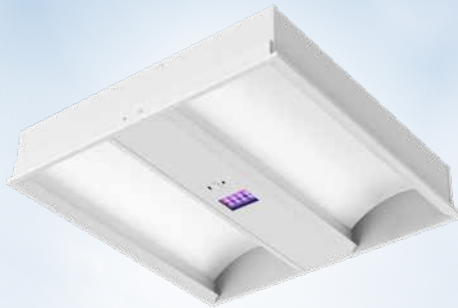


Simulated

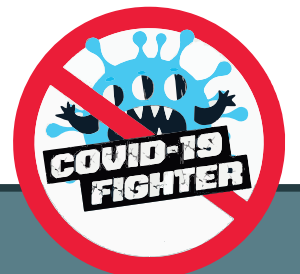


ARTEMIS FarUV

Protect your family, staff and customers with the latest in FarUV disinfection technology!

— Be safe. Breathe easy. —

Stylish • Affordable • SAFE!





Downlight222



Lunar222



Portable222

LOOK AT THESE FEATURES...

- ✓ Low energy consumption/ energy saving LED lighting.
- ✓ Skin and eyes friendly.
- ✓ Eco-friendly, no noise.
- ✓ Air sterilisation and functional lighting at the same time.
- ✓ Free from harmful wavelengths or ozone.
- ✓ Long lifespan / lasts up to 10000 hours.
- ✓ High effect, and low cost.
- ✓ Can be controlled wirelessly.
- ✓ Easy to install.
- ✓ Destroys the RNA and DNA of all known airborne bacteria and viruses.
- ✓ Scientifically tested for safety and efficiency.



Kills up to 99.9% of all airborne pathogens including COVID-19, Measles, E-Coli and Flu.

Stylishly fits into any environment with the additional benefit of sterilised airflow.

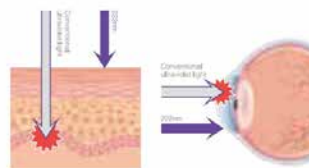
We offer **portable** sterilisation units, in a range of options to suit any application. Floor, stand or ceiling mounted. Available in White, Grey and Black. **Neat. Simple. Easy!**
Ask us for more information...



Safe for human cells (Difference in penetration depth)

Filtered Far UV-C Ultraviolet light

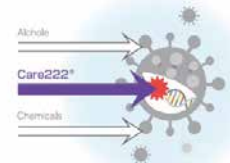
The 222nm wavelength used with Care222 technology is absorbed by the dead skin layer of the stratum corneum and the upper layer of cornea of the eye.



Why is UV disinfection effective?

Why is UV disinfection effective?

UV light works by disrupting the DNA or RNA of microorganisms such as viruses or bacteria so they cannot replicate. Unlike with chemical treatments or antibiotics, bacteria and viruses cannot become resistant to damage from ultraviolet light.



Joint development by Ushio and Columbia University

Joint development by Ushio and Columbia University

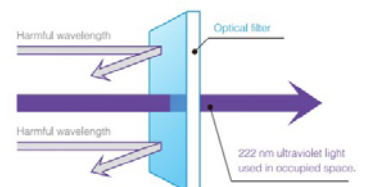
Care222 technology is based on research by Ushio, Inc. a light source solutions company, and Columbia University Center for Radiological Research, a leading research lab for UV irradiation.



Filtering of harmful UV wavelength (Maybe used in occupied space)

Filtering of harmful ultraviolet wavelength (Maybe used in occupied space)

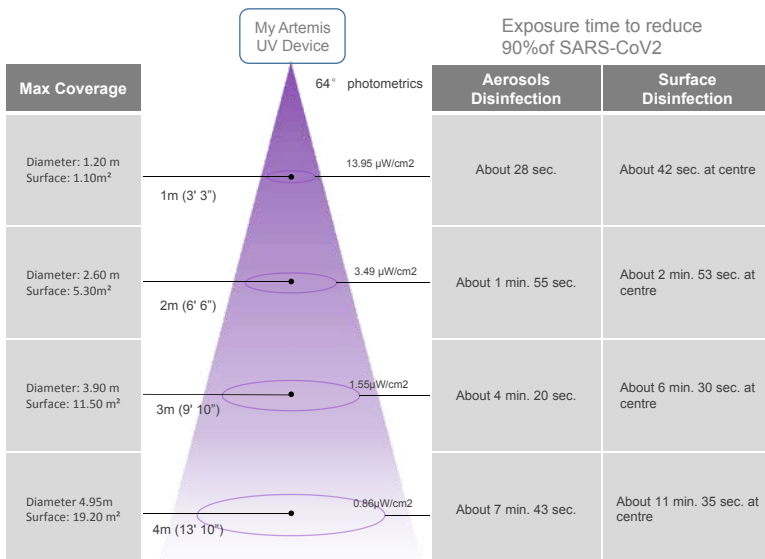
Care222 is a Far UV-C disinfection technology using 222nm excimer lamps combined with an optical filter, which blocks wavelengths above 230nm that can be potentially harmful to human skin and eyes.



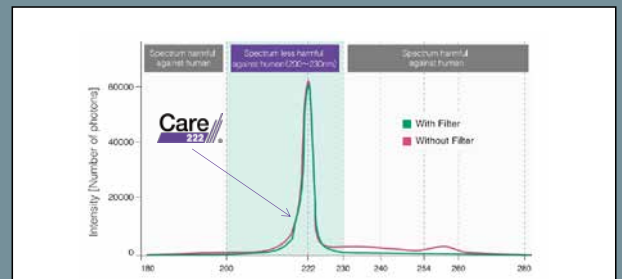
Simulated



Exposure time with Artemis UV for SARS/ Covid-19

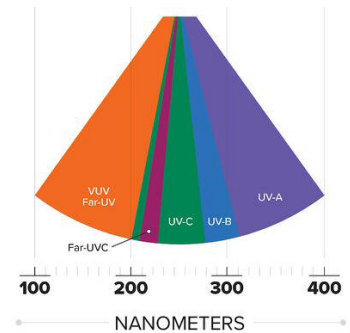


Light spectrum distribution



Should be the best far UVC light source in the market. Care222 has global patent for filtered far UVC technology, and most of the scientist teams used the filtered far UVC devices to do the experiment and prove the safety and efficacy of this technology. There's no harmful wavelength leakage, which is much safer than the other so called far UVC products in the market. Most Far-UVC suppliers do not sell lamps with filters, and can therefore not make safety claims based on research, despite being below regulatory threshold limit values.

ULTRAVIOLET LIGHT SPECTRUM



- | VUV Far-UV | Far-UVC | UV-C | UV-B | UV-A (Near UV) |
|---|---|---|--|---|
| <ul style="list-style-type: none"> • 100nm-200nm • Medical equipment • Nanofabrication • Photochemistry • Spectroscopy | <ul style="list-style-type: none"> • 207nm-222nm • Germicidal • Most effective for disinfecting • Safe for skin and eyes • Sensing | <ul style="list-style-type: none"> • 200nm-280nm • Germicidal • Most effective for disinfecting • Sensing | <ul style="list-style-type: none"> • 280nm-315nm • Curing • Tanning • Medical Applications | <ul style="list-style-type: none"> • 315nm-400nm • Printing • Curing • Lithography • Sensing • Medical Applications |

Simulated



Some of the common pathogens that may spread via airborne transmission and are inactivated when treated with correct dosage of UV Lighting:

- ✓ Anthrax
- ✓ Aspergillosis
- ✓ Blastomycosis
- ✓ Chickenpox
- ✓ Adenovirus
- ✓ Enteroviruses
- ✓ Rotavirus
- ✓ Influenza
- ✓ Rhinovirus
- ✓ Neisseria meningitidis
- ✓ Streptococcus pneumoniae
- ✓ Legionellosis
- ✓ Measles
- ✓ Mumps
- ✓ Smallpox
- ✓ Cryptococcosis
- ✓ Tuberculosis
- ✓ Bordetella pertussis (Whooping Cough)
- ✓ Severe acute respiratory syndrome (SARS1-2)
- ✓ Middle East Respiratory Syndrome (MERS)
- ✓ Coronavirus (COVID-19)

This is a non-exhaustive list that only encompasses some of the common diseases that have been implicated in airborne transmission. A special note to be made is regarding COVID-19, the 21st-century pandemic which is spread through airborne routes (among other routes). Active measures to prevent airborne transmission have been shown to curb its spread.



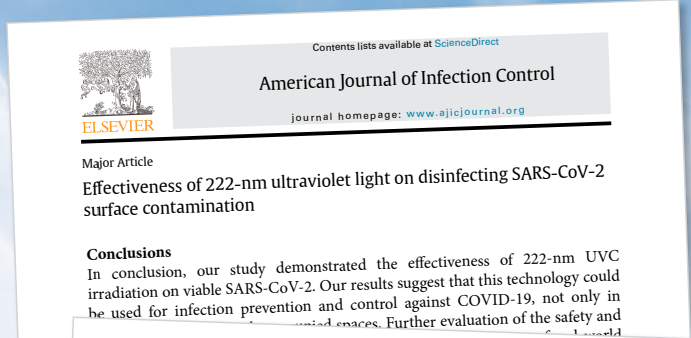
REPORTS

The Internet is rife with articles explaining the importance and role Far-UV products will have in keeping people safe and the eradication of harmful airborne pathogens in our environment.

Product specifications



	Lunar	Downlight	Mobile
Input voltage	AC100-240V / 50/60Hz		DC24V
Power consumption	45W	25W	13W
Luminous flux/ Colour temp/ Colour rendering index	3600lm / 5000k / Ra80	800lm / 5000k / Ra80	-
LED lifespan	40,000 hours		
Care222 lifespan	3000 hours		
External/ Installation hole dimensions	595x595x-100mm / 595	ø170x121.5 / ø150	100x113x-155mm
Weight	4.3kg	1.45kg	1.0kg
Operation mode	Occupied mode (ceiling height 3m or 4m) or unoccupied mode		Occupied/ unoccupied
Lighting mode	LED lighting & UV irradiation / UV irradiation only / switch operated		
Reflective mode	Ultra fine foamed light reflective material (MCPET)		
Wavelength/ UV intensity	222nm / 2.5W/m ² (D=50mm)		



Conclusions
In conclusion, our study demonstrated the effectiveness of 222-nm UVC irradiation on viable SARS-CoV-2. Our results suggest that this technology could be used for infection prevention and control against COVID-19, not only in public spaces. Further evaluation of the safety and effectiveness of this technology is needed.

Kobe University-Ushio Inc. Joint Study Finds Repetitive Irradiation with 222 nm UV-C Does Not Cause Skin Cancer
16th April 2020



Highlights

- The research study demonstrated for the first time in the world that repeated irradiation of 222 nm ultraviolet radiation (UV-C) does not cause skin cancer when it was applied to mice with extra susceptible skin.
- The results of the research suggest that repeated irradiation of 222 nm UV-C is also safe on human skin and eyes.
- The 222 nm UV-C lamp unit used in the research included an optical filter to remove almost all but the required 222 nm wavelength. Irradiation with this lamp unit caused no onset of skin cancer or cataracts*1 to the mice used in the research, which have a high susceptibility to UV radiation.

Study Suggests Far-UV Light Could Save Us from the Next Pandemic

Far-UV-C is a shorter wavelength than the typical UVC light that is known to kill pathogens. Because of the shorter wavelength, it can't penetrate living skin or eye cells. However, it is still effective at killing bacteria and viruses. About a decade of studies have demonstrated that far-UV-C is safe for people while able to kill airborne bacteria and viruses. Earlier studies have already demonstrated far-UV-C's ability to kill SARS-CoV-2 and other coronaviruses, influenza viruses and drug-resistant bacteria.



For further information, contact:



148 Ellis Street,
Frankton, Hamilton, NZ

Phone: 0800 577 722
Email: jay@jsr.co.nz
Web: www.jsr.co.nz

