FIRST UVC
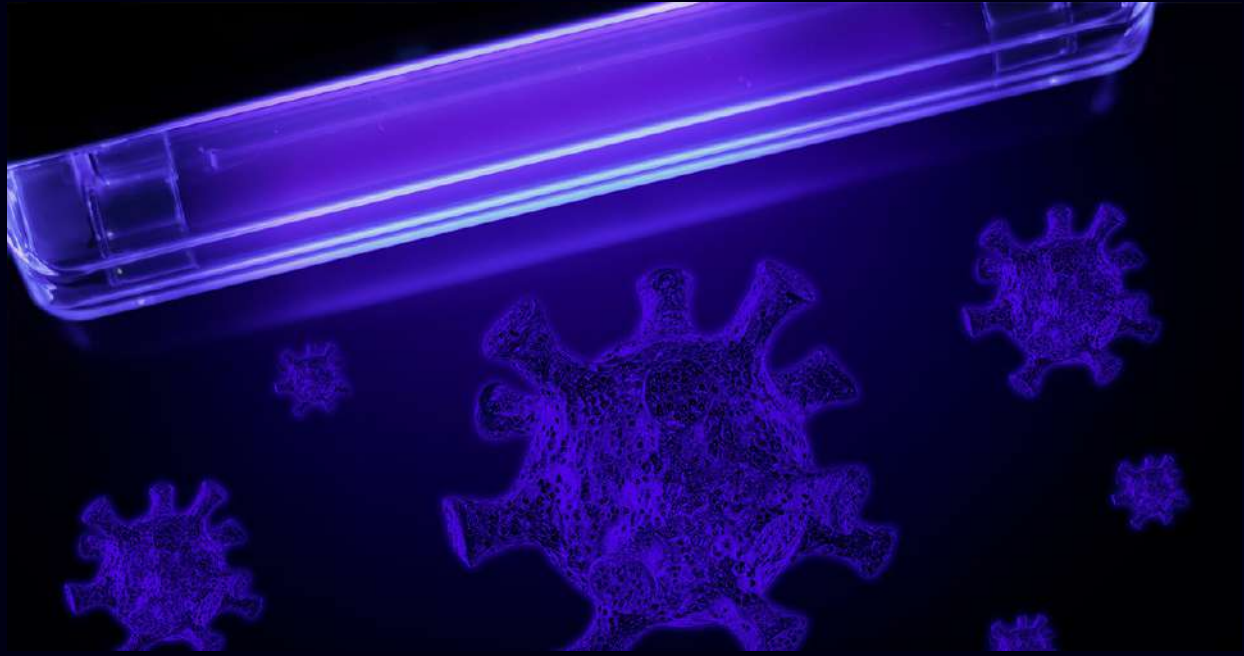FAR UVC LIGHT 222nm

Far UVC 222nm
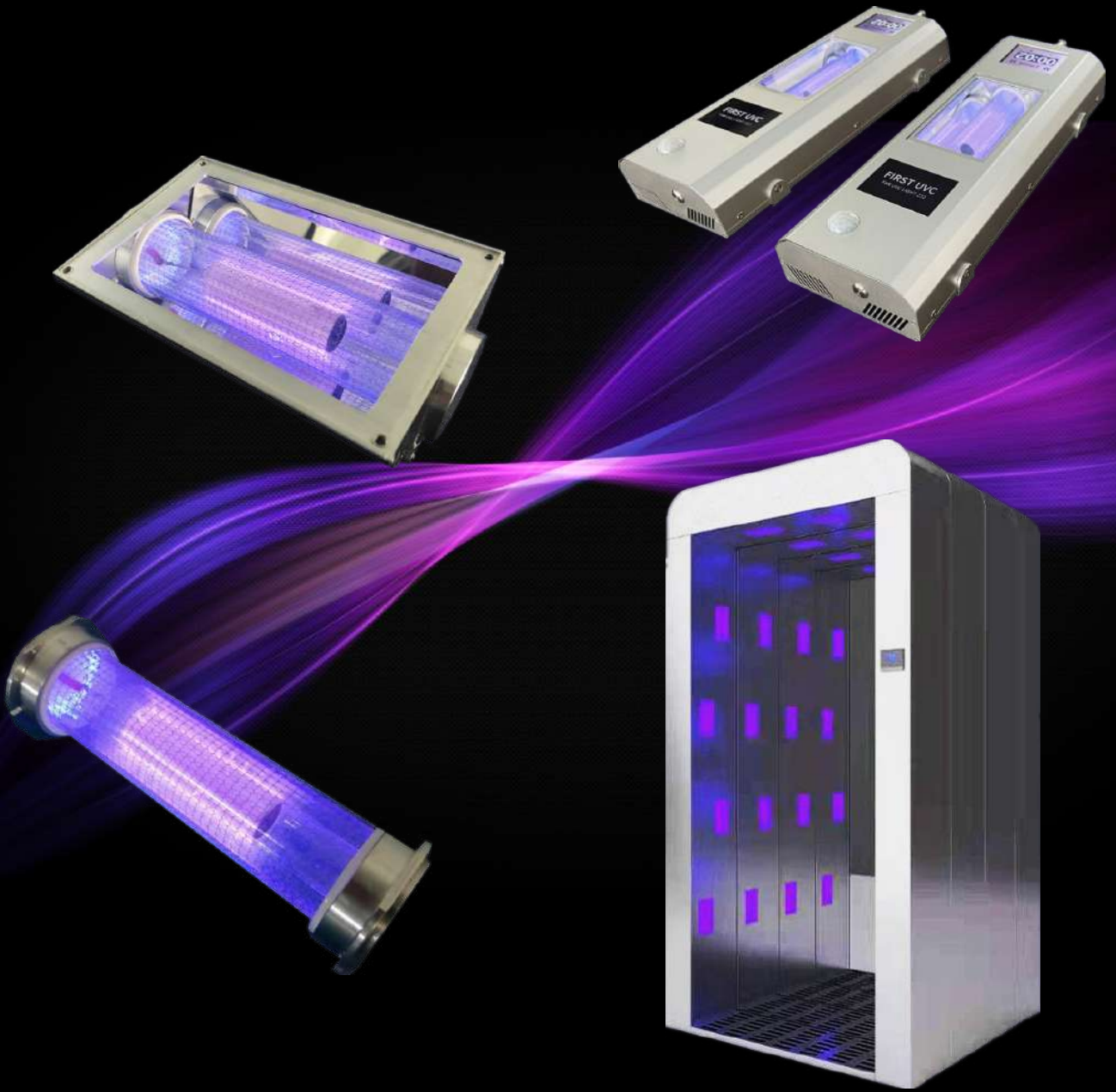## Enterprise Solution

We Connect Everything to improve the quality of life
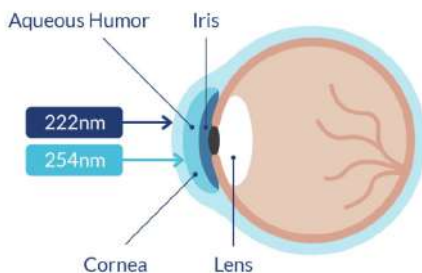
SHINETECH   CARROT HOME

Authorized distributor of FIRST UVC

Products

Conventional 254nm UVC vs 222nm Far-UVC

Ultraviolet radiation C (UVC) is defined as 100-280nm wavelengths UV. UVC from solar UV cannot reach the surface of the earth, because this range of UV is absorbed by the ozone layer. Conventional germicidal UVC light (254nm wavelength) can be used to disinfect unoccupied spaces such as empty hospital rooms or empty subway cars, but direct exposure to these conventional UV lamps is not possible in occupied public spaces, as this could be a health hazard

As an alternative, far-UVC light (207-222nm) has been reported that it efficiently kills pathogens such as Coronavirus potentially without harm to exposed human tissues. This is because, due to its strong absorbance in biological materials, far-UVC light cannot penetrate even the outer (non-living) layers of human skin or eye; however, because bacteria and viruses are of micrometer or smaller dimensions, far- UVC can penetrate and inactivate them.

Continuous low dose rate far UVC light in indoor public locations is a promising, safe and inexpensive tool to reduce the spread of airborne-mediated microbial diseases. Bases on the latest research results, continuous far –UVC exposure in occupied public locations at the current regulatory exposure limit (~3MJ/cm square per hour) would result in 90% viral inactivation in 8 minutes, 95% in 11 minutes, 99% in 16 minutes and 99.9% inactivation in 25 minutes.

References :
https://www.eurekalert.org/pub_releases/2020-04/ku-riw040720.php
https://www.ledinside.com/news/2020/4/222nm_uvc_harmless
https://www.laserfocusworld.com/lasers-sources/article/16555364/ uv-sterilization-faruvc-light-kills-airborne-flu-viruses-without-danger-to-humans

Customized Disinfection Gantry

Features & Benefits

- Automatic and Manual Start / Stop Control
- Optional Motion Sensor (Infrared)
- Optional Timer Module
- Safety Filter technology (Narrowband 222nm Emission)
- B-series / F-series Excimer Lamp Module
- ZERO Mercury – Environment Friendly
- Peak wavelength 222nm
- Minimal Ozone Emission
- Kills 99% of viruses, bacteria, mold and spores.
- Wide Operating Temperature
- Instantaneous On/Off
- High UV output

The Sanitation gate can disinfect 99% of viruses, bacteria, mold and spores at entry/exit points and high traffic areas.
It is equipped with multiple excimer lamps, offers 222nm UV-C output that is considered to be eye and skin safe for humans.
The gate offers instant start and automated operation with a PIR motion sensor.

The S-Series Disinfection gate can be customized in dimension and layout for different industrial application.

Model: S - SERIES Disinfection Gate

B- SERIES MODULE WITH FILTER

Model: B - SERIES
Module with filter

Features & Benefits

- Safety filter technology (Narrowband 222nm Emission)
- ZERO Mercury – Environment Friendly
- Peak wavelength 222nm
- Minimal Ozone Emission
- Kills 99% of viruses, bacteria, mold and spores.
- Higher UV output
- Model No - B1-5W / B2-15W /B3-20W

The featured B-Series module contains highly efficient 222nm Excimer lamps and a safety filter that eliminates dangerous longer wavelengths of more than 230nm.

The B-Series module is a powerful disinfective solution for both occupied and unoccupied areas. It provides 222nm Far-UVC output and disinfects 99% of viruses, bacteria, mold and spores on surfaces and in the air.

B-Series module has an expected lifespan of 3,000-10,000 hours, The housing on this unit is constructed of aluminum alloy for durability.

B-Series module is safe for use in occupied areas, instant-on power, mercury free, high UV output, and low heat output make Far-UVC Excimer lamps the preferred choice for UV sanitation and disinfection applications.

DF-SERIES DISINFECTION MODEL

Model: DF - SERIES
DISINFECTION

Features & Benefits

- LCD Control Board with Remote Control
- Motion Sensor（Infrared）
- Timer Module
- Safety Filter technology (Narrowband 222nm Emission)
- ZERO Mercury – Environment Friendly
- Peak wavelength 222nm
- Minimal Ozone Emission
- Kills 99% of viruses, bacteria, mold and spores.
- Wide Operating Temperature
- Instantaneous On/Off
- Higher UV output
- Mass production Capacity
- Model No – DF15B/DF19B/DF28B

The DF series (5w/20w) feature a powerful disinfection solution for both occupied and unoccupied areas. It provides 222nm Far-UVC output and disinfects 99% of viruses, bacteria, mold and spores on surfaces and in the air.

This unit is equipped with LCD control board and a motion sensor that automatically shuts the unit down when motion is detected or vice versa. DF series has an expected lifespan of 3,000-10,000 hours, the Excimer light emits a flood beam pattern and is replaceable.

The housing of this unit is constructed of aluminum alloy with a 2-layer powder coated grey finishing for durability.

DF series is safe for use in occupied areas, mercury free, high UV output and low heat output makes Far-UVC Excimer lamps the preferred choice for UV sanitation and disinfection applications.

F-SERIES DISINFECTION MODEL

Features & Benefits

- ZERO Mercury – Environment Friendly
- Peak wavelength 222nm
- Minimal Ozone Emission
- Kills 99% of viruses, bacteria, mold and spores.
- Instantaneous On/Off
- High UV output
- Model No - 5W/15W/20W/40W/60W/100W/150W/300W/500W/800W/1000W

F-Series 222nm Excimer Lamps offer range from 5W – 1000w, and it has ZERO mercury - environmentally friendly. Excimer lamps can be tuned to specific wavelengths (222nm wavelength for this product) and produce no harmful UVC radiation or wasteful visible light and infrared light. Excimer lamps are more efficient at converting electricity (input power) into UV irradiance, which reduces the heat output from Excimer lamps over other technologies

Model: F-SERIES
FAR-UVC EXCIMER LAMPS

DF- Series Disinfection Model (complete set with ballast + Power adapter)

	Model	Dimensions	Description
	DF15B-5W 24V	292*114*33(mm)	FIRSTUVC FAR UVC 222nm Disinfection **Model DF15B with 5W** - *Mercury free/Motion sensor/Remote Control/Coated Quartz Glass/min 4000H+ lifetime*
	DF19B-15W 24V	345*114*38(mm)	FIRSTUVC FAR UVC 222nm Disinfection **Model DF19B with 15W** - *Mercury free/Motion sensor/Remote Control/Coated Quartz Glass/min 4000H+ lifetime*
	DF28B-20W 24V	307*114*48(mm)	FIRSTUVC FAR UVC 222nm Disinfection **Model DF28B with 20W** - *Mercury free/Motion sensor/Remote Control/Coated Quartz Glass/min 4000H+ lifetime*
	DF28C-5W	Φ210*58.5(mm)	FIRSTUVC FAR UVC 222nm Disinfection **Model DF28C with 5W** - *Mercury free/Motion sensor/Remote Control/Coated Quartz Glass/min 4000H+ lifetime*
	DF28C-20W	Φ245*72.5(mm)	FIRSTUVC FAR UVC 222nm Disinfection **Model DF28C with 20W** - *Mercury free/Motion sensor/Remote Control/Coated Quartz Glass/min 4000H+ lifetime*

B-Series Module (Excimer Lamp + Filter + UV Reflector + Aluminum Alloy Housing + Ballast)

	Model		Description
	DF15B-B1 5w	-	**BI Module - 222nm Excimer Lamp 5W** - *Mercury free / Lifetime: 4000H+* - *Alluminium Alloy Casing* - *Integration with your own design devices.*
	DF19B-B2 15w	-	**B2 Module - 222nm Excimer Lamp 15W** - *Mercury free / Lifetime: 4000H+* - *Alluminium Alloy Casing* - *Integration with your own design devices.*
	DF28B-B3 20w	-	**B3 Module - 222nm Excimer Lamp 20W** - *Mercury free / Lifetime: 4000H+* - *Alluminium Alloy Casing* - *Integration with your own design devices.*

SAFE-Series (Disinfection Gate)

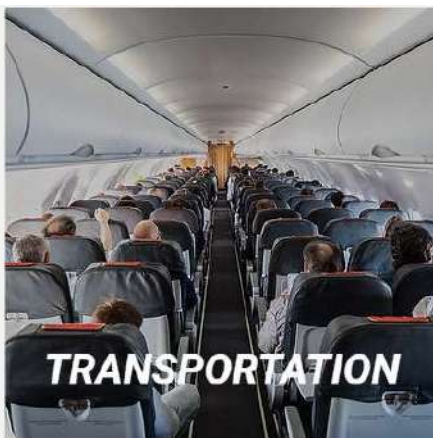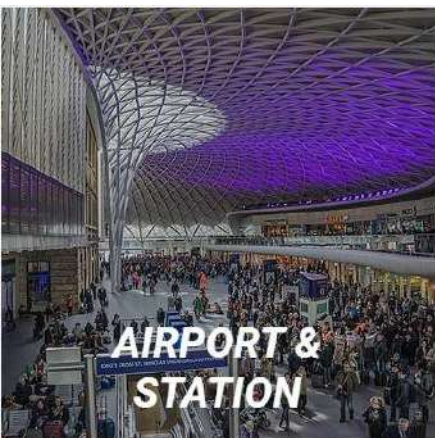|	Model	Dimensions	Description
	SAFE222-280W	1047*400*2300 (mm)	**SAFE222-280W SANITATION GATE** - *12 x B3 module/ Mercury free/Motion Sensor/Remote Control/Coated Quartz Glass/min 4000H+ lifetime/Stainless steel TI-Plated Mirror*
	SAFE222G-280W	(OD)1200*400*2200 mm (ID)900*400*2000 mm	**SAFE222G-280W SANITATION GATE** - *12 x B3 module/ Mercury free/Motion Sensor/Remote Control/Coated Quartz Glass/min 4000H+ lifetime/Sheet Iron+Silver White Spray Paint*

F-Series (Excimer Lamp + Ballast only)   * Power Adapter not included

	F15-5W DC24V	Φ15*110mm	222nm Excimer Lamp **5W** *- Mercury free Lifetime: 4000H+*
	F19-15W DC24V	Φ19*160mm	222nm Excimer Lamp **15W** *- Mercury free / Lifetime: 4000H+*
	F28-20W DC24V	Φ28*120mm	222nm Excimer Lamp **20W** *- Mercury free / Lifetime: 4000H+*
	F28-40W DC24V	Φ28*205mm	222nm Excimer Lamp **40W** *- Mercury free / Lifetime: 4000H+*
	F28-60W DC24V	Φ28*300mm	222nm Excimer Lamp **60W** *- Mercury free / Lifetime: 4000H+*
	F40-100W AC220V	Φ40*457mm	222nm Excimer Lamp **100W** *- Mercury free / Lifetime: 4000H+*
	F40-150W AC220V	Φ40*457mm	222nm Excimer Lamp **150W** *- Mercury free / Lifetime: 4000H+*
	F55-300W AC220V	Φ55*1000mm	222nm Excimer Lamp **300W** *- Mercury free / Lifetime: 4000H+*
	F40-500W AC220V	Φ55*1000mm	222nm Excimer Lamp **500W** *- Mercury free / Lifetime: 4000H+*
	F40-800W AC220V	Φ55*1000mm	222nm Excimer Lamp 80**0W** *- Mercury free / Lifetime: 4000H+*
	F55-1000W AC220V	Φ55*1000mm	222nm Excimer Lamp **1000W** *- Mercury free / Lifetime: 4000H+*

F-Series (Excimer Lamp + Ballast only)

APPLICATION SCENARIOS

Disease-causing bacteria and viruses threaten the lives of millions of people each year. Since the start of the pandemic, millions have become infected and more than 1 million people worldwide have died. And these numbers continue to increase as many countries move into second and even third waves of infection.

Far UVC or 222 nm, it's that wavelength that initial studies shows to be both effective and safe for humans. UVC 222nm technology may provide immediate relief in COVID-19 outbreaks in populated indoor spaces, thus we need safe and effective technology for indoor public spaces where people gather— from airports, schools, and public transportation to all forms of entertainment venues— that can effectively reduce pathogens.

HOSPITAL

RESIDENTIAL & OFFICE BUILDINGS

SCHOOL

AIRPORT & STATION

TRANSPORTATION

ENTERTAINMENT

Microbiological Analysis Report & Certifications

Microbiological Analysis Report

Certifications

Benefits & Safety Precautions

Benefits:

• Safe for skin and eyes – According to most research, far-UVC products are safe for skin and eyes. Far-UVC does not penetrate the outer layer of skin or eyes, so it doesn't cause any tissue damage.

• Constant disinfection – Because far-UVC is safe for skin and eyes, products can run constantly. They can work at all times to kill pathogens like viruses and bacteria so you are never starting from ground zero. 254nm UV-C products only target germs during a timed cycle when no one is in the room.

• Environment friendly as it has zero mercury and minimal ozone emission, no residue after or during usage.

Safety Precautions :

• Please note that the effect of UV lamps through glass will be reduced or blocked entirely.

• Please follow the usage guideline regarding the size of rooms and length of use to ensure effective operation.

• Please use our UV lamp light tube replacement services.

• Please test sensors periodically.

• Indoor use only. Please take care not to use the unit if any part of it is wet or water is spilled on the unit. Please call our customer service hotline if the unit has water damage to avoid electric shock.

• Clean unit with dry cloths only.

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