Vendi222

FAR UVC LIGHT 222nm

VE15B - 5W

A smart system of human body surface sterilization

Specifications

Remote Controller

Power Adapter

Dimensions:	307*117*48mm
Wattage:	5W
UV Wavelength:	FAR UVC 222nm
Effective UV Intensity(with Filter):	2500 μW/cm²
Input Voltage:	DC24V
Voltage:	AC100V~240V(with AC/DC Adapter)
Ambient Operating Temperature Range:	-10℃ to+50℃
Expected Lifespan:	4000+H
Safety Requirement:	Mercury-Free
Storage Environment:	Dry, and Ventilation Environment
Optional Function:	Motion Sensor And Timer Module;
Material:	High Purity Quartz Glass Sandblasting Oxidation(Silver) Aluminum Alloy

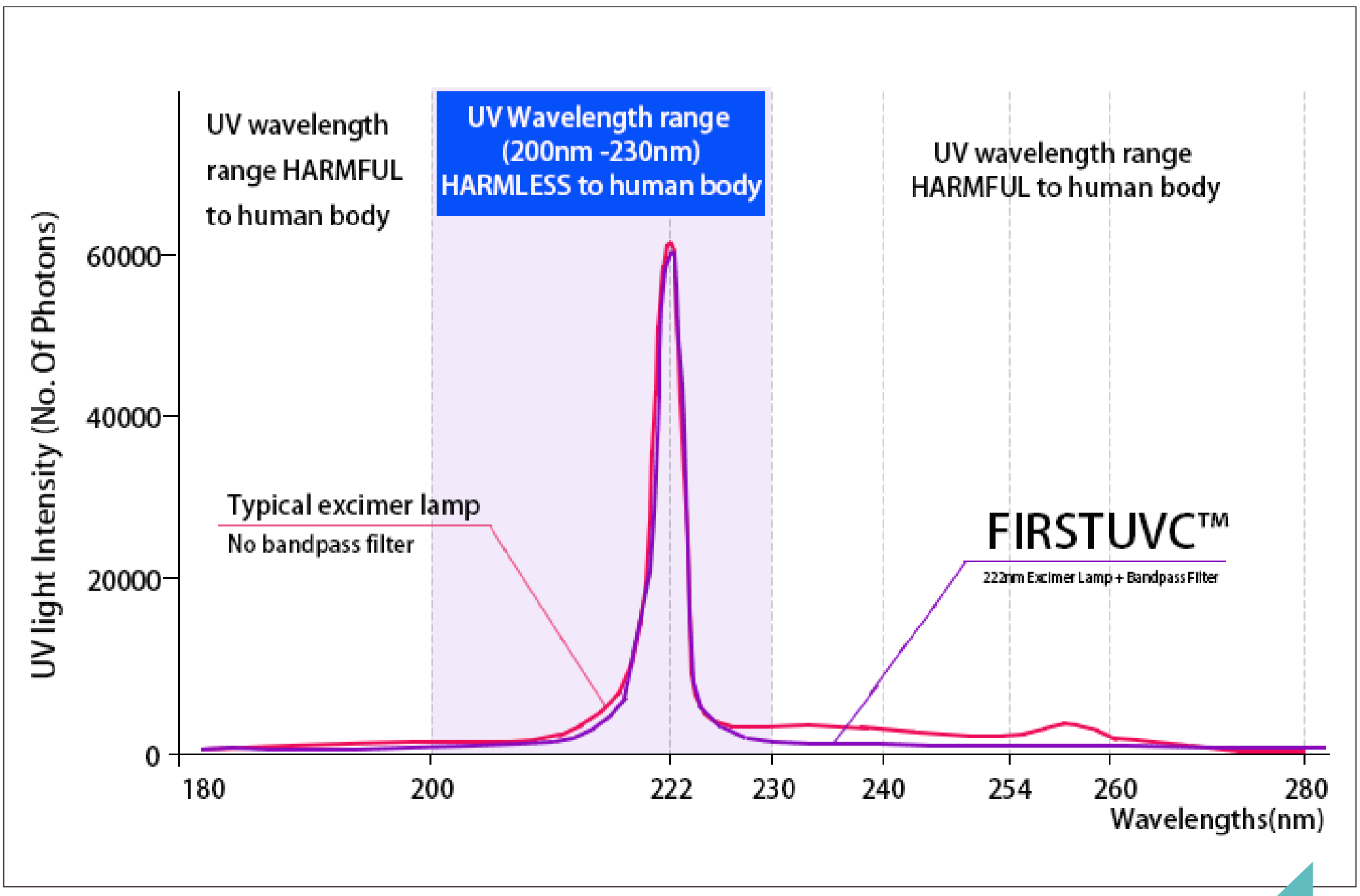
How to use?

Installed on a tripod,
which is convenient for various occasions.

Installed on the roof of offices, supermarkets, etc.
for effective disinfection.

Vendi222 BANDPASS FILTER

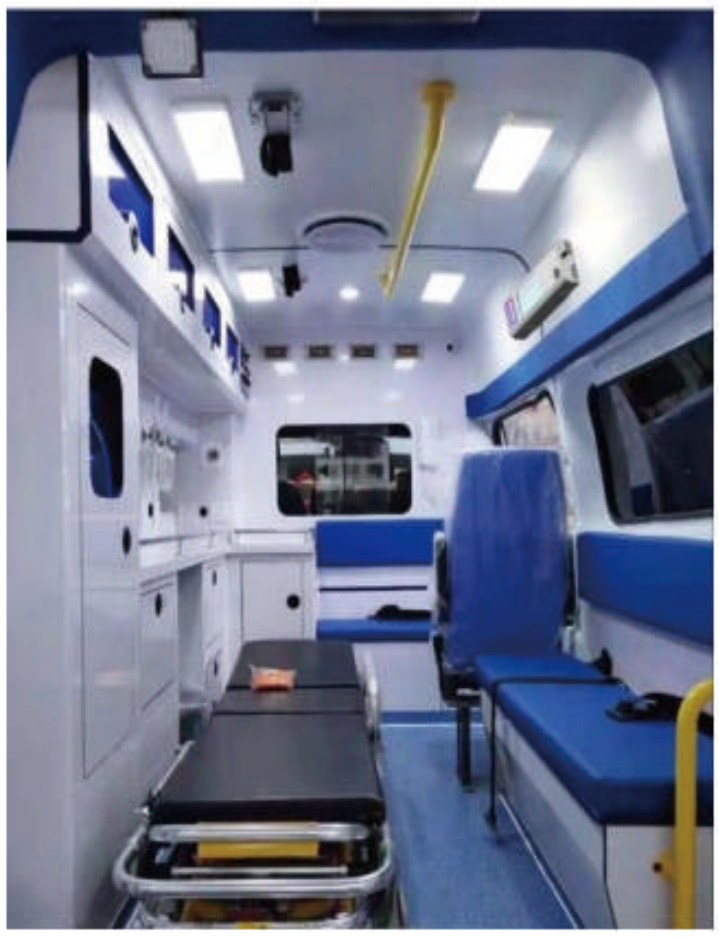
Proprietary Safety Filter Technology Included to Ensure Narrowband 222nm Emission



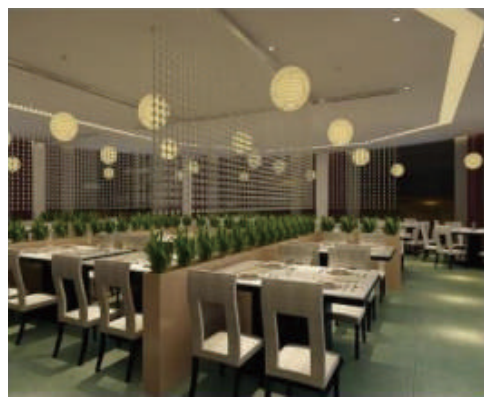
VendiGlobe

FAR UVC LIGHT 222nm

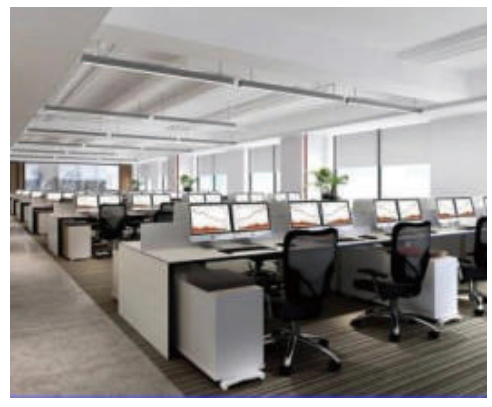
Occasion of intensive crowds/ time of air pollution are health hazardous



Ambulance



Restaurant



Office

School

Hospital

Shopping Center Entrance

Bus

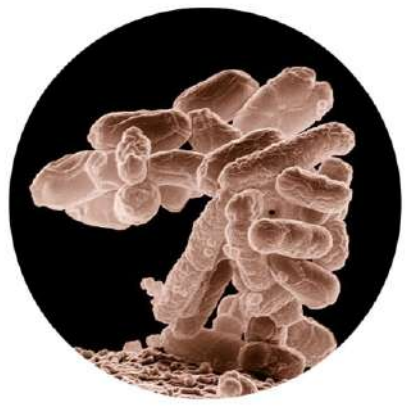
Meat Processing Factory

Bank

FAR UVC sterilization

FARUVC has strong bactericidal ability. After irradiation, It can destroy the bacterial DNA structure and lose its vitality and fecundity.

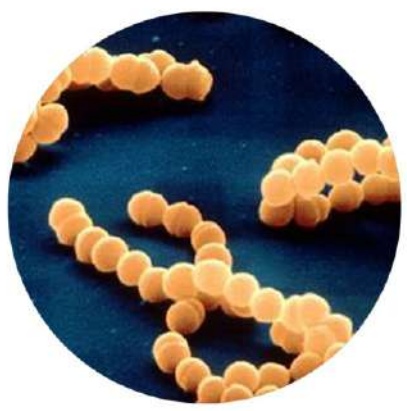
Candida albicans
(Hand, foot, and mouth disease (HFMD), Fever)



E. coli
(Diarrhea, vomit)

Salmonella Typhimurium
(Acute gastroenteritis)

Staphylococcus aureus
(Cough, pneumonia)

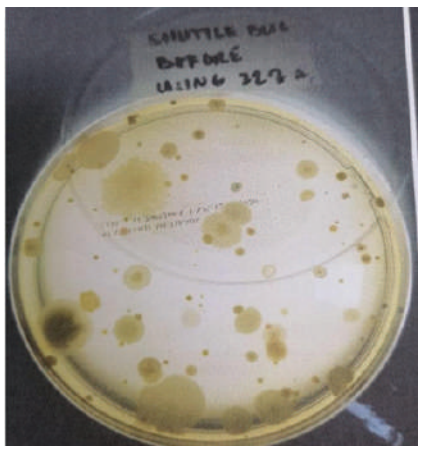


Haemolytic streptococci
(Tonsillitis)

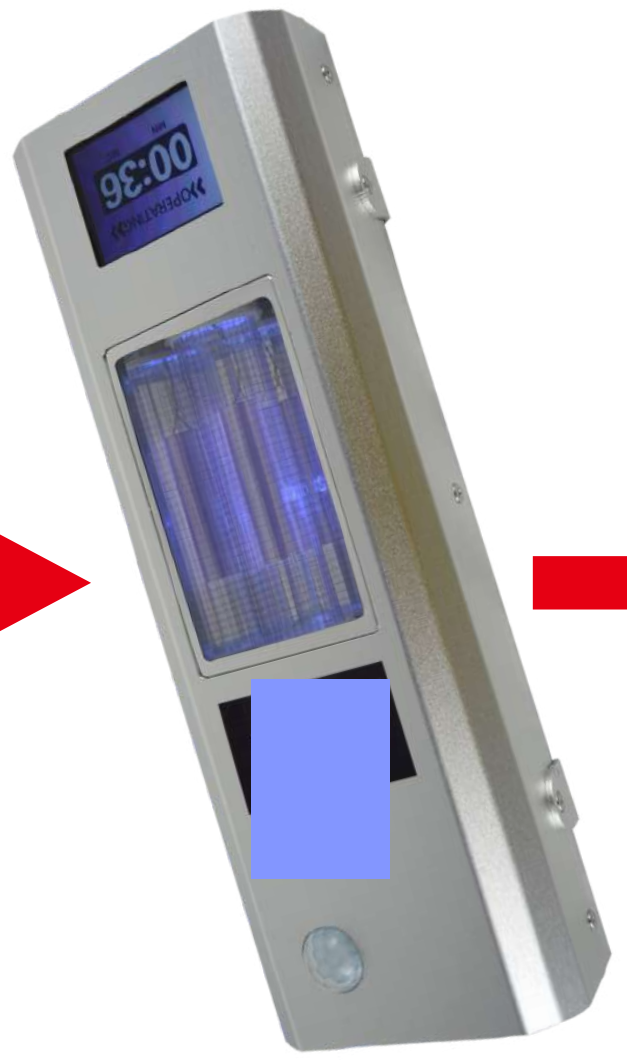
Currently there are no bacteria that are found by all scientists and biologists in the world to be imperishable by UVC LED.

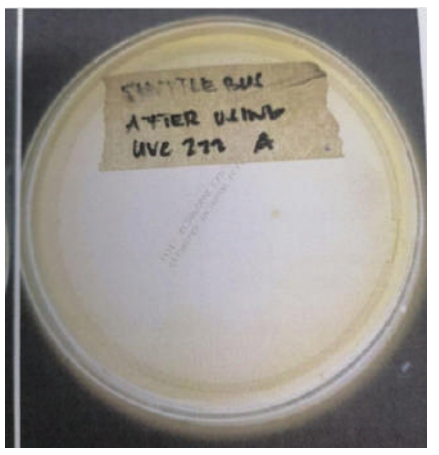
Eliminate bacterial reproduction

Experiments show that faruvc can destroy the DNA structure of bacteria, make it lose its vitality and fecundity, and then die, so as to achieve the purpose of sterilization and disinfection.



BEFORE OPEN UVC 222



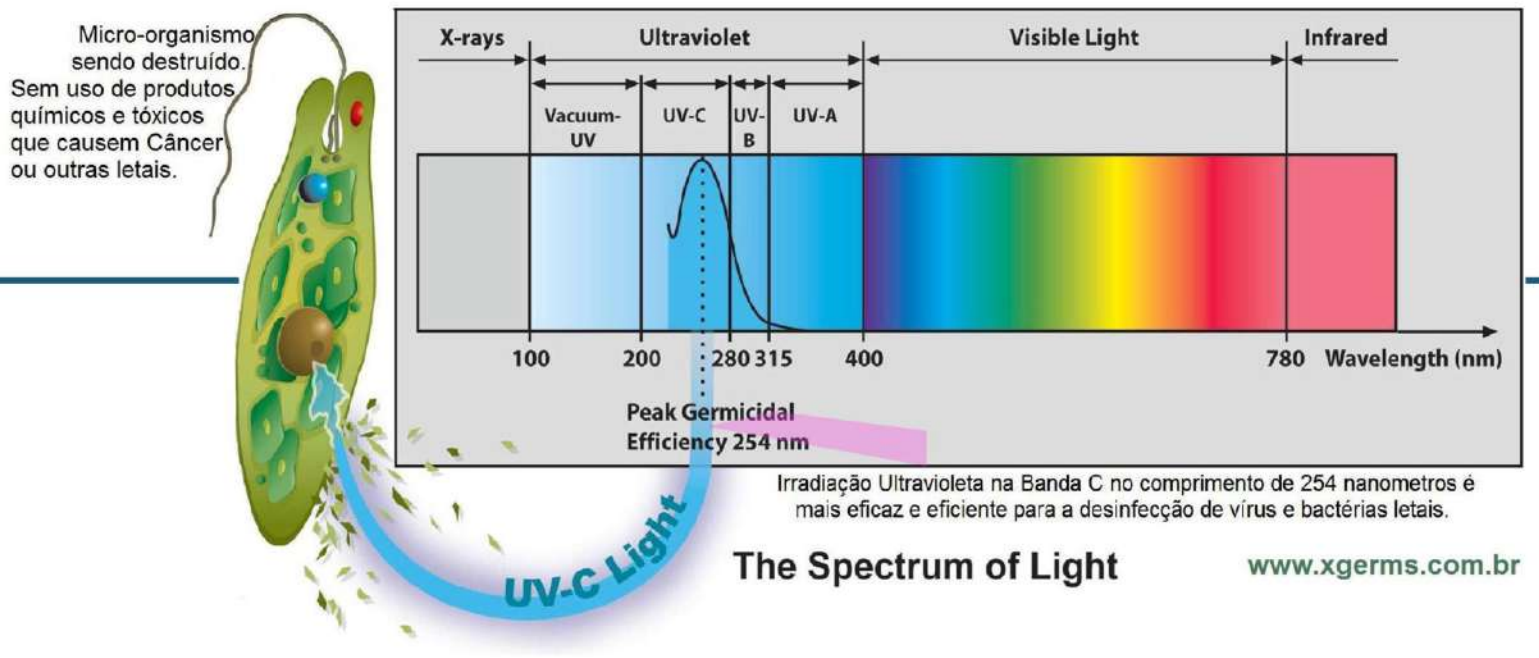


AFTER OPEN UVC 222

Before irradiation

After irradiation

However, in the range of UV LED wavelength, the fields of application vary as energy intensity differs .

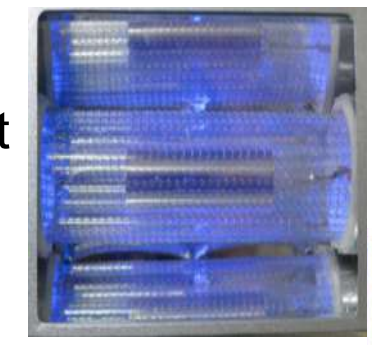


Vendi222

FAR UVC LIGHT 222nm

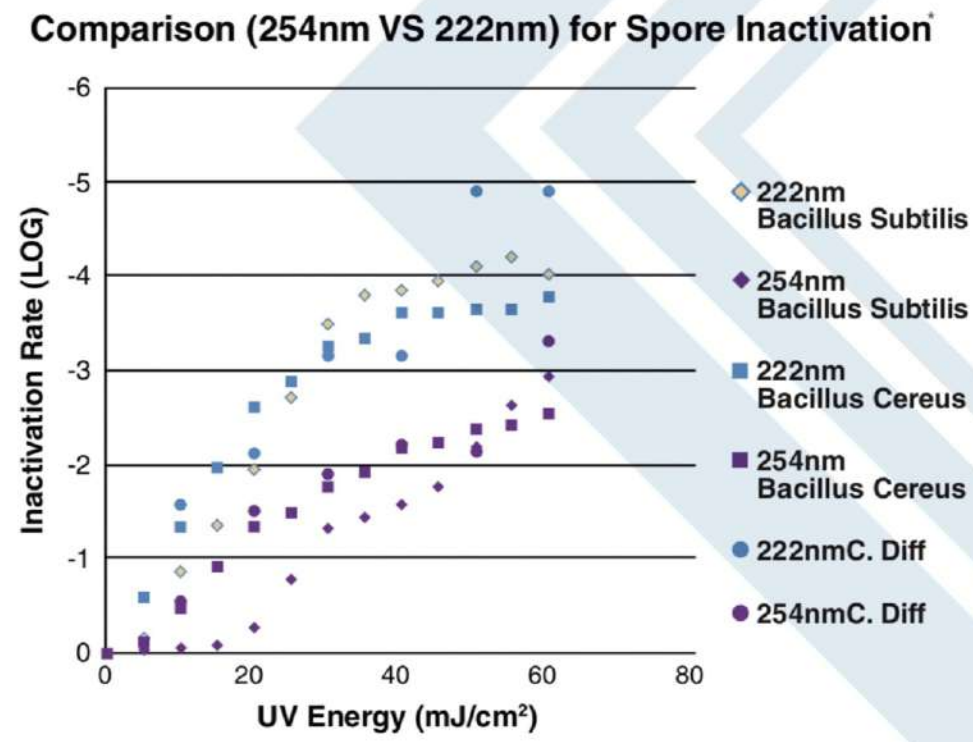
Far ultraviolet light 222nm

Far ultraviolet light (222 nm) can effectively kill pathogens such as coronavirus without damaging exposed human tissues. This is because, due to its strong absorption in biomaterials, far ultraviolet light can not even penetrate the outer layer (non living layer) of human skin or eyes. However, because bacteria and viruses are micron or smaller in size, far ultraviolet rays can penetrate and inactivate them.



Disinfection effect: comparison between 222 nm and 254 nm

Domain		Species		Dose for 3log reduction [mJ/cm2] 222 nm	254 nm
Vegetative Bacteria	MRSA	メチシリン耐性黄色ブドウ球菌		15	10
	Pseudomonas aeruginosa	緑膿菌		8	4
	Escherichia. coli O157	大腸菌O-157		9	5
	Salmonella typhimurium	ネズミチフス菌		10	4
	Campylobacter jejuni	カンピロバクター		4	4
	Bacillus subtilis	枯草菌	Vegetative cell（栄養型）	7	8
	Bacillus cereus	セレウス菌	Spore（芽胞）	44	90
	Bacillus subtilis	枯草菌		30	60
	Clostridium difficile	クロストリジウム・ディフィシル		30	60
Molds and Yeasts	*Candida albicans*	カンジダ・アルビカンス		24	40
	Penichillium expansum	アオカビ		50	50
	Aspergillus niger	黒色麹菌	Hypha （菌糸）	>1000	>700
			Spore （芽胞）	>500	>700
Virus	MS2	バクテリオファージMS2		23	50
	Feline calicivirus	ネコカリシウイルス		24	24
	Influenza virus	インフルエンザ		6	6

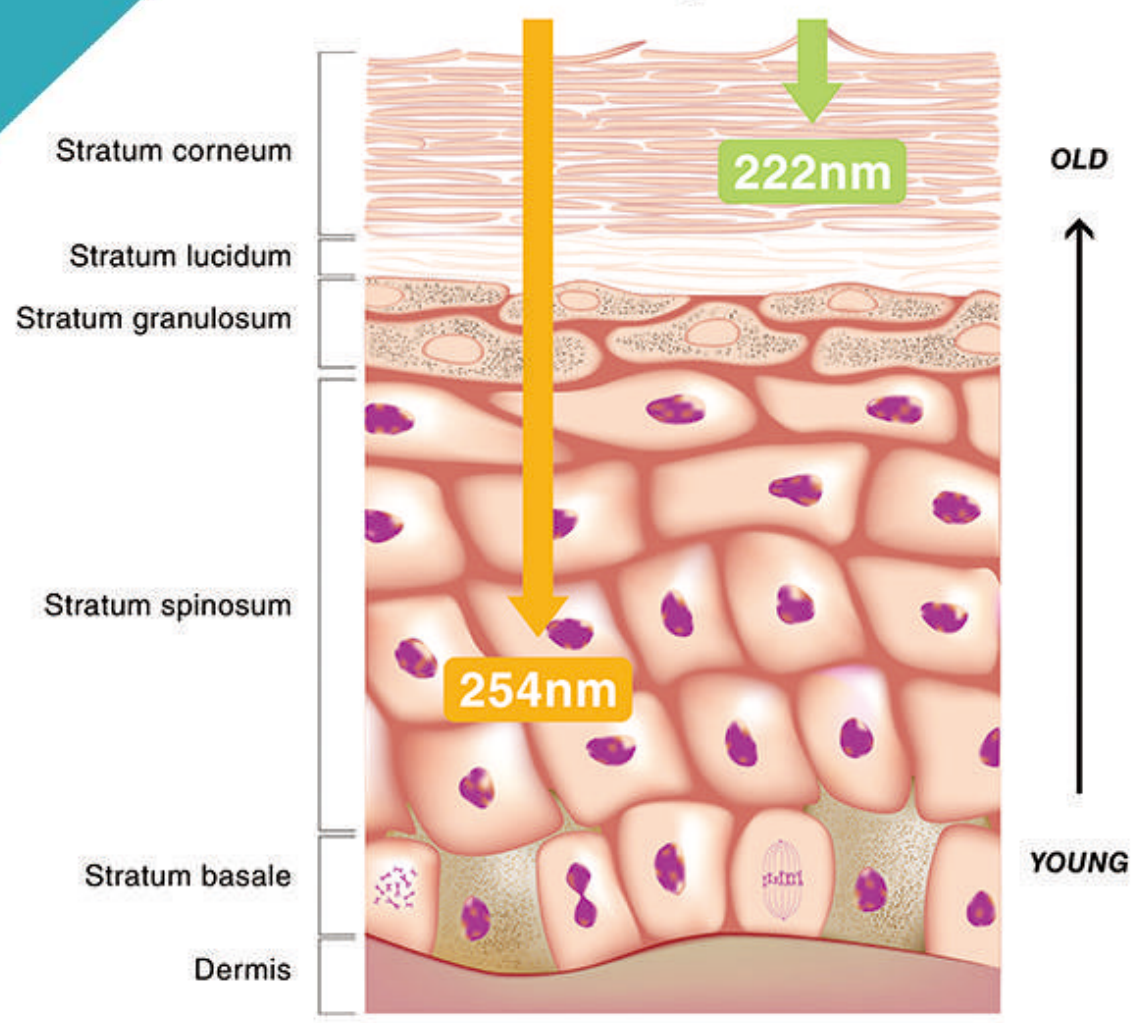


Germicidal irradation, benefits, and differences of ULTRAVIOLET LIGHT

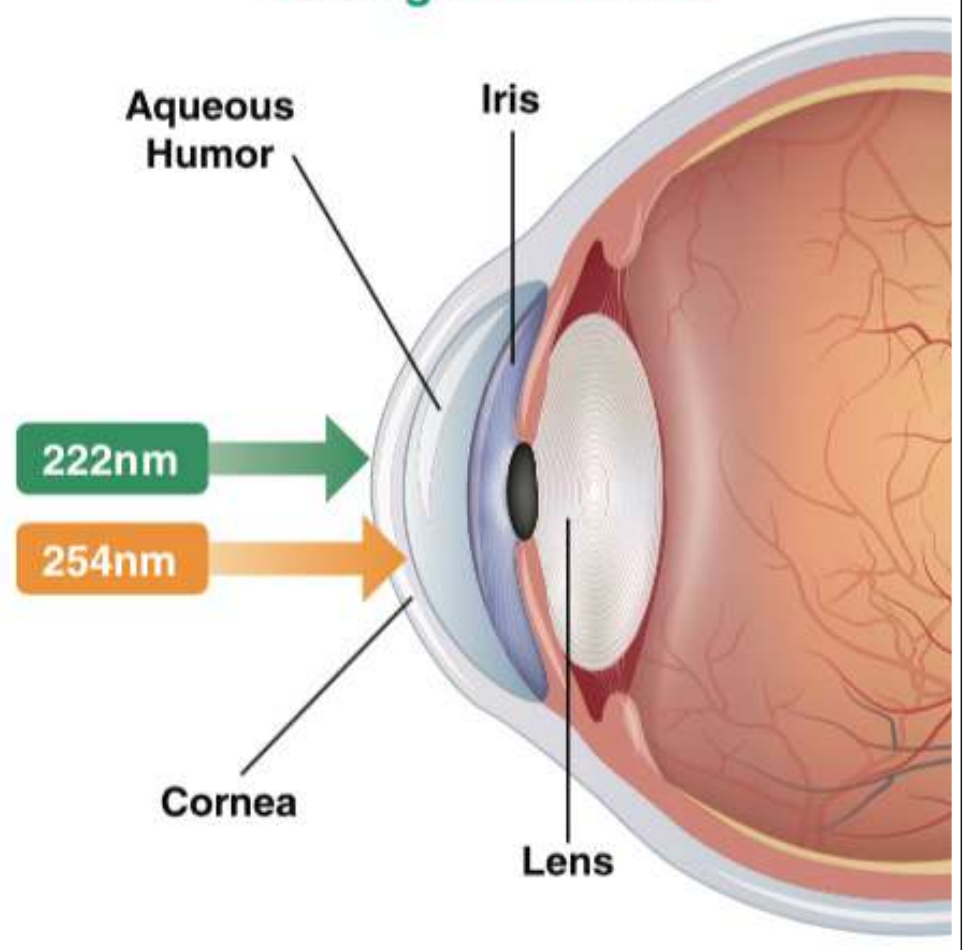
UV type	NANOMETERS (nm)	SAFE for skin and eyes	RAPID DEGRADATION on materials like plastic and rubber	PRACTICAL USES
VUV Far-UV	100-200	YES	YES	Medical equipment
Far-UVC	207-222	YES	YES	Germicidal, **most effective for disinfecting**, sensing
UV-C	200-280	NO	YES	Germicidal, **most effective for disinfecting**,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

Skin Absorption Penetration Showing 222nm vs. 254nm

Structure of the Epidermis

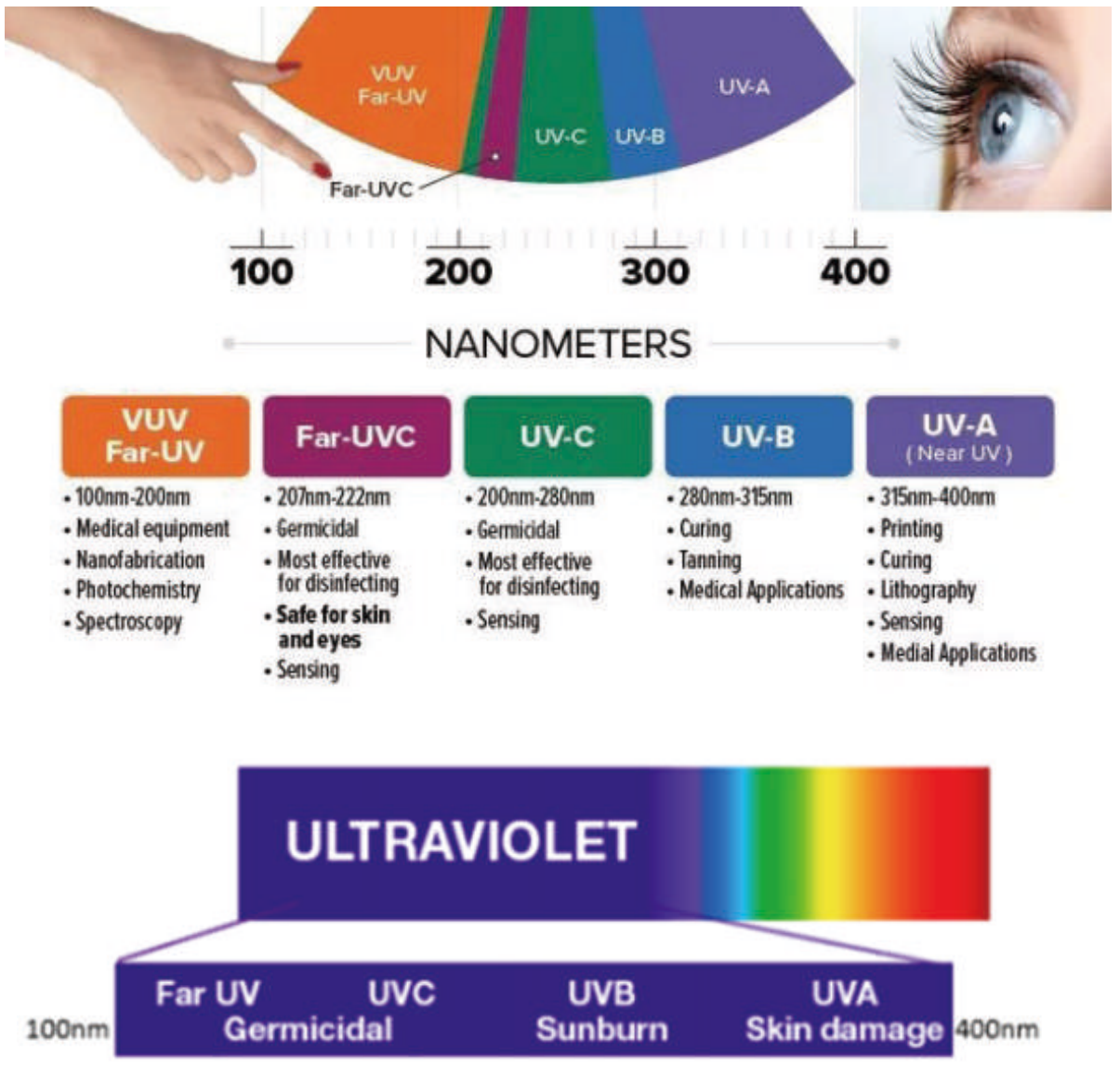


Damage of Cornea



Corneas absorb 222nm and does not produce cataracts

The transmittance of cornea at 280nm or shorter wavelength is 0.01% or less.[3]



VUV Far-UV	Far-UVC	UV-C	UV-B	UV-A (Near UV)
• 100nm-200nm • Medical equipment • Nanofabrication • Photochemistry • Spectroscopy	• 207nm-222nm • Germicidal • Most effective for disinfecting • **Safe for skin and eyes** • Sensing	• 200nm-280nm • Germicidal • Most effective for disinfecting • Sensing	• 280nm-315nm • Curing • Tanning • Medical Applications	• 315nm-400nm • Printing • Curing • Lithography • Sensing • Medial Applications

UV-C Comparsion Studies

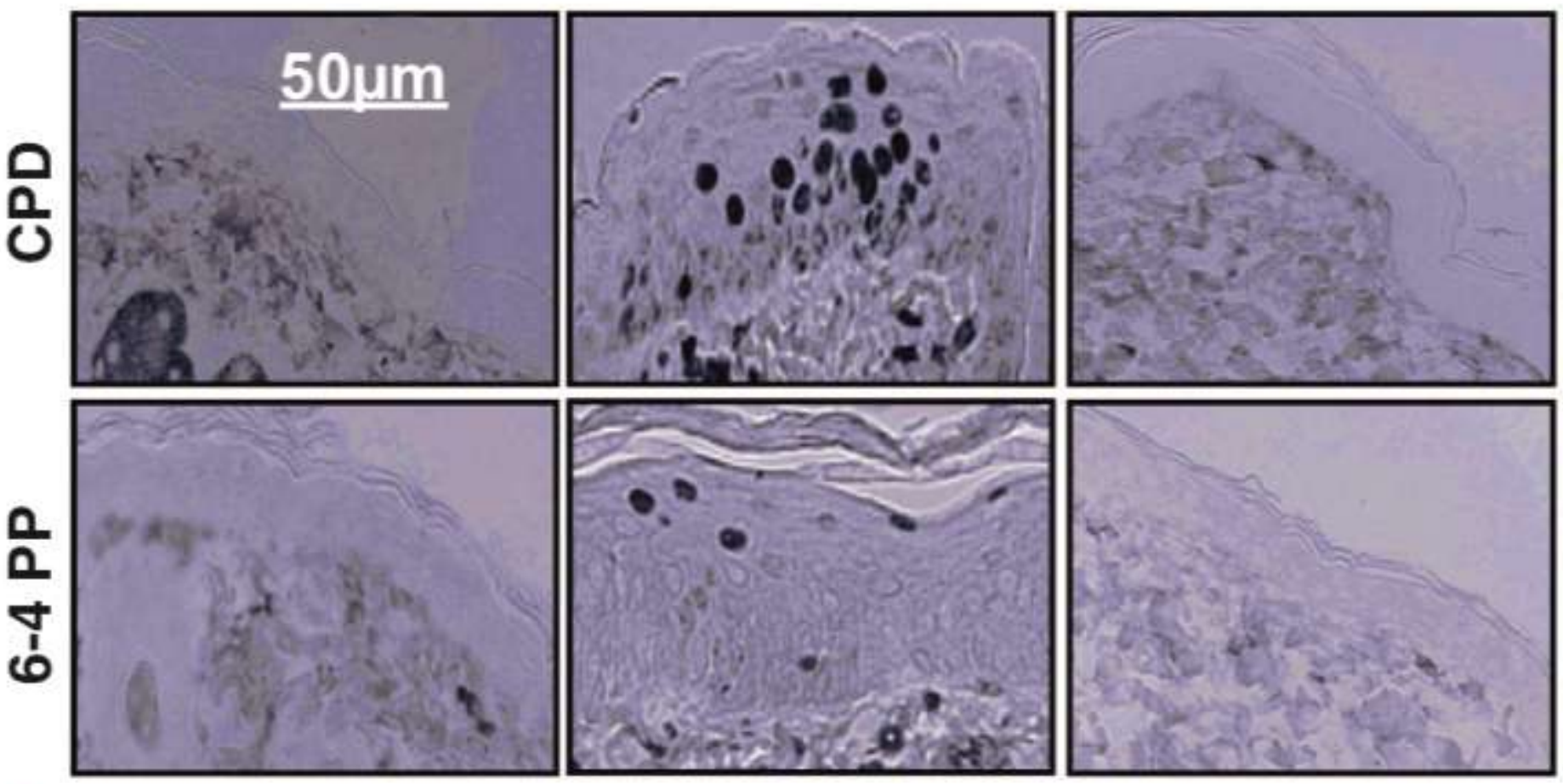
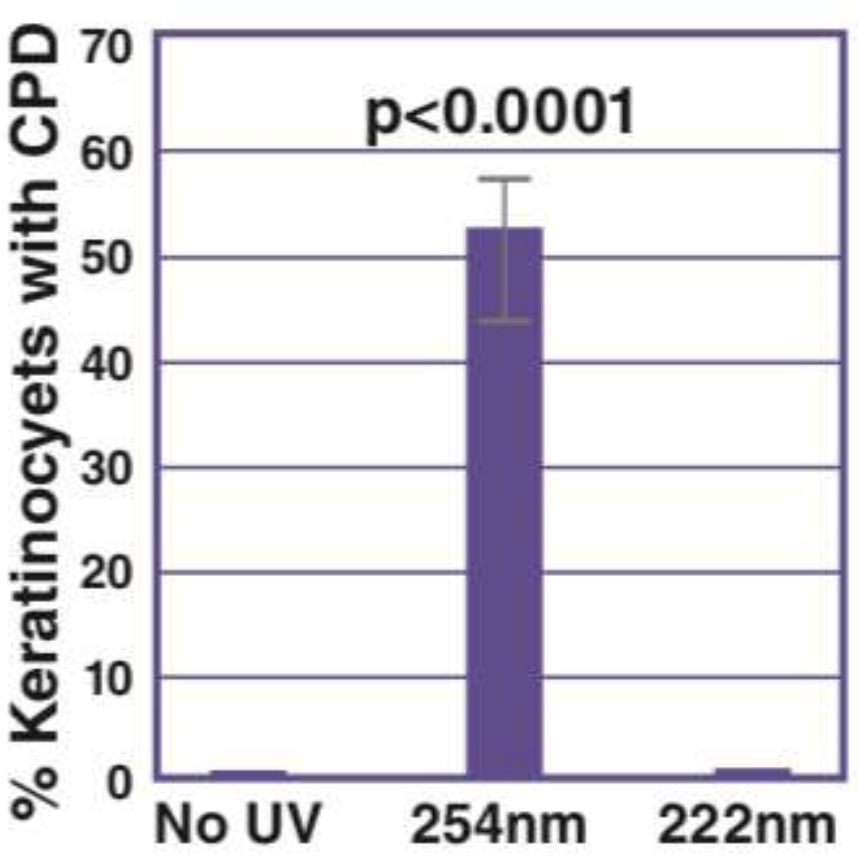


Fig. 1 Comparison of cross-sectional images of UVC-induced premutagenic skin lesions CPD (cyclobutane pyrimidine dimers) and 6-4PP (photoproducts) in the dorsal epidermis of mice. A UV dose of 157 mJ/cm2 was used for both 254 and 222 nm[1].



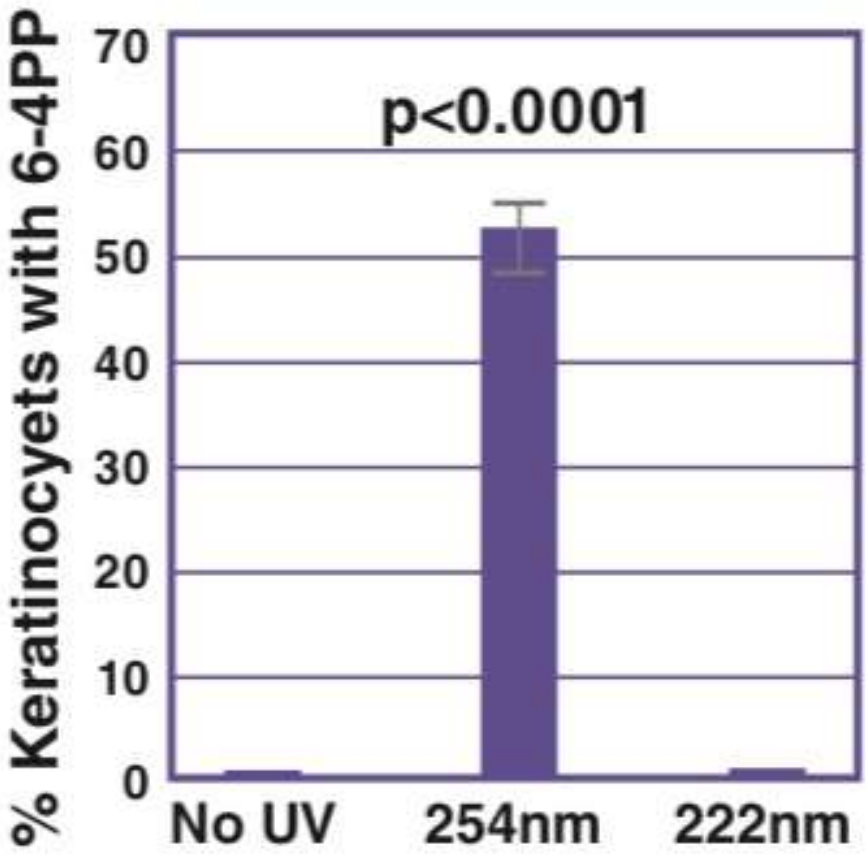
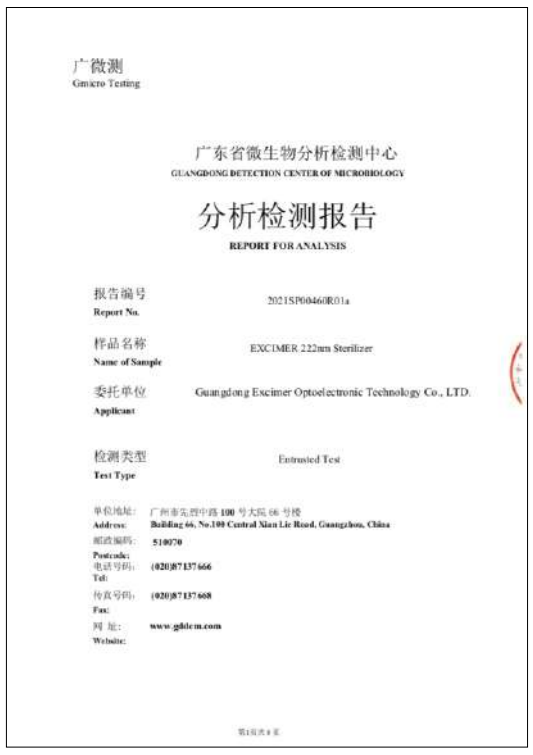


Fig. 2 & 3 Average percent of keratinocyte cells exhibiting dimers (Fig 2. - right CPD; Fig 3. - left 6-4PP) measured in UVC-induced premutagenic DNA lesions in nine randomly selected fields of view per mouse (n=3)[1].

White mouse test (eyes/skin)

12 days, 8 hours of irradiation every day, irradiation distance of 1 meter


广微测
Gmicro Testing

广东省微生物分析检测中心
GUANGDONG DETECTION CENTER OF MICROBIOLOGY

分析检测报告
REPORT FOR ANALYSIS

报告编号 Report No. 2021SP00460R01a
样品名称 Name of Sample EXCIMER 222nm Sterilizer
委托单位 Applicant Guangdong Excimer Optoelectronic Technology Co., LTD.
检测类型 Test Type Entrusted Test
单位地址：广州市先烈中路 100 号大院 66 号楼
Address: Building 66, No.100 Central Xian Lie Road, Guangzhou, China
邮政编码：510070
Postcode:
电话号码：(020)87137666
Tel:
传真号码：(020)87137668
Fax:
网 址：www.gdiem.com
Website:

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广东省微生物分析检测中心
GUANGDONG DETECTION CENTER OF MICROBIOLOGY
分析检测报告
REPORT FOR ANALYSIS

报告编号(Reports No.) 2021SP00460R01a 检验码(Verification Code)：16408295

样品名称 Name of Sample	EXCIMER 222nm Sterilizer	检测类型 Test Type	Entrusted Test
委托单位 Applicant	Guangdong Excimer Optoelectronic Technology Co., LTD.	地址 Address	4 / F, No.63 Panlong Road, Taoyuan Town, Heshan City, Guangdong Province, China
样品来源 Sample Source	The Applicant shall submit it for test	样品数量 Sample Quantity	4 Units
样品规格和批号 Spec and Lot of Sample	DF28B-20W DC24V	样品状态和特性 State and Characteristic	Machine
接样日期 Sample Received Date	2021-01-14	检测完成日期 Completion Date	2021-04-08
检测依据和方法 Test Standard and Method	The method is provided by the Applicant		
检测项目 Item Tested	The skin and eyes of mice were irradiated with 222nm UVC		
检测结论 Test Conclusion	After 12 days of 222nm UVC irradiation according to the method given by the Applicant, all animals drank and ate normally, and no abnormality was found in their behavior.No damage was found in the skin and eyes after daily observation.Pathological examination found no abnormal pathological changes in the eyes of all the animals, obvious increase of adipocytes in the subcutaneous tissues of the skin, and no other lesions. Issue Date: 2021-04-19		
备注 Remarks	① Animal testing site: No. 790, Shenzhou Road, Huangpu District, Guangzhou City; ② Manufacturer: Guangdong Excimer Ophotoelectric Technology Co., LTD. (provided by the Applicant).		

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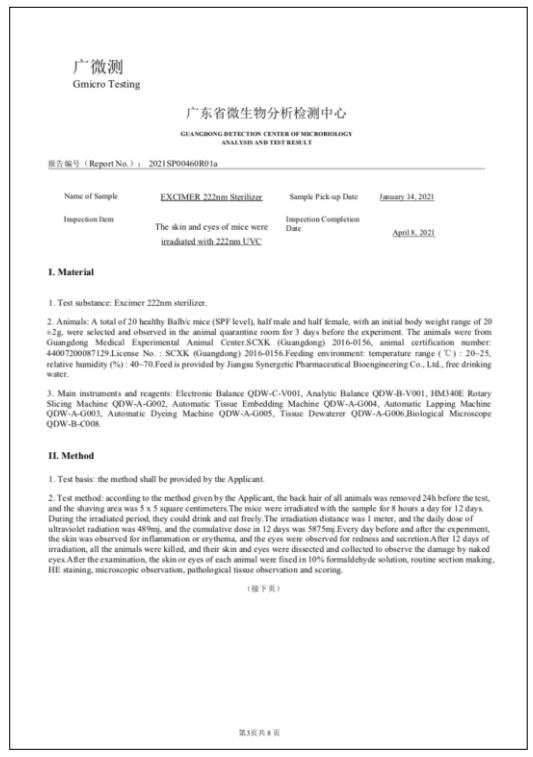
广微测
Gmicro Testing

广东省微生物分析检测中心
GUANGDONG DETECTION CENTER OF MICROBIOLOGY
ANALYSIS AND TEST RESULT

报告编号（Report No.）：2021SP00460R01a

Name of Sample EXCIMER 222nm Sterilizer
Sample Pick-up Date January 14, 2021
Inspection Item The skin and eyes of mice were irradiated with 222nm UVC
Inspection Completion Date April 8, 2021

I. Material

1. Test substance: Excimer 222nm sterilizer.

2. Animals: A total of 20 healthy Balb/c mice (SPF level), half male and half female, with an initial body weight range of 20 ±2g, were selected and observed in the animal quarantine room for 3 days before the experiment. The animals were from Guangdong Medical Experimental Animal Center.SCXK (Guangdong) 2016-0156, animal certification number: 4400720087129.License No. : SCXK (Guangdong) 2016-0156.Feeding environment: temperature range (℃) : 20~25, relative humidity (%) : 40~70.Feed is provided by Jiangsu Synergetic Pharmaceutical Bioengineering Co., Ltd., free drinking water.

3. Main instruments and reagents: Electronic Balance QDW-C-V001, Analytic Balance QDW-B-V001, HM340E Rotary Slicing Machine QDW-A-G002, Automatic Tissue Embedding Machine QDW-A-G004, Automatic Lapping Machine QDW-A-G003, Automatic Dyeing Machine QDW-A-G005, Tissue Dewaterer QDW-A-G006,Biological Microscope QDW-B-C008.

II. Method

1. Test basis: the method shall be provided by the Applicant.

2. Test method: according to the method given by the Applicant, the back hair of all animals was removed 24h before the test, and the shaving area was 5 x 5 square centimeters.The mice were irradiated with the sample for 8 hours a day for 12 days. During the irradiated period, they could drink and eat freely.The irradiation distance was 1 meter, and the daily dose of ultraviolet radiation was 489mj, and the cumulative dose in 12 days was 5875mj.Every day before and after the experiment, the skin was observed for inflammation or erythema, and the eyes were observed for redness and secretion.After 12 days of irradiation, all the animals were killed, and their skin and eyes were dissected and collected to observe the damage by naked eyes.After the examination, the skin or eyes of each animal were fixed in 10% formaldehyde solution, routine section making, HE staining, microscopic observation, pathological tissue observation and scoring.

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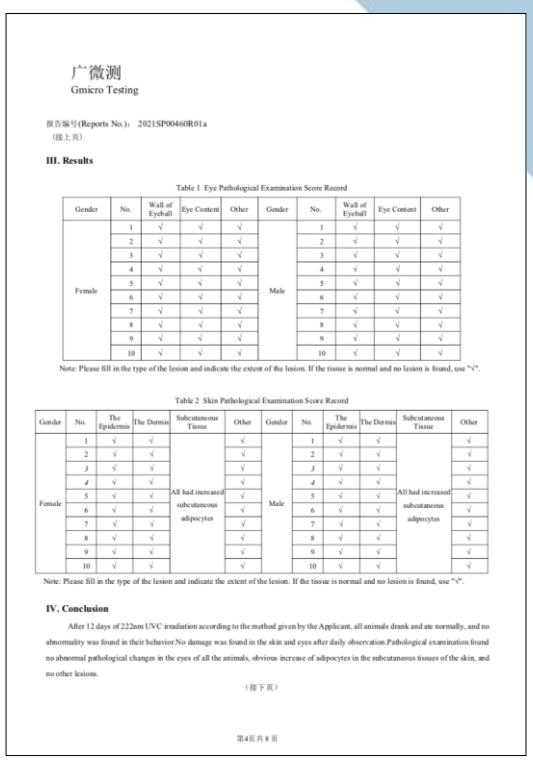
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III. Results

Table 1 Eye Pathological Examination Score Record

Gender	No.	Wall of Eyeball	Eye Content	Other	Gender	No.	Wall of Eyeball	Eye Content	Other
Female	1	√	√	√	Male	1	√	√	√
	2	√	√	√		2	√	√	√
	3	√	√	√		3	√	√	√
	4	√	√	√		4	√	√	√
	5	√	√	√		5	√	√	√
	6	√	√	√		6	√	√	√
	7	√	√	√		7	√	√	√
	8	√	√	√		8	√	√	√
	9	√	√	√		9	√	√	√
	10	√	√	√		10	√	√	√

Note: Please fill in the type of the lesion and indicate the extent of the lesion. If the tissue is normal and no lesion is found, use "√".

Table 2 Skin Pathological Examination Score Record

Gender	No.	The Epidermis	The Dermis	Subcutaneous Tissue	Other	Gender	No.	The Epidermis	The Dermis	Subcutaneous Tissue	Other
Female	1	√	√	All had increased subcutaneous adipocytes	√	Male	1	√	√	All had increased subcutaneous adipocytes	√
	2	√	√		√		2	√	√		√
	3	√	√		√		3	√	√		√
	4	√	√		√		4	√	√		√
	5	√	√		√		5	√	√		√
	6	√	√		√		6	√	√		√
	7	√	√		√		7	√	√		√
	8	√	√		√		8	√	√		√
	9	√	√		√		9	√	√		√
	10	√	√		√		10	√	√		√

Note: Please fill in the type of the lesion and indicate the extent of the lesion. If the tissue is normal and no lesion is found, use "√".

IV. Conclusion

After 12 days of 222nm UVC irradiation according to the method given by the Applicant, all animals drank and ate normally, and no abnormality was found in their behavior.No damage was found in the skin and eyes after daily observation.Pathological examination found no abnormal pathological changes in the eyes of all the animals, obvious increase of adipocytes in the subcutaneous tissues of the skin, and no other lesions.

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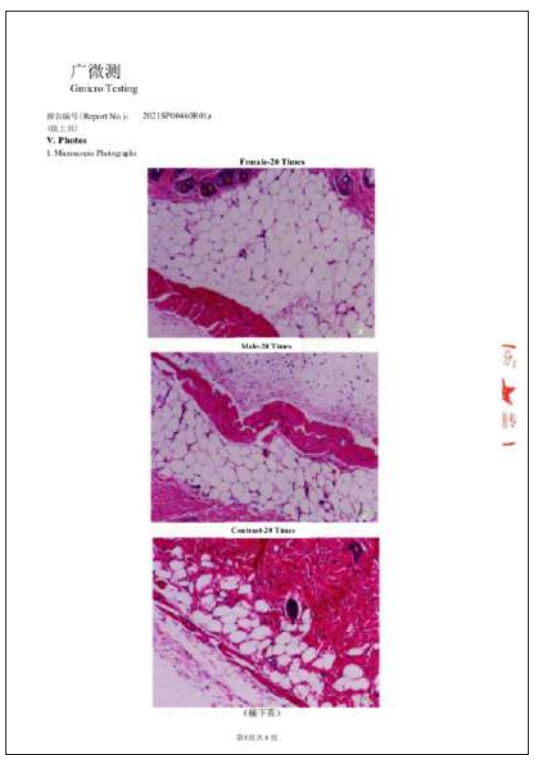
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报告编号（Report No.）：2021SP00460R01a
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V. Photos
1. Microscopic Photographs

Female-20 Times

Male-20 Times

Contrast-20 Times

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Gmicro Testing

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2.Sample Photos

3.Photos of the experiment process

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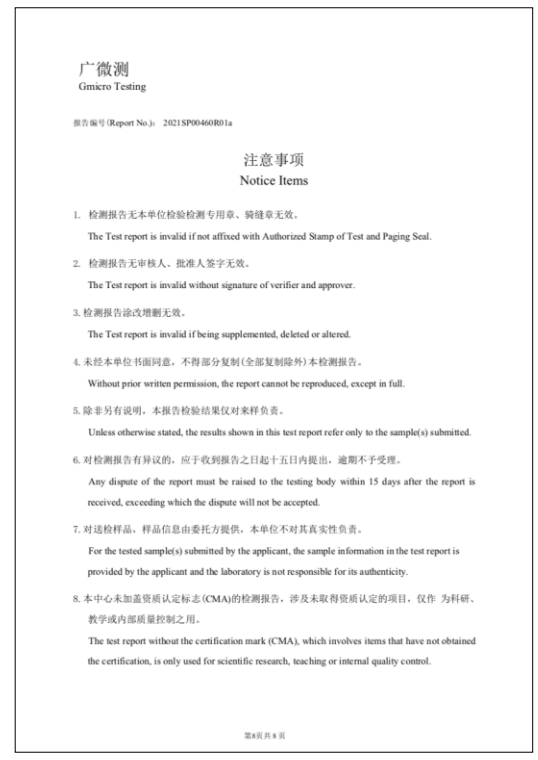
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报告编号(Report No.)： 2021SP00460R01a

注意事项
Notice Items

1. 检测报告无本单位检验检测专用章、骑缝章无效。
The Test report is invalid if not affixed with Authorized Stamp of Test and Paging Seal.
2. 检测报告无审核人、批准人签字无效。
The Test report is invalid without signature of verifier and approver.
3. 检测报告涂改增删无效。
The Test report is invalid if being supplemented, deleted or altered.
4. 未经本单位书面同意，不得部分复制（全部复制除外）本检测报告。
Without prior written permission, the report cannot be reproduced, except in full.
5. 除非另有说明，本报告检验结果仅对来样负责。
Unless otherwise stated, the results shown in this test report refer only to the sample(s) submitted.
6. 对检测报告有异议的，应于收到报告之日起十五日内提出，逾期不予受理。
Any dispute of the report must be raised to the testing body within 15 days after the report is received, exceeding which the dispute will not be accepted.
7. 对送检样品，样品信息由委托方提供，本单位不对其真实性负责。
For the tested sample(s) submitted by the applicant, the sample information in the test report is provided by the applicant and the laboratory is not responsible for its authenticity.
8. 本中心未加盖资质认定标志(CMA)的检测报告，涉及未取得资质认定的项目，仅作 为科研、教学或内部质量控制之用。
The test report without the certification mark (CMA), which involves items that have not obtained the certification, is only used for scientific research, teaching or internal quality control.

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No lesions found

Certificate


LST
Certificate of Compliance

Certificate No.: LST20127800SL
Applicant: GUANGDONG EXCIMER OPTOELECTRONIC TECHNOLOGY CO., LTD.
Applicant Address: F1,4,Excimer Optoelectronic Building,No.63,Taoyuan Road,Heshan City,Jiangmen City,Guangdong Province
Manufacturer: GUANGDONG EXCIMER OPTOELECTRONIC TECHNOLOGY CO., LTD.
Manufacturer Address: F1,4,Excimer Optoelectronic Building,No.63,Taoyuan Road,Heshan City,Jiangmen City,Guangdong Province
Product: Excimer UV Sterilizer
M/N: DF19B-15W DF15B-5W,DF15B-10W,DF28B-20W
Trademark: FIRSTUVC
Test Standard: EN 60335-1:2012/A13:2017

The EUT described above has been tested by us with the listed standards and found in compliance with the council LVD directive 2014/35/EU. It is possible to use CE marking to demonstrate the compliance with this LVD Directive. It is only valid in connection with the test report number: LST20127800SLR.

CE

Manager
Issue Date: Dec. 11, 2020


CERTIFICATE
QUALITY MANAGEMENT SYSTEM
Certificate No. Q86160662692

This is to certify that
Guangdong Excimer Optoelectronic Technology Co., Ltd
P/C: 529725 Unified social credit code: 91440784MA55843776
Registration Address: Fourth Floor, No.63, Panlong Road, Taoyuan Town, Heshan City

Which is in conformity with
GB/T19001-2016/ISO 9001:2015

Scope of Certification
Optoelectronic device manufacturing; Optoelectronic device sales; Electronic special materials research and development; Technical Services, Technology development, technical consulting, Technology Exchange, Technology transfer, Technology Promotion; Lighting equipment sales; Lighting equipment manufacturing; First class medical device sales; First class medical device production; Technology import and Export; Import and export

Issue date: 06 January, 2021 Term of validity: 05 January, 2024

ISO 9001
IAF
Signed by:
Zenview Certification (China) Co., Ltd
http://www.zb-iso.com


HTT
TECHNOLOGY

FCC SUPPLIER'S DECLARATION OF CONFORMITY

Certificate Number: HTT21043030F
Product Name: UV disinfection door
Model No.: SAFE 222-200W, SAFE 222G-200W, SAFE 222G-500W
Trade Mark: N/A
Applicable standards: FCC CFR Title 47 Part 15 Subpart B:2017

The products comply with the FCC regulations and the electromagnetic compatibility evaluation requirements.

The test result has been evaluated by Shenzhen HTT Technology Co., Ltd laboratory and showed in the test report
The test report number: HTT21043030FR

It is understood that each unit marketed is identical to the device as tested, and any changes to the device that could adversely affect the emission characteristics will require retest.

The following responsible party designated in FCC §2.909 is responsible for this declaration:

FC

Company Name:
Company Address:
Tel:
Fax:
Email:
Signature:
Date:

Shenzhen HTT Technology Co.,Ltd. Web: www.httpcc.com
TEL: 0755-28606200 FAX: 0755-28606230 Hotline: 400 6606 202 Mail: info@httpcc.com
2F, B Building, Huafeng International Robotics Industrial Park, Gushu, Xixiang Street, Baoan District, Shenzhen, China


FDA Radiological Health
Electronic Submission Program

This certifies that
GUANGDONG EXCIMER OPTOELECTRONIC TECH CO., LTD
No.63, Panlong Road, Heshan, Jiangmen, Guangdong China

has been filed according to reporting requirements in Title 21, Code of Federal Regulations (CFR), Part 1002 for Radiation product Initial Report. Submission has been assigned an ACCESSION NUMBER which can be used by manufacturer and FDA to identify submission as below:

Accession Number: 2110183-000
Product: Ultraviolet Commercial/Consumer Products (UV sterilizer, UV Lamp)

FDA

Model(s): F40-150W AC220V, DF28B-20W 24V, F40-400W AC220V, DF15B-5W 24V, F28-40W DC24V, F15-5W DC24V, F19-15W DC24V, DF19B-15W 24V, DF15B-B1 5W, F19-40W DC24V, F28-60W DC24V, DF28B-B3 20w, F28-20W DC24V.

This certificate affirms that the above stated information is registered with the U.S. Food and Drug Administration pursuant to Title 21, Code of Federal Regulations (CFR), Part 1002, such submission having been verified as effective by CCTS, and CCTS will confirm that such registration remains effective upon request of FDA official rules period.

CCTS makes no other presentations or warranties, nor does this certificate make any representations or warranties to any person or entity other than the named certificate holder, for whom sole benefit it is issued. CCTS assumes no liability to any person or entity in connection with the foregoing. The U.S. Food and Drug Administration does not issue a certificate of registration, nor does the U.S. Food and Drug Administration recognize a certificate of registration. CCTS is not affiliated with the U.S. Food and Drug Administration.

Please note that your firm is required to submit an Annual Report to CDRH every year by September 1.

CCTS
Shenzhen CCTS Quality Certification Co., Ltd
Issued: August 25, 2021

ABOUT US

VendiGlobe
222nm FAR-UVC Disinfection

VendiGlobe
FAR UVC LIGHT 222nm

Vendiglobe, a company aimed at improving the safety and quality of the environments in which people work, travel, and live through the application of environmentally sound technologies. We are excited to debut a new product line of FUV 222nm Excilamps and doors using empirically-proven technology to reduce the presence of viruses and bacteria. For years, we have known that conventional ultraviolet light effectively kills bacteria and viruses; however, it is also a health hazard to humans preventing its widespread use. This new product line takes advantage of research that has identified a way of utilizing the effectiveness of ultraviolet light without the health concerns. At a wavelength of 222nm, these lights are unable to penetrate the skin's protective outside layer, making them safely deployable in public spaces.

The COVID-19 pandemic has illustrated the importance of ensuring safety, particularly for business, educational, and travel settings where people congregate in close proximity. With this line of Excilamps and doors, we hope to greatly improve safety and reduce transmission of dangerous viruses and bacteria. Our lamps have a wide operating temperature, power up in less than a second, are safe for people and animals.

Our Far-UVC 222nm excimer light systems inactivate airborne and surface pathogens like SARS-CoV-2 (COVID-19) by damaging its RNA. The same light neutralizes bacteria by damaging its DNA.

Website:https://222nm.org