanitizer for portable devices enables the destruction of pathogens including bacteria and viruses and COVID-19 by deactivating DNA and disabling their ability to multiply.

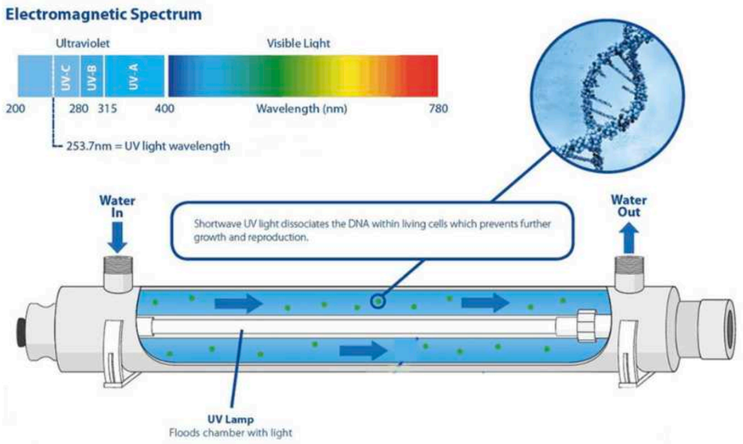
## UV Sterilizer and Disinfection Cabinet

UV Sterilizer and Disinfection Cabinet (UVSD) is a portable cabinet equipped with UV-C lights that kills up to 99.9% of bacteria and germs on items placed in the cabinet in minutes. he box is equipped with three UV-C lamps, protected by steel grids to prevent damage and a safety position to turn off the UV lamps when the door is opened.
Whenever the door is closed, UV lamps turn on and begin the disinfection of the internal space and target surfaces, The high intensity UV lamps are positioned within the cabinet producing short wave ultraviolet light at 254nm to destroy exposed surface DNA of bacteria, and viruses leaving evidence free of contamination.

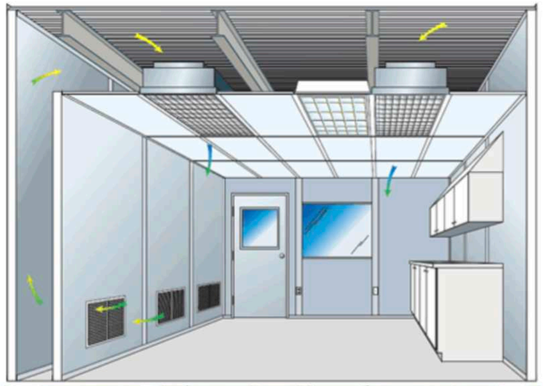
# UV For Water Disinfection

**UV Disinfection System is an extremely effective way to combat microbial contamination in water. UV Disinfection Systems are used in many different applications ranging from the purification of drinking water in individual homes , food processing and supermarkets .**

- **Bio- Pharmaceutical – Water used in Pharmaceutical and healthcare products and for CIP (Cleaning in Place) must be free of chemicals like chlorine, ozone, and pathogens. Most pharmaceutical companies depend on UV systems for water disinfection.**
- **Cosmetics – Water that is free of microorganisms and toxins ensure quality and enhance the shelf life of cosmetics. UV Sterilization is the preferred choice for the cosmetic industry across the globe.**
- **Centralized Drinking Water – A UV drinking water disinfection system is an easy, affordable solution to ensure pure water in each and every tap of your home or office**

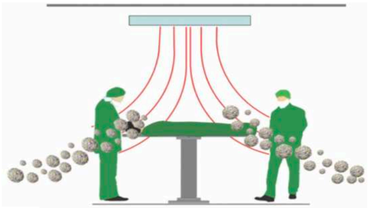


# HOSPITALS CLEAN ROOMS OPERATING ROOMS



## Clean Rooms For Hospital Operating Rooms

The global market for cleanrooms is expected to rise at an average rate of almost 15 percent each year between 2020 and 2025. The pharmaceutical and medical device industry is projected to make up much of this demand, as they need cleanroom environments to limit exposure to dust, airborne particulates chemicals, viruses and COVID-19 virus . As thousands of patients die of infections developed during a hospital stay, medical facilities may also consider investing in cleanroom technology, such as air cleaners, to prevent the chance of infection.

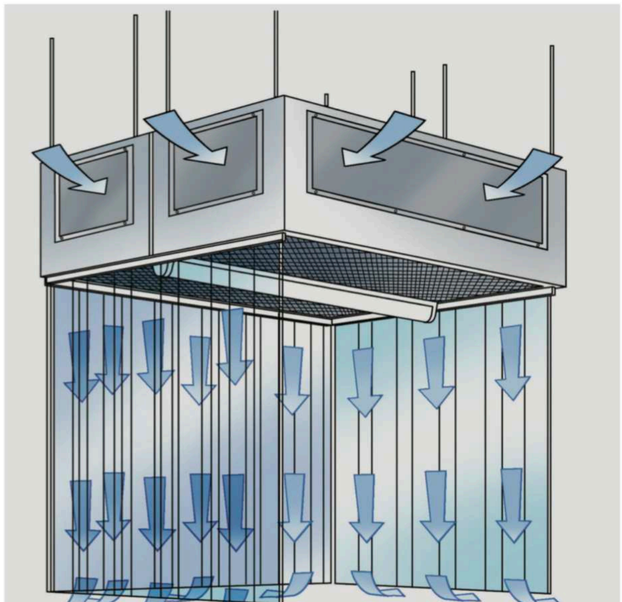


## Modular Cleanroom Systems

The IMARI clean room System is an all-purpose solution for creating a cleanroom or environmental enclosure that will fit almost anyone's needs. Designed for applications from ISO 4 to ISO 8 cleanroom environments, the system is a versatile yet cost effective solution for simpler applications involving basic process segmentation or control over air quality, temperature, or humidity.

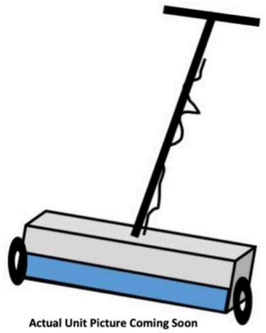
### Soft Wall Clean Rooms

A modular softwall cleanroom from Technical Air Products is a flexible, cost-effective way to create a clean air environment. allows you to quickly and easily turn any space into a high-performance cleanroom.. Our modular cleanroom design makes it easy to install and move, and economical to add on to.

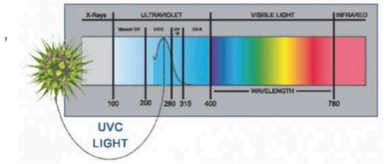


## *UV-C Vacuum Disinfection For Floors, Seats, Beds And All Services*


**HOME VACUM WITH UV - C**



Actual Unit Picture Coming Soon




## *Furniture And Beds UV-C Disinfection*

## Whole Area Air Purification And UV Disinfection System

**Enjoy Super Clean Air in Operating Room, large office area, universities, schools and restaurants using IMARI Air Purification System with 3-Stage Portable Air Purification! That Easily Attaches to Air Handler. Includes MERV pre-filter, HEPA 13 Filtration, charcoal filtration Deluxe Twin Bulb Germicidal UV Light, the system will Remove Odors, Dust, Smoke, Chemicals, VOC's, and Kill Bacteria, Mold & Viruses for Maximum Allergy and Asthma and COVID-19 elimination**

# Air Treatment System For Hospitals

## Infectious Disease Control With Ultraviolet Light

Non-ozone generating. Photocatalytic oxidizing (PCO) technology neutralizes stubborn odors, fumes, and toxic chemicals. **UV-C light kills airborne bacteria, viruses, and mold**. Removes up to 99.9% of allergens down to 0.3 microns. Helps neutralize NOx and carbon monoxide and alerts you when filter and UV lamp need replacement.Used For Hospitals, Hotels, offices, Schools Factories

# AIR FILTRATION WITH INTEGRATED UV- C

# IDEAL FOR ALL PLACES OF GATHERING

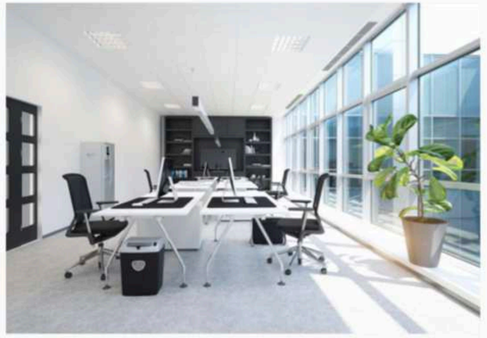
## HOSPITALS / LABS

Leading hospitals and Laboratory settings are combatting contaminated air with a proven, patented UV-C air purification system. Decrease the possibility of cross contamination in your labs.

## EDUCATION

Create a safe environment for faculty and students in classrooms settings.

## COMMERCIAL

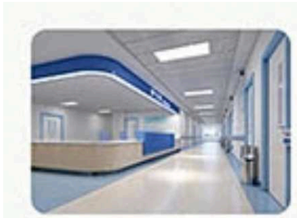


An outbreak of any kind is never conducive to productivity in the workplace. A sanitized work environment means employees feel safer at the office.

## HOSPITALITY INDUSTRY

Crowded gathering places filled with strangers represent the largest opportunity for the spread of a virus or bacteria. Give patrons peace of mind by safeguarding these environments with an air sanitizing solution.

# Applications



Hospitals

Schools

Communities

Factories

Enterprises and institutions

Construction sites

Supermarkets

Shopping malls

Stations

Airports


Banks

Hotels

KTV

Exhibitions