SAFEGLO®

SAFEGLO Far-UVC Product Profile

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GMY Lighting Technology Co., Ltd.

GMY

SAFEGLO®

Used in designated hospital for Peking winter Olympics

CCTV News recommended usage

Scientific discovery:
Far-UVC is safe and efficient for disinfection of human body

Human safety

Professor Brenner of Columbia University discovery:

- The cuticle as the outermost layer of the skin, can block 222nm from reaching subcutaneous living cells, and the cuticle is in a continuous metabolic process
- The cornea is protected by the tear layer, which can block 222nm waves. The upper cornea is 4-6 cells thick and the metabolic cycle is about 1-2 days, so there is no long-term risk

Nature Research Scientific Report


www.nature.com/scientificreports

SCIENTIFIC REPORTS

nature research

OPEN

Far-UVC light (222 nm) efficiently and safely inactivates airborne human coronaviruses

Manuela Buonanno, David Welch, Igor Shuryak & David J. Brenner

"The father of Far-UVC"

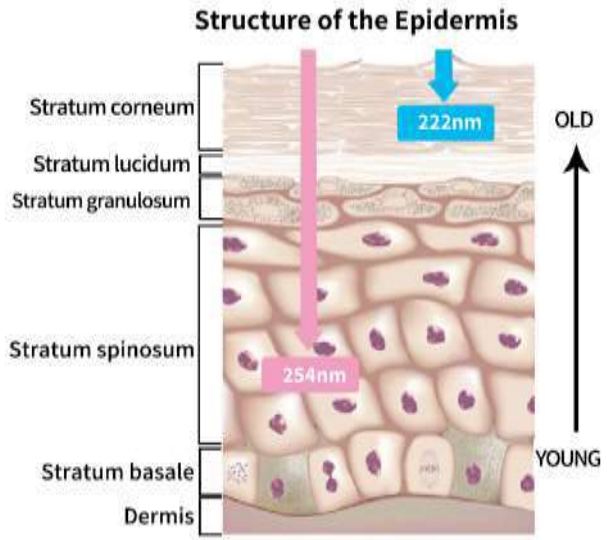
David J. Brenner, Ph.D., D.Sc

Center For Radiological Research, Columbia University

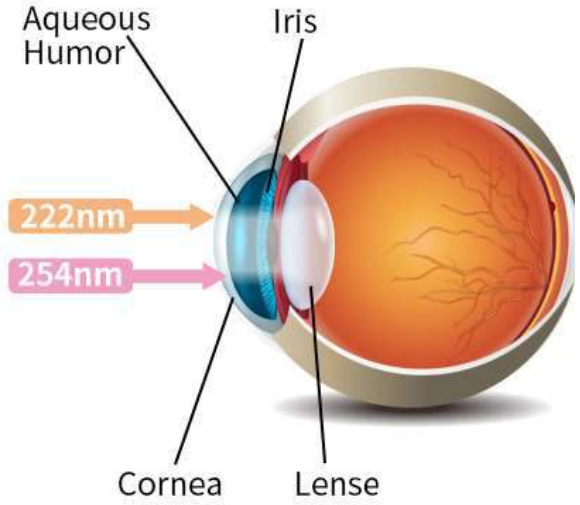
Far-UVC is safe for humans

Far-UVC (222nm) doesn’t penetrate tissue

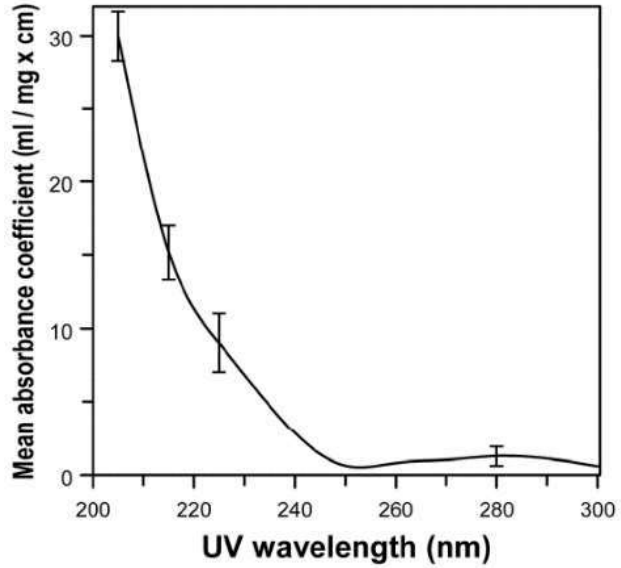
- Most UVC disinfection lamps (254nm) can damage eyes and skin
- SafeGlo's Far-UVC doesn't even penetrate tissue. Keeps eyes and skin safe from harm



Penetration of epidermis of 254nm vs. 222nm[2]



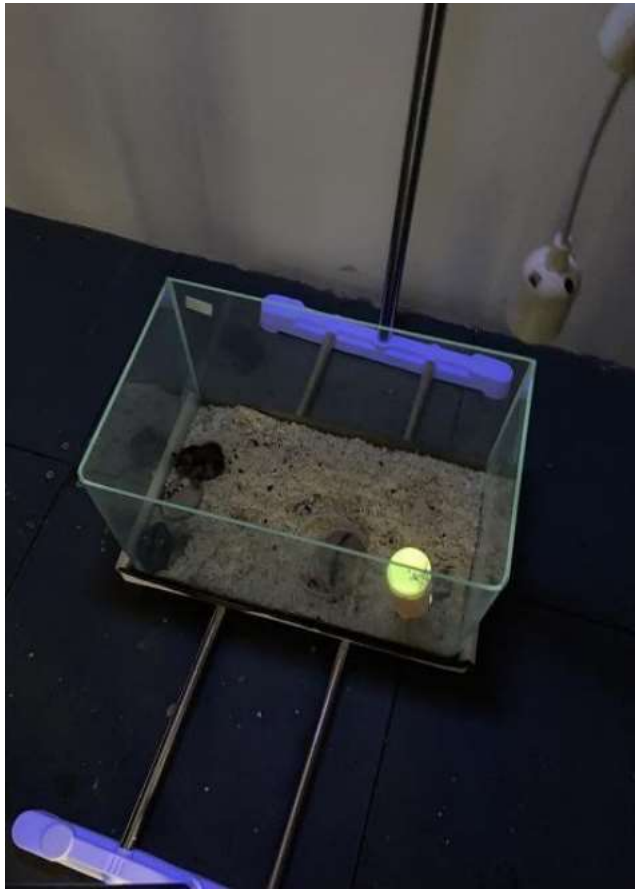
Ocular penetrati on of 222nm vs. 254nm[2]



Average UV absorption coefficient curves of proteins[1]

Reference: [1] Buonanno M, Randers-Pehrson G, Bigelow A W , *et al*. 207-nm UV light - A promising tool for safe low-cost reduction of surgical site infections. I: In vitro studies [J]. *PLOS ONE*, 2013, **8** (10): e76968.
[2] Ushio. White Paper: Care 222® in the workplace: Testing effectiveness of long-range surface infection prevention.

SAFEGLO Far-UVC safety studies in China

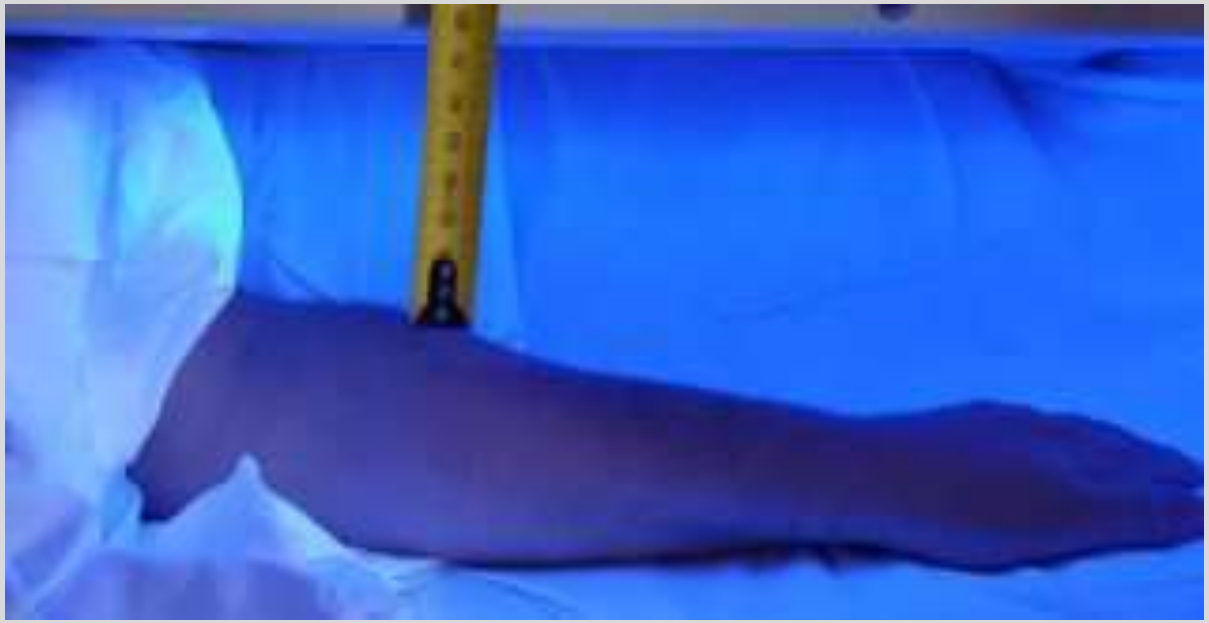


The safety of SAFEGLO Far-UVC was verified by exposure experiment on mice with SAFEGLO 222nm Far-UVC light source.

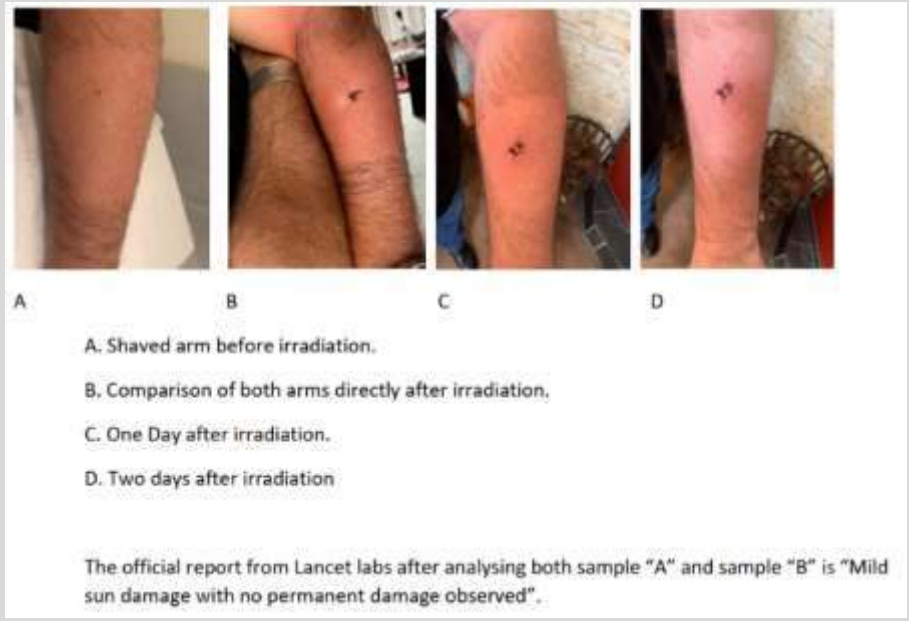
- (1-7d) 10 min exposure, 3 times/day;
- (8-14d) 30 min exposure, 3 times/day;
- (15-21d) 1 hour exposure, 3 times/day;

  (22-28d) 6 hours continuous exposure/day.
- At the end of the experiment, the mice survives without obvious lesions in eyes and skin.

Human skin exposure in Lancet Laboratory

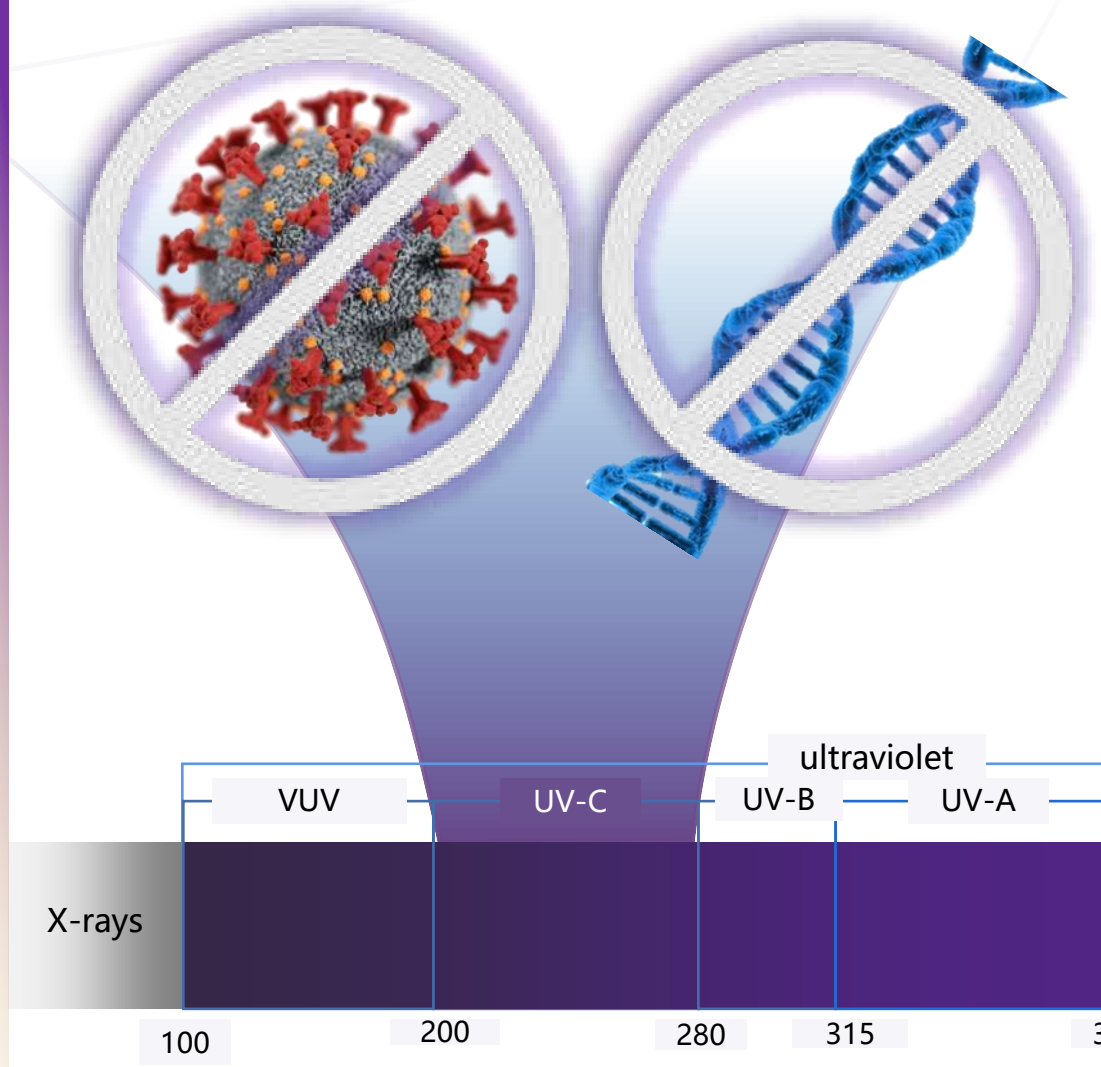


SafeGlo Far-UVC lamp exposure on volunteer's arm



The irradiance is 1.83 mW/cm² Exposure time 13 hours, no harm to human skin

SAFEGLO®



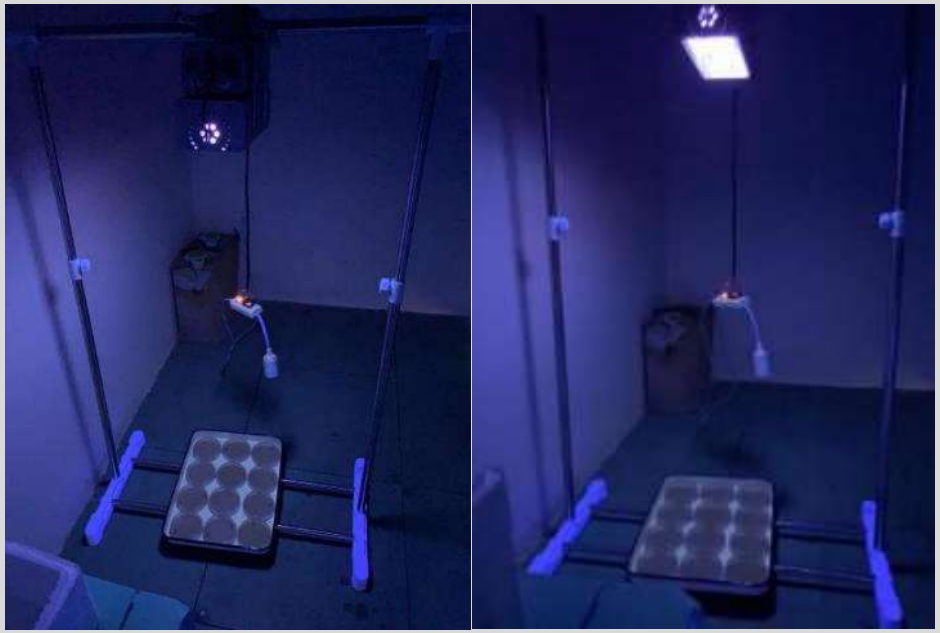
Far-UVC breaks the DNA/RNA of germs, so that they can't replicate

Scientific research shows that high-energy ultraviolet rays can efficiently disinfect air, water and surfaces. UVC ultraviolet technology destroys up to 99.9% of most pathogens without the use of harsh chemicals that often come with harmful side effects.

- No harmful chemicals. No odor. No mess.
- Easy maintenance. No dirty filters to change.
- Efficient and rapid disinfection.
- Destroy up to 99.9% of all pathogens.

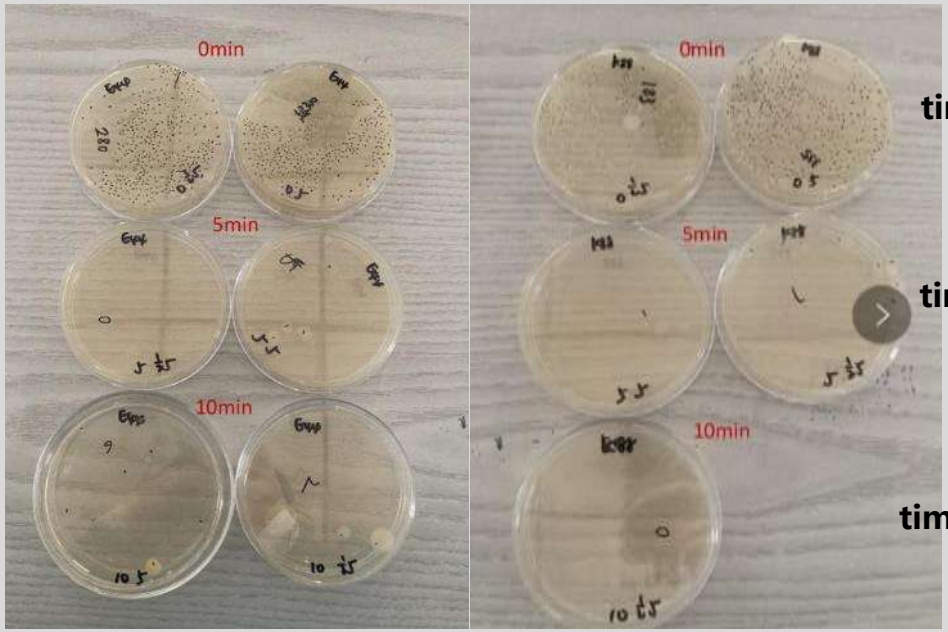
Domestic scientific research experiments on Far-UVC efficient disinfection

The disinfection experiment was carried out by SAFEGLO Far-UVC light source



Height 1 meter　　Height 1.5 meter

Different irradiation heights were compared



time: 0 min

time: 5 min

time: 10 min

Indicator: e44　　Indicator: k88

Different indicator bacteria were compared

SAFEGLO Far-UVC can destroy SARS-CoV-2

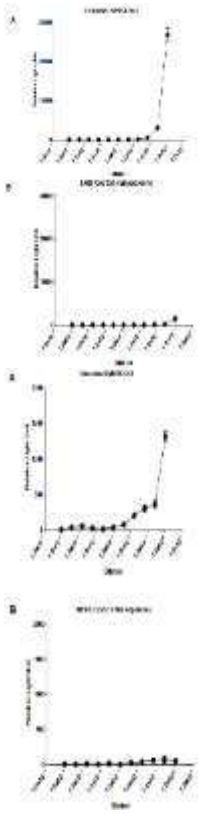
CSIR

To whom it may concern:

This is to confirm that my Research Group, Array Tech and Companion Diagnostic based at the CSIR, specialized in virology research and virucidal assays, has tested and evaluated the FAR UVC Africa device using a GMY 150W globe for disinfection of SARS-CoV-2, the virus that causes COVID-19. The process involved growing the virus and subjecting it to the UVC light emitted by the device for 15 minutes at the height of 0.5 m. This was then followed by the infection of target cells using the exposed viruses and comparing them to unexposed viruses as controls. After three days of tissue culture we observed a marked reduction in the virus infectivity. I can, therefore, confirm that the FAR UVC light generated by this device can destroy SARS-CoV-2.

If you need more information, please feel free to contact me.

Sincerely,



Council for Scientific and Industrial Research(CSIR) experiment

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Division of the National Health Laboratory Service

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Table 4: Average SARS-CoV-2 concentration extracted from metal discs, log reduction and the percentage log reduction achieved over a period of 60 minutes

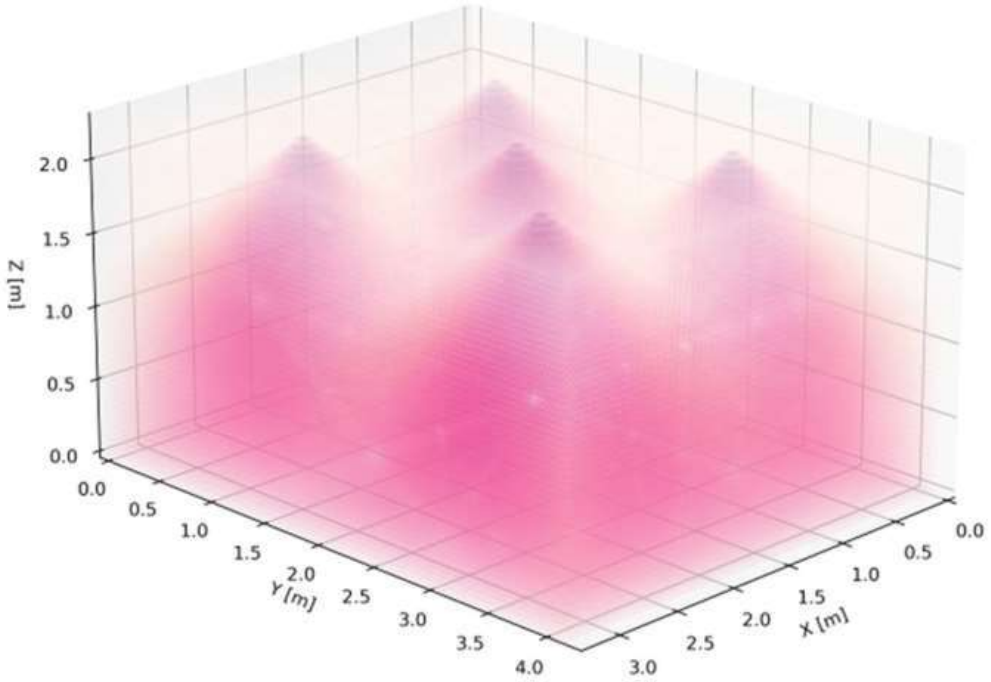
Sample intervals	Concentration (copies/ml)			Log Reduction			Percentage Reduction (%)		
	S gene	N gene	ORF1ab	S gene	N gene	ORF1ab	S gene	N gene	ORF1ab
SARS CoV-2 baseline	1.72×10^7	3.68×10^7	4.37×10^7	0.00	0.00	0.00	0.00	0.00	0.00
SARS-CoV-2 10 min	9.38×10^6	2.45×10^7	2.75×10^7	0.26	0.18	0.20	45.44	33.24	37.07
SARS-CoV-2 20 min	7.38×10^6	1.93×10^7	2.40×10^7	0.37	0.28	0.26	57.06	47.60	45.15
SARS-CoV-2 30 min	5.11×10^6	1.57×10^7	1.63×10^7	0.53	0.37	0.43	70.27	57.42	62.77
SARS-CoV-2 40 min	2.98×10^6	8.85×10^6	9.14×10^6	0.76	0.62	0.68	82.69	75.94	79.09
SARS-CoV-2 50 min	2.94×10^6	6.82×10^6	8.32×10^6	0.77	0.73	0.72	82.93	81.46	80.96
SARS-CoV-2 60 min	2.15×10^5	8.08×10^5	8.32×10^5	1.90	1.66	1.72	98.75	97.80	98.10

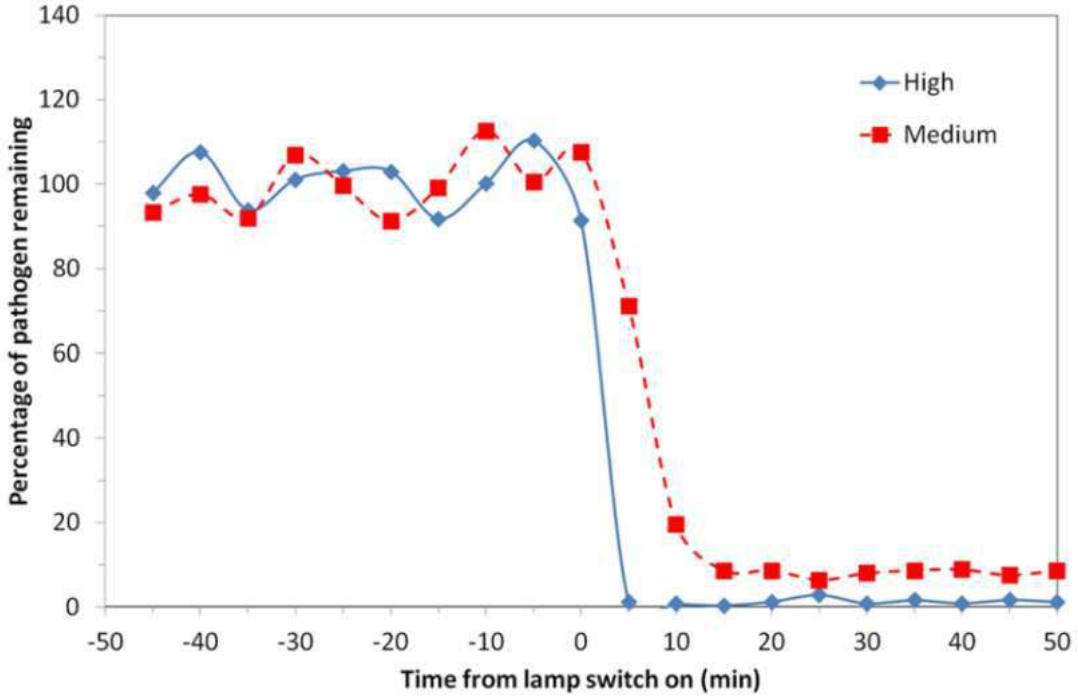
Log Reduction= LOG [Pre (copies / ml)] – LOG [Post (copies / ml)]

Percentage Reduction = [Pre (copies / ml) - Post (copies / ml)] x 100/ [Pre (copies / ml)]

South African National Institute for Occupational Health Laboratory experiment

“The whole house disinfection”Effectively prevent the transmission of Coronavirus





Far-UVC is both safe and effective

Defects in other disinfection techniques

Conventional UVC lamp

It can only be used in an unoccupied environment

It can cause serious damage to people's eyes and skin

Contains mercury and is not environmentally friendly

Chemical disinfectant

Toxic and harmful chemical residue

Highly dependent on manual operations

The disinfection effect will not last

LED UVC light source

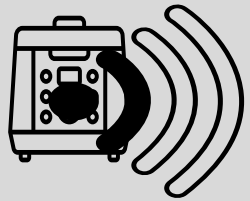
2% Low UVC efficiency

high costs

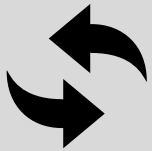
Need heat dissipation

SAFEGLO®

Air disinfection machine



Effective only around the equipment, not the whole house disinfection



Air circulation efficiency is low, the elimination need long time

Unable to disinfect the surface

Produce ozone, free radicals and other toxic and harmful substances

The world health organization：Far-UVC - Safe disinfection for human body


A LIGHTBULB
MOMENT
International Forum on 222nm Far-UVC
FAR UVC AFRICA
GMY SAFEGLO
EDEN PARK ILLUMINATION
biocare
UEC ENERGY

International Far-UVC science and technology progress A full-scale

ACGIH recently announced an update to its standard, which increases the allowable 222nm value from 23mJ/cm² to 160mJ/cm², directly announcing the safety of 222nm

WHO held a special meeting to recommend safe disinfection by Far-UVC.

UL launched UL8802 directive at the beginning of this year, paving the way for Far-UVC "human-machine coexistence" product certification

SAFEGLO®

specification

Name	FAR UVC Panel
Model	222E 20D Tablet
Power	12-15W
Adapter	AC100-240V
Drive Voltage	DC24V
Ozone	≤ 0.1ppm
Warranty	1 year
Design Life	3000 hours

SAFEGLO®

specification

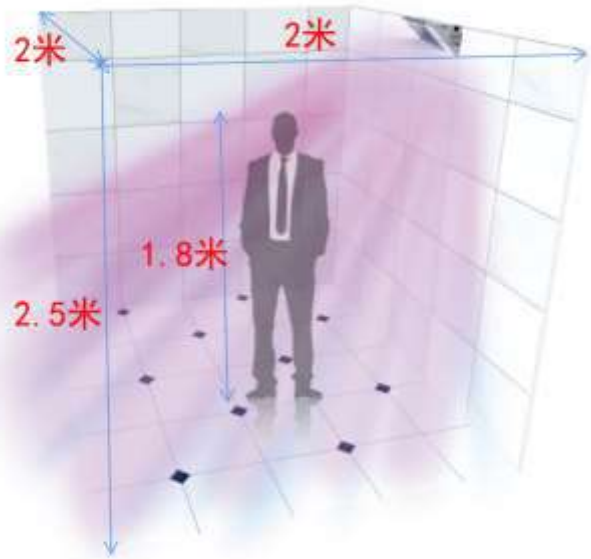
Name	Mini-power FAR UVC
Model	222E3D15×65
Power	3W
Adapter	AC100-240V
Lamp Voltage	AC2000V
Ozone	≤ 0.1ppm
Warranty	1 year
Design Life	3000 hours

Far-UVC disinfection lamp

SAFEGLO®

Specification

Product	FAR-UVC elevator disinfection lamp
Model	SGED01
Power	15W
Adapter	AC100-240V
Product voltage	DC24V
Weight	880g
Warranty	one year
design life	3000 hours



Space: 10m³ aerosol lab

Test germ: E. coli

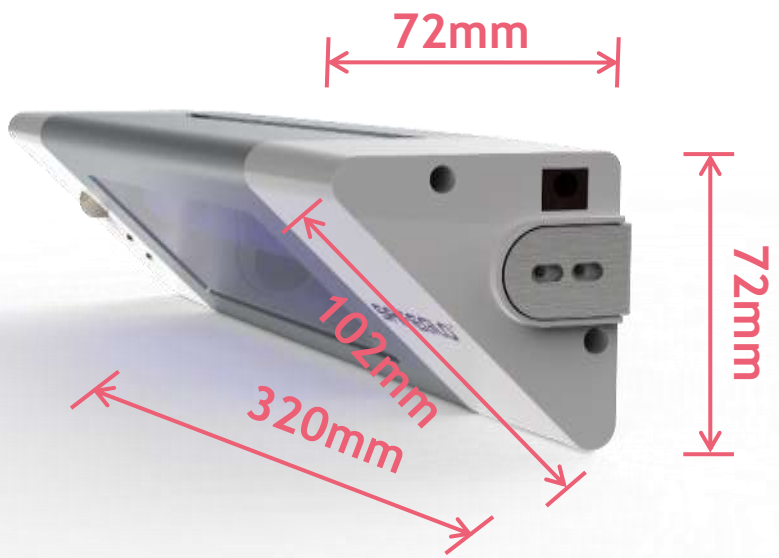
Results:

87% killed in 5 mins

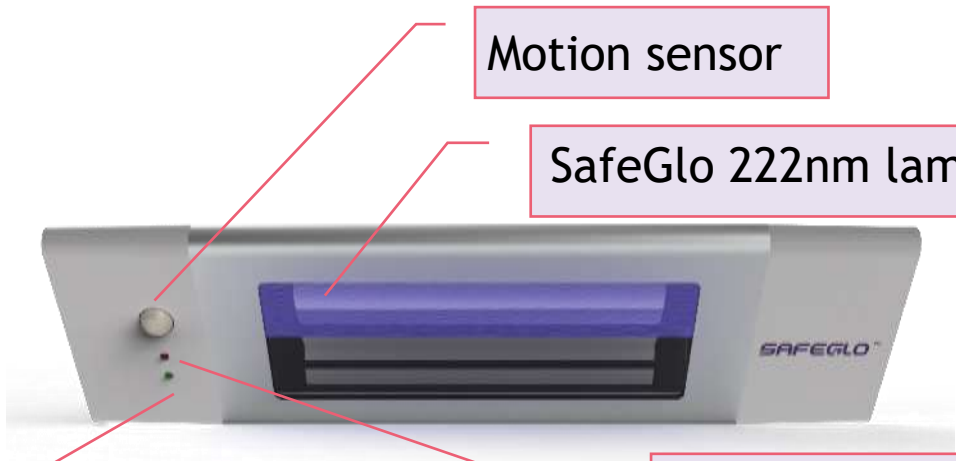
98.7% killed in 10 mins

99.9% killed in 20 mins (7mJ/cm²)

Far-UVC disinfection lamp



Lamp Size



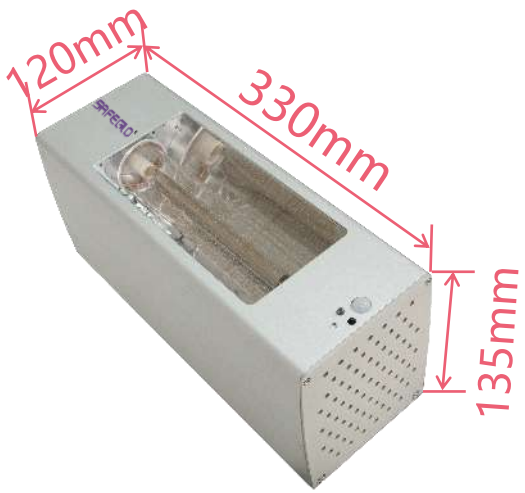
Panel description

75W Far-UVC Wall Mounted Lamp

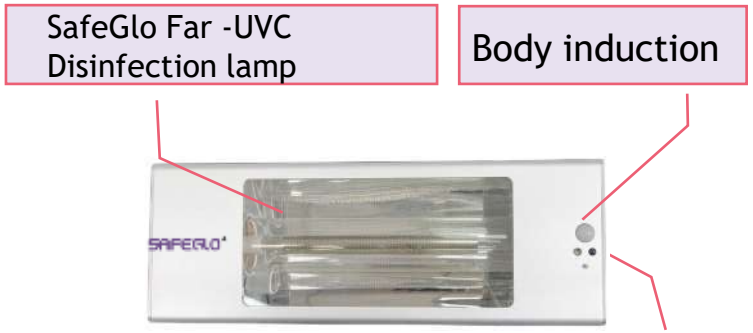
SAFEGLO®

Specification

Product	SafeGlo 75W Far-UVC wall mounted lamp
Model	SGWM01
Power	75W
Voltage	AC220-240V
Weight	2.44kg
Warranty	one year
design life	3000 hours



Lamp Size



Green indicator light:
- Steady on: The indicator is on
- Blinking: The indicator is off and standby

Red fault indicator light:
- Steady on indicates near the end of life
- Flashing indicates failure

Panel description

Far-UVC Disinfection Gate

SAFEGLO®

Product Characteristics

222 Using 222nm Far-UVC light source, harmless to human body

6 sec 6 seconds to complete elimination, disinfection rate can reach 99.9%, fast and efficient

- ✓ **voice prompt:** There will be a voice prompt before and after disinfection
- ✓ **Human body induction:** Automatic human body induction, automatic light
- ✓ **Fast pass:** 6 seconds to complete elimination, disinfection rate up to 99.9%, efficient express
- ✓ **Visible throughout:** the structure design is transparent and visible, and the situation is monitored in real time
- ✓ **Emergency stop switch:** the machine can be stopped immediately in case of emergency
- ✓ **Harmless to human body:** using 222nm Far-UVC harmless light source

SAFEGLO®

Specification

Product	Far-UVC Disinfection Gate
Model	SGD01
Power	1500W
Model size	Outside: 1300x700x2385mm interior casing: 900x700x2000mm
Input voltage	220 -240V / 50 Hz
Wavelength	222nm Far-UVC
Warranty	one year
Designed life	3000 hours

SAFEGLO®

Specification

Product	150W Far-UVC Disinfection module
Model	222E150D40×457 Module
Power	150W
Input voltage	AC120V/220-240V
Far-UVC Irradiance	100μW/cm²(@ 0.5m); 25μW/cm²(@1m)
Off and on time	200000
Design life	3000 hours
Working Temperature	-5℃~50℃
Warranty	one year

SAFEGLO®

Specification

Product	15W Far-UVC Disinfection Module 01
Model	222E15D40×66 module
Power	15W
Input voltage	DC24V
Far-UVC Irradiance	50μW/cm²(@ 0.25m)； 10μW/cm²(@0.5m)
Off and on time	200000
Design life	3000 hours
Working Temperature	-5℃~50℃
Warranty	one year

SAFEGLO®

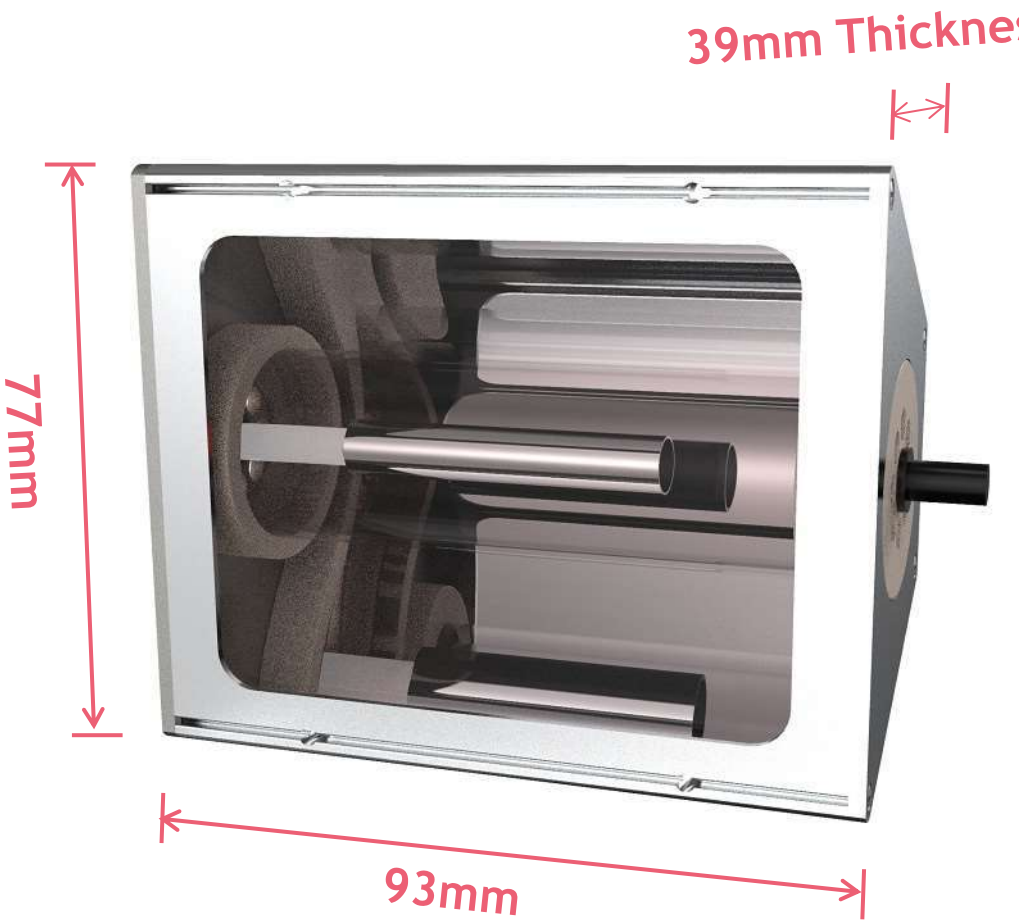
Specification

Product	15W Far-UVC Disinfection module 02
Model	222E15D25×85 module(rectangle)
Power	15W
Input voltage	DC24V
Far-UVC Irradiance	55μW/cm²(@ 0.25m)； 13μW/cm²(@0.5m)
Off and on time	200000
Design life	3000 hours
Working Temperature	-5℃~50℃
Warranty	one year

SAFEGLO®

Specification

Product	15W Far-UVC Disinfection module 03
Model	222E15D25×85 module(trapezoid)
Power	15W
Input voltage	DC24V
Far-UVC Irradiance	55μW/cm²(@ 0.25m)； 13μW/cm²(@0.5m)
Off and on time	200000
Design life	3000 hours
Working Temperatur	-5℃~50℃
Quality guarantee	one year



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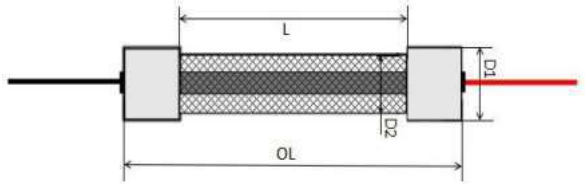
Base Specification



If you need a specific parameter product, please contact us to customize

Picture	Specification	Total watt.(W)	Input voltage	Size parameters	UVC Radiation Categories
	222E150D40×457	150 W	AC120V/220-240V	OL 457 mm L1 361mm D2 40 mm D1 53 mm	160μW/cm² (@ 500mm)
	222E75D25×589	75 W	AC120V/220-240V	OL 589 mm L1 500mm D2 25 mm D1 33 mm	70μW/cm² (@ 500mm)
	222E35S25×300	35 W	DC24V	OL 300 mm L1 240mm D2 25 mm D1 33 mm	45μW/cm² (@ 500mm)
	222E15S25×100	15 W	DC24V	OL 100 mm L1 60mm D2 25 mm D1 33 mm	10μW/cm² (@ 500mm)

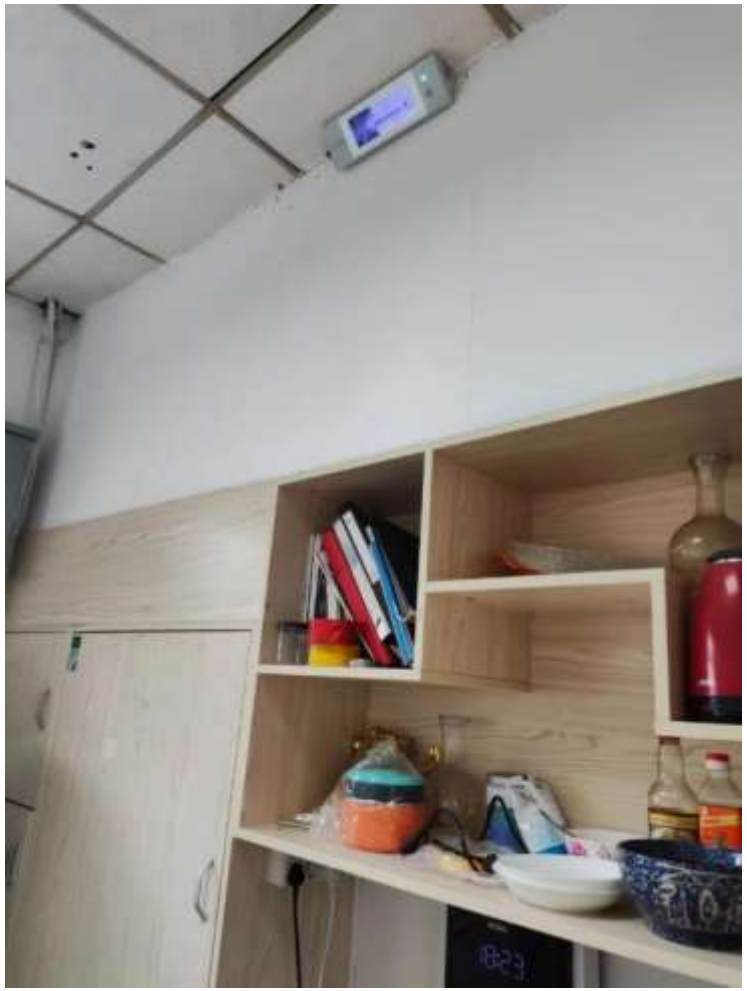
SAFEGLO Application

Taiwan Hospital

Isolation Hotel

South Africa's restaurant

SAFEGLO Application



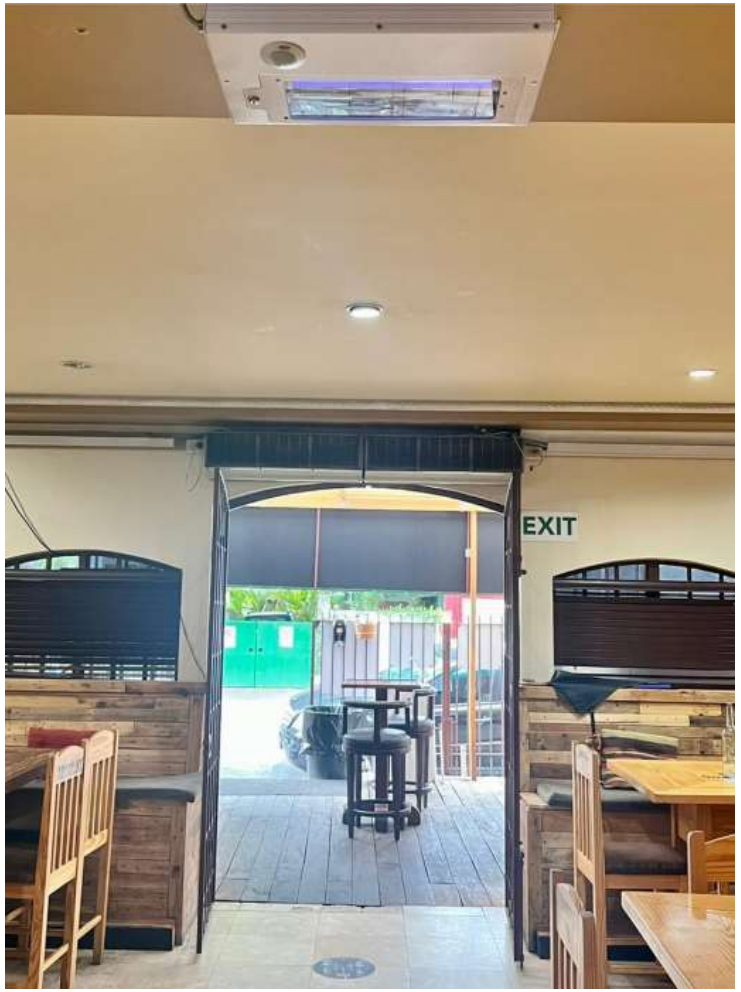
Tea room

Elevator room

Kitchen

SAFEGLO Application

The Grand Collection



Restaurant

SAFEGLO Application

Convenience Store

Bar

Coffee Shop

SAFEGLO Application

Office

Food cold chain

Tea cafe

Company Profile

Since 1998, GMY Lighting has been recognized worldwide for its outstanding product technology, excellent product quality and thoughtful customer service – with solutions spanning general lighting, automotive lighting, ultraviolet lights, equipment for disinfection, infrared and other health uses, and specialized horticultural and agricultural applications.

GMY produces hundreds of millions of light source products annually, which are sold in more than 100 countries around the world. Our development and manufacturing campus spans an area of nearly 80,000 square meters, with more than 700 employees. GMY production has been reviewed and certified under ISO9001, ISO14001, SA8000, and ITAF16949 guidelines.

As a world leader in the application of light technology, GMY works with partners to "create better life with light". We provide customers with the highest quality products, services and solutions, and continuously improve and innovate to create greater value for our customers.

Scan to see
our VR factory

Certified Quality

Our strict quality control standards have been certified by multiple authorities

- **IS09001** Quality System Certification
- **ISO14001** Environmental Management System Certification
- **SA8000** Social Responsibility Management System Certification
- **IATF16949** Quality management system certification for the automotive industry
- **Product Certificates:** CE | UL | ERP | EMC | FCC | CCC | ROHS

Social Responsibility

Our community

Our responsibility

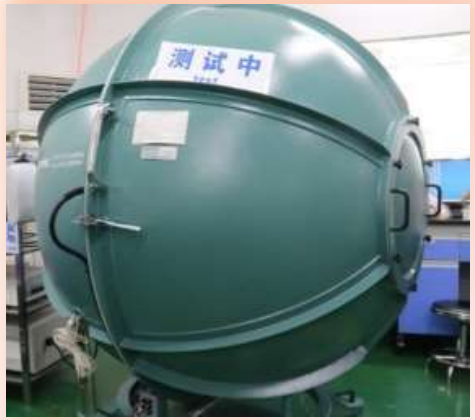
Both in China and

around the world

Experitise

Established in accordance with national CNAS* standards

- Rigorous testing standards: CE | UL | ERP | EMC | FCC | CCC | ROHS
- More than **23 years** of experience in light source manufacturing
- With more than 70 R&D personnel, more than **270 patents**



Visible spectrum analysis system

Compressive strength tester

Fluorescence Spectrometer

* CNAS (The China National Accreditation Service for Conformity Assessment) is **the national accreditation body of China**

Production Agility

Proprietary automated production equipment

- Fast turnaround from prototype to production
- Achieve mass production quickly, saving labor costs
- Ensure product consistency, stability and reliability

Cooperative Development and Branding

We provide customized products

for more than 100 world famous brands

SAFEGLO®

Thanks!

Website
www.gmylight.com

Company
GMY LIGHTING TECHNOLOGY CO., LTD.

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GMY