



Delivering state of the art  
UltraViolet Germicidal  
Irradiation (UVGI)  
products. Let's fight the  
Corona Virus together



# VITAL AIRE UV

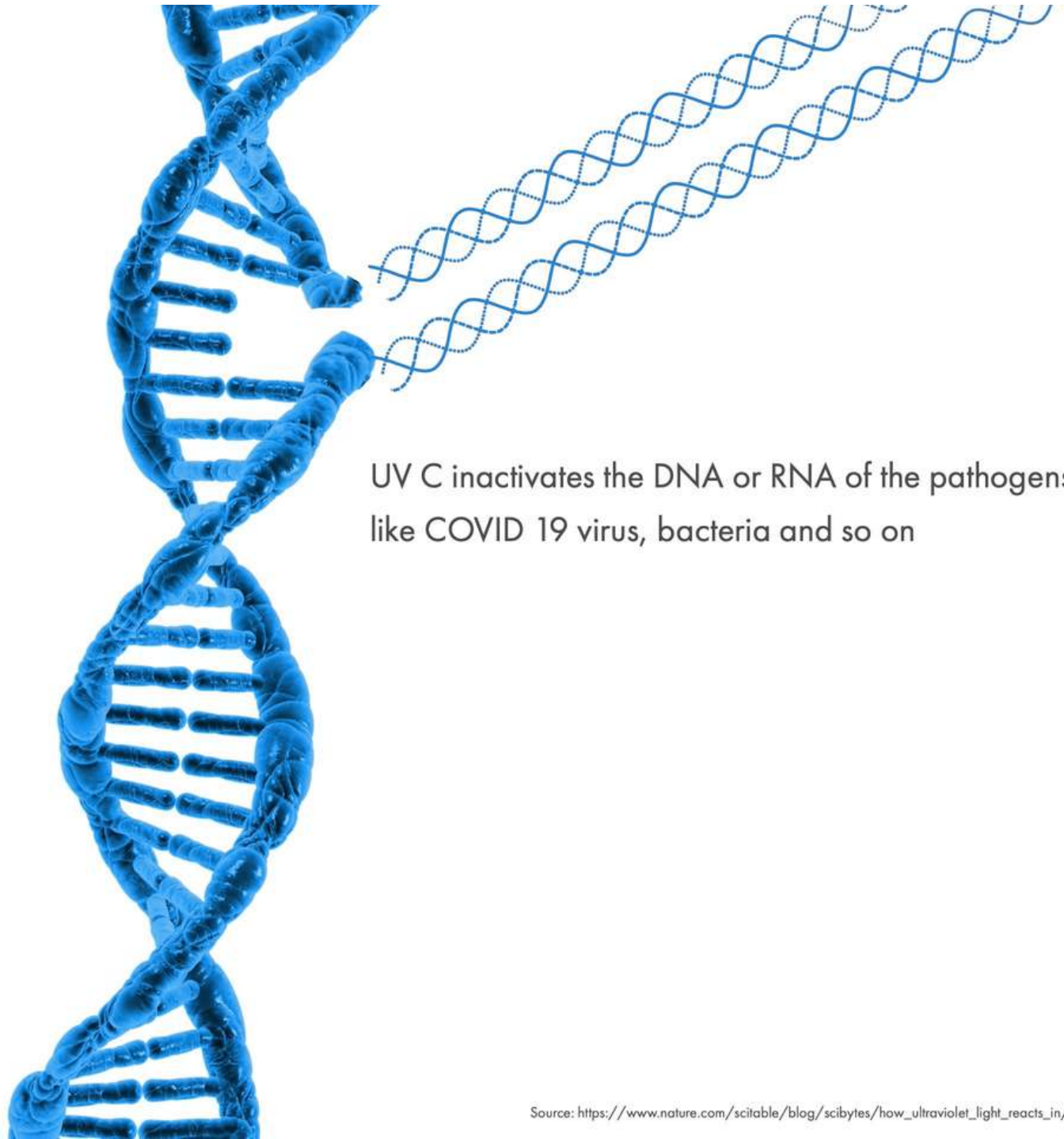
Effectively Disinfect Air With Power Of Ultraviolet Light

[www.finsenritter.com](http://www.finsenritter.com)

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# HOW DOES ULTRAVIOLET GERMICIDAL IRRADIATION WORK?

UV has been in use for germicidal irradiation purposes for decades now. It is a proven technology for disinfection uses.



UV C inactivates the DNA or RNA of the pathogens like COVID 19 virus, bacteria and so on

Source: [https://www.nature.com/scitable/blog/scibytes/how\\_ultraviolet\\_light\\_reacts\\_in/](https://www.nature.com/scitable/blog/scibytes/how_ultraviolet_light_reacts_in/)

# UVGI vs. Chemical Disinfection

## Overview

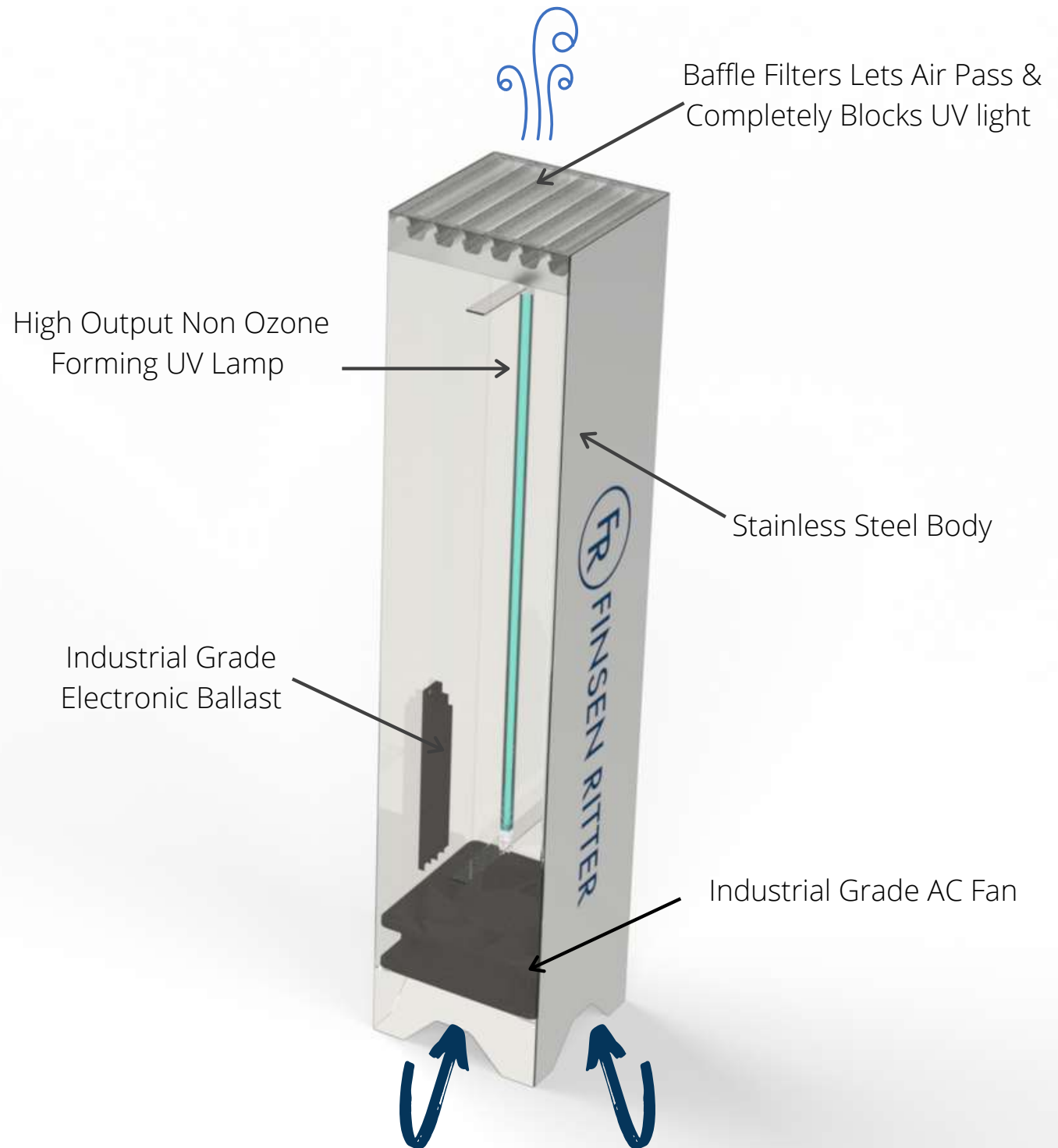
We at Finsen Ritter are Ultraviolet Disinfection Experts. We deliver to our customers the state of the art Ultraviolet Germicidal Irradiation(UVGI) devices.



	Chemical Disinfection	UVGI
Cost effectiveness <small>[Rs. 6 for whole day disinfection; upto 40 times cheaper than Chemical disinfection]</small>	✗	✓
Non Flammable	✗	✓
Continious Air Disinfection	✗	✓
Chemical Free & Eco Friendly	✗	✓
No Filter Changes	✗	✓
No Human Intervention	✗	✓

# WORKING PRINCIPLE

How Air Disinfection Works



# TECHNICAL SPECIFICATIONS & FEATURES

Specifications	Vital Aire 75	Features	Description
Power	75 W	Ozone Formation	Non Ozone Forming
Fan Power	50 W	Speed Regulator	Yes
Total Power	125 W	24/7 Operations	Yes
Weight	7.1 Kg	Stainless Steel	Yes
UV Wavelength	254 nm	Heavy Duty Electronic Ballast	Yes
Power to UV-C efficiency	34%	Baffle Filters	Yes
Operating Voltage	220 V AC 50 Hz		
Noise	Max 56 dBA		
Dimensions	1200 x 220 x 200		
Lamp Life	9000 hr		
Air Flow	360 CFM		



# APPLICATIONS

One product, many uses. Find out if this product can be useful for you.



Offices



Clinics & Labs



Co-working spaces



Gyms



Saloons & Spa



Shops & Stores



## FREQUENTLY ASKED QUESTIONS

### Does it work on Corona Virus (SARS CoV-2)?

Yes. UVGI inactivated the Corona Virus on sufficient exposure.

### WHAT IS UV-C and UVGI?

Ultraviolet radiation is divided into three categories UV-A (315 - 400 nm), UV-B (280 - 315 nm) & UV-C (200 - 280 nm). UV C is the light with the higher frequency and smaller wavelength. UVGI refers to radiation with specific wavelength (254 nm), scientifically proven to kill and inactivate most harmful Microbial Pathogens

### WILL UV-C DEGRADE OBJECTS IN THE ROOM?

UV-C is a short wavelength light and does not penetrate most objects. Hospital room disinfection does not accumulate sufficient exposure time to cause any material degradation.

## IS UV-C LIGHT HARMFUL?

UVC radiation refers to wavelengths shorter than 280 nm. These wavelengths are entirely absorbed by our atmosphere and no natural UVC radiation reaches the surface of the earth. These wavelengths are available to us through artificial sources, such as UVC LEDs or mercury lamps. UVC does not penetrate the skin and is almost entirely absorbed by the outer dead layer (stratum corneum) and outer skin (Outer Epidermis) and negligible radiation reaches the living cells of the skin. Human Eyes are most susceptible to UVC exposure due to absence of an outer dead protective layer of skin. Exceeding the threshold level of exposure will cause a painful irritation of the cornea similar to looking directly at Sun. This damage is painful but transitory with corneal shedding and replacement in a day or two. The intensity from point sources like UVC LEDs falls off as 1 over distance squared, and once it gets past the scattering length, it falls off exponentially. This means that the further away a UVC source from a human, the lesser dose they are exposed to.

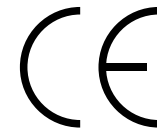
## FREQUENTLY ASKED QUESTIONS

### HOW DOES IT WORK?

Multiple Scientific Papers and Research Studies prove conclusively that when Pathogenic organisms are irradiated with UV-C light with specific wavelength(UVGI), The UV Photons interact Photochemically with DNA and RNA molecules. Photon absorption by DNA or RNA (specifically by thymine bases) is known to cause inactivation of the DNA or RNA double helix strands through the formation of thymine dimers. If enough of these dimers are created in DNA, the DNA replication process is disrupted and the organism cannot replicate rendering it inactive

### SHOULD I CLEAN MY DEVICE?

Yes - depending on the surrounding environment, UVC lamps should be checked periodically (approximately every three months) and can be cleaned with a dry cotton cloth or paper towel.



For more information visit:  
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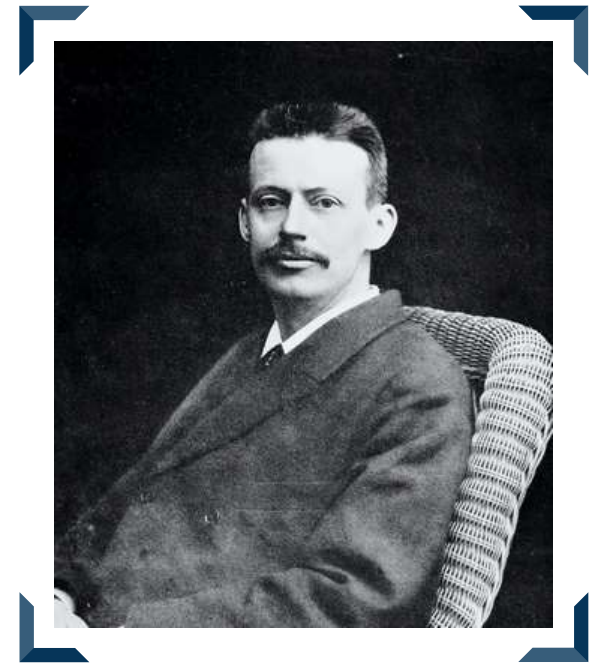
# OUR TRIBUTE



## NIELS RYBERG FINSEN

*15 December 1860 – 24 September 1904*

*He was one of the pioneers to use UV light in medicine. In 1903, he was awarded the Nobel Prize in Medicine and Physiology "in recognition of his contribution to the treatment of diseases, especially lupus vulgaris, with concentrated light radiation, whereby he has opened a new avenue for medical science."*



## JOHANN WILHELM RITTER

*16 December 1776 – 23 January 1810*

*Johann Wilhelm*

*Ritter was a German chemist, physicist and philosopher. He was one of the first to document the UV rays. In 1801, after hearing about the discovery of "heat rays" (infrared radiation) by William Herschel (in 1800), Ritter looked for an opposite (cooling) radiation at the other end of the visible spectrum. He did not find exactly what he expected to find, but after a series of attempts he noticed that silver chloride was transformed faster from white to black when it was placed at the dark region of the Sun's spectrum, close to its violet end. The "chemical rays" found by him were afterwards called ultraviolet radiation*

