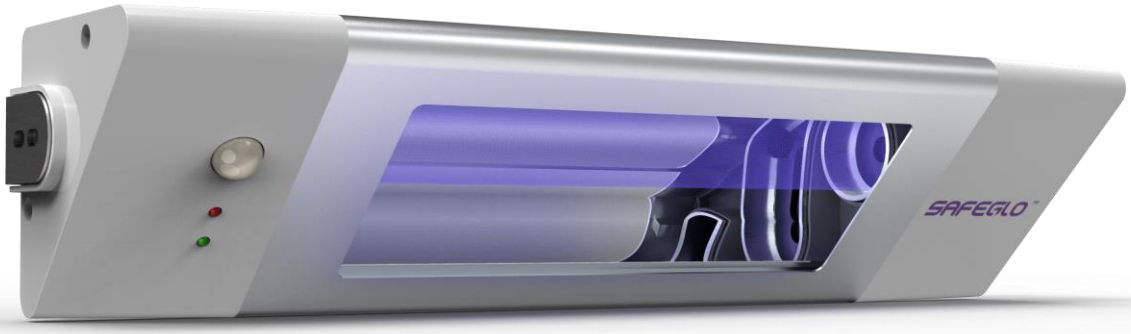


SAFEGLO™

# FAR-UVC DISINFECTION LAMP

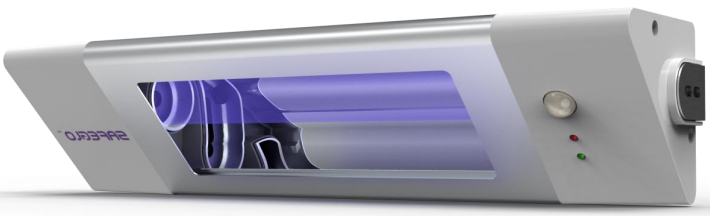



## Safe ultraviolet disinfection made easy

- Destroys bacteria and viruses, even Covid
- HARMLESS to skin and eyes
- Purify both air and surfaces
- Easy to install, easy to maintain
- No odors, sprays or chemicals



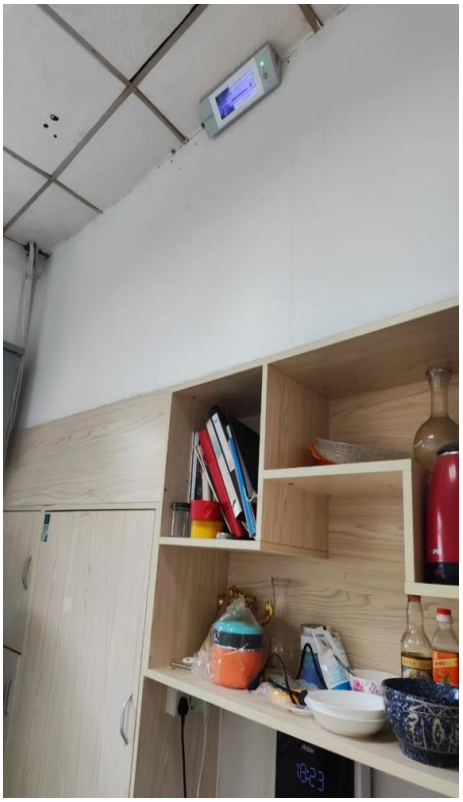

SafeGlo FAR UVC lamp destroys both surface and airborne bacteria and viruses, including Covid. utilizing 222nm disinfection technology, It keeps small spaces healthy even ones with poor ventilation!



# Application

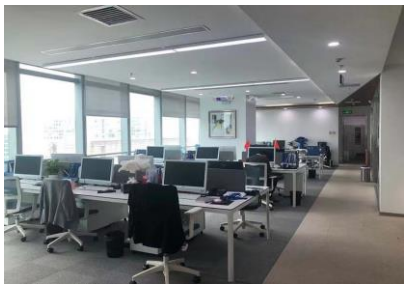










Elevator, hospital, clinic, tea room,
meeting room, office, etc

SAFEGLO®



CONFIDENTIAL REPORT

REPORT NO: 009/21-22

IMMUNOLOGY & MICROBIOLOGY REPORT

"Evaluation of FAR UVC Device in reducing surface SARS-CoV-2, *Staphylococcus aureus* and *Escherichia coli* in a laboratory testing facility"



NHLS testing
disinfect Covid
With SafeGlo 222



CSIR

11th June 2021

To whom it may concern:

This is to confirm that my Research Group, Array Tech and Companion Diagnostic based at the CSIR, specialised 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,

Dr. Kabamba Bankoledi Alexandre
Council for Scientific and Industrial Research (CSIR)
Next-Generation Health Cluster
Synthetic Biology Center
Array Tech and Companion Diagnostic Research Group
Room 120, Building 20,
Meiring Naude
Road, Brummeria, Pretoria, 0001, South Africa
+27-12-841-4776
+27-60-527-4024
AAlexandre@csir.co.za



中科检测技术服务（广州）股份有限公司
CAS Testing Technical Services (Guangzhou) Co.,Ltd.

检测报告

CMA 201819000873



广微测 Gmicro Testing

CMA 201819000873

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 | 2022FM0648SR01 |
| 样品名称 | SafeGlo®电梯智能远紫外消毒灯 |
| 送检单位 | 广州[illegible]光科技有限公司 |

单位地址：广州市先烈中路 100 号大院 66 号楼
邮政编码：510070
电话号码：(020)87137666
传真号码：(020)87137668
网　址：www.gddcm.com

CSIR testing
disinfect Covid
With SafeGlo 222

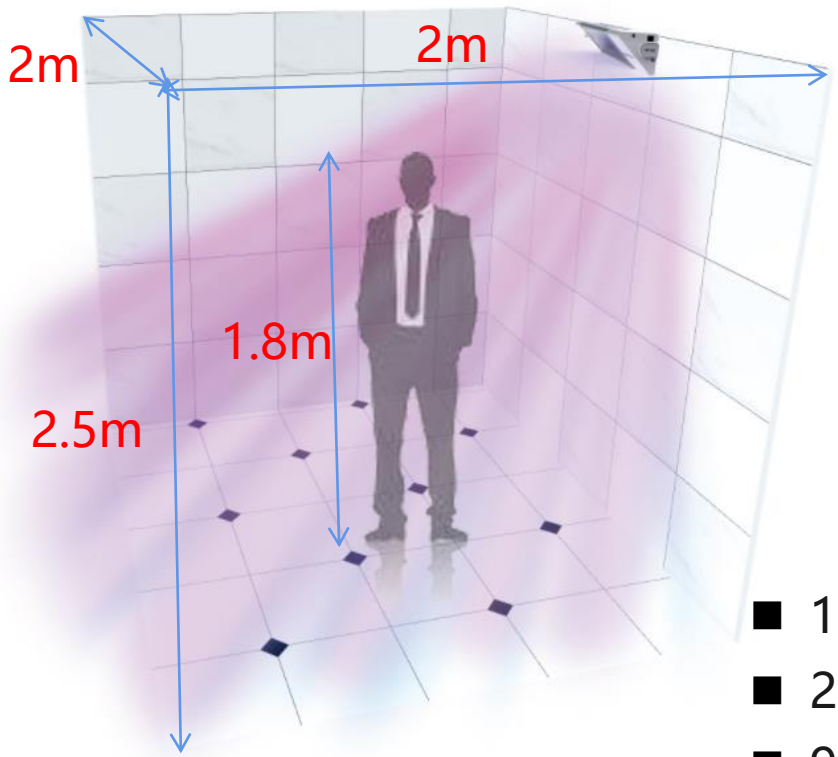
Cas Testing:
**Surface 99.9%**
**Air 99.9%**

Gmicro Testing
**Air 99.9%**

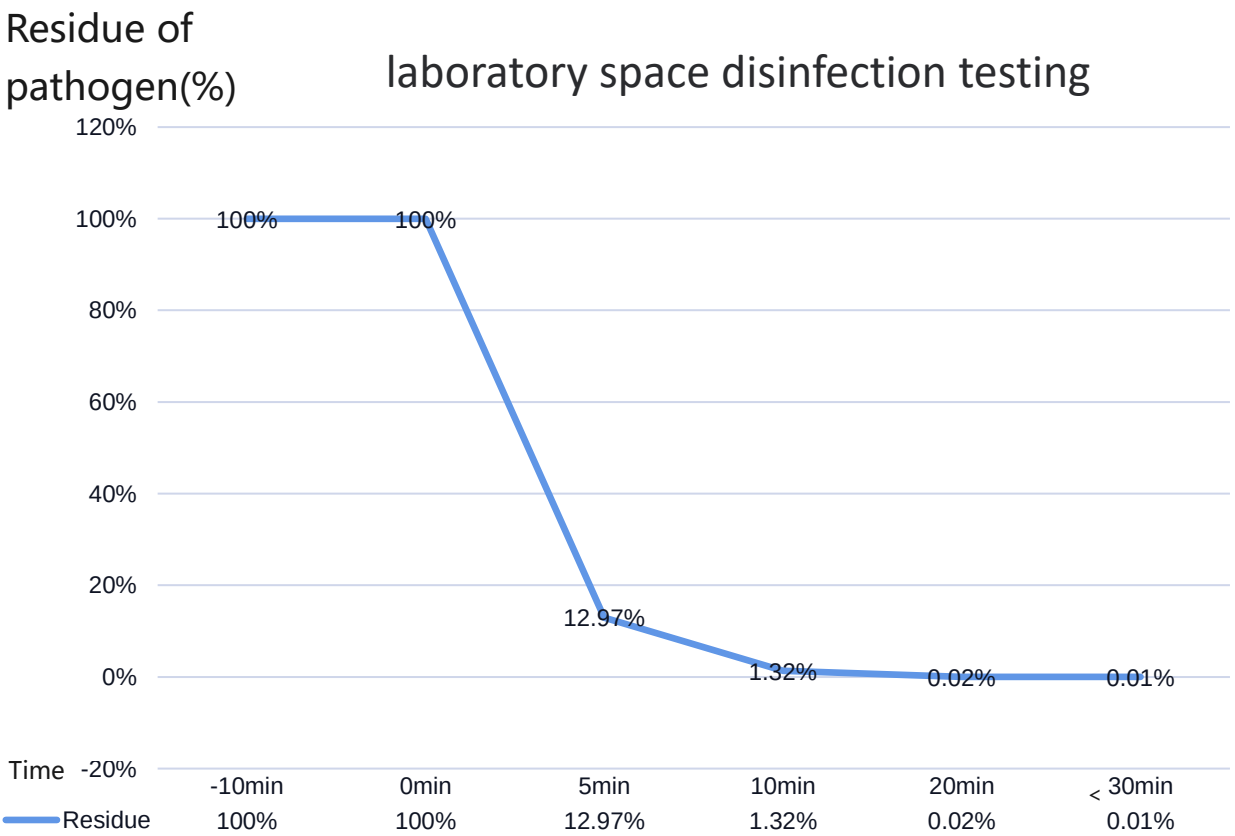
- **Effective COVID-19 Disinfection**
- **Third Party Certification**

# Real-time space Disinfection






- 10 cubic meter
- 20 minutes
- 99.9% disinfection



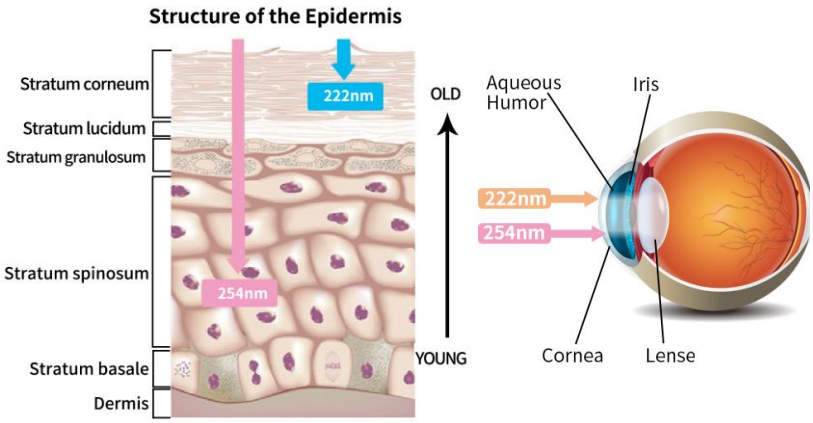
# Far UVC safety



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

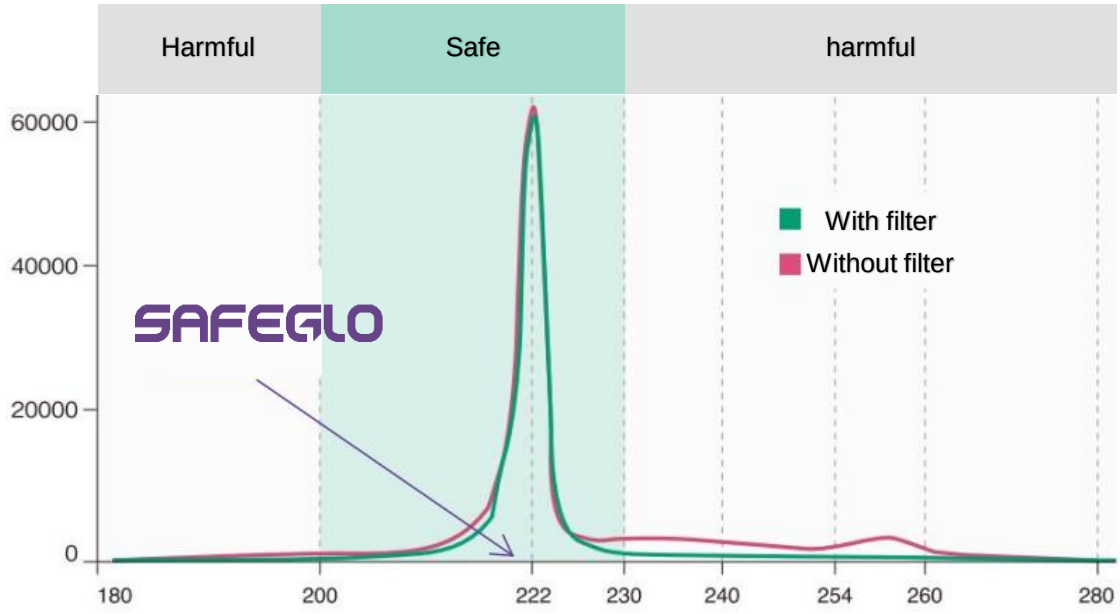
- Most UV disinfection lamps (254nm) can damage eyes and skin

- SafeGlo's Far UVC (222nm) doesn't even penetrate tissue. Keeps eyes and skin safe from harm




## SafeGlo's 222nm spectrum distribution

Study shows that 222 nanometers FAR UVC efficiently inactivate microbes without harm to exposed human skin. the SafeGlo far-UVC lamp inactivates more than 90 percent of the airborne microbes in six minutes.

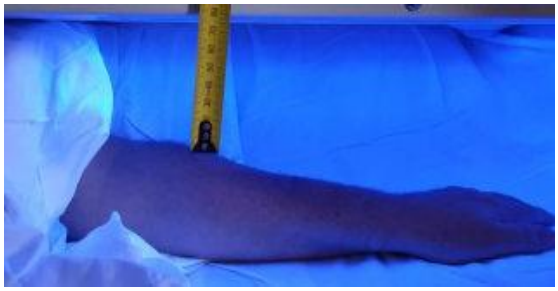


# Proven safe



## Lancet Laboratories safety test

- Use SafeGlo 150W 222nm lamp
- Exposure  at 7cm for 13 full hours
- Exposed skin showed only light redness that disappeared after day 2



**Independent test on the effects of filtered FAR UVC on Human skin.**

**Abstract**

This test aims to investigate, using a human subject, whether a filtered FAR UVC 222nm lamp caused any permanent skin damage to human skin under the below mentioned test parameters. Test date was 21-22 June 2021.

**Introduction**

Since the outbreak of Covid-19 there has been extensive research and development into alternative methods to combat pandemics and viruses. One such technology is Filtered FAR UVC 222nm excimer lamps that inactivate viruses in the air and surfaces. What sets this technology apart is the fact that it is effective in destroying SARS-Cov-2 accompanied by a lack of acute skin and eye reactions. Even at radiant exposures above the current exposure limits.

Implementation of this ground-breaking technology could encounter resistance after decades of public health warnings about ultraviolet exposure from traditional UVC 256nm technology.

This study aims to put to rest these concerns.



A B C D

A. Shaved arm before irradiation.

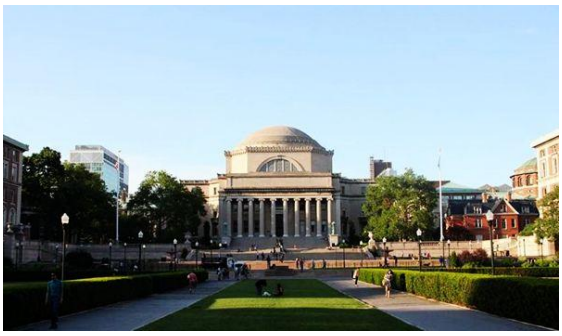
B. Comparison of both arms directly after irradiation.

C. One Day after irradiation.

D. Two days after irradiation

The official report from Lancet labs after analysing both sample "A" and sample "B" is "Mild sun damage with no permanent damage observed".

## Columbia University research on 222nm FAR UVC



- Irradiation for 1.2mJ/cm2, 25min to disinfect 99.9% HCoV-OC43
- mouse irradiation experiment by 500mJ/cm2 each day for 60 weeks
- Result: No harm to mouse skin and eyes



SCIENTIFIC REPORTS | (2020) 10:10285 | https://doi.org/10.1038/s41598-020-67211-2

SCIENTIFIC REPORTS

nature research

Check for updates

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

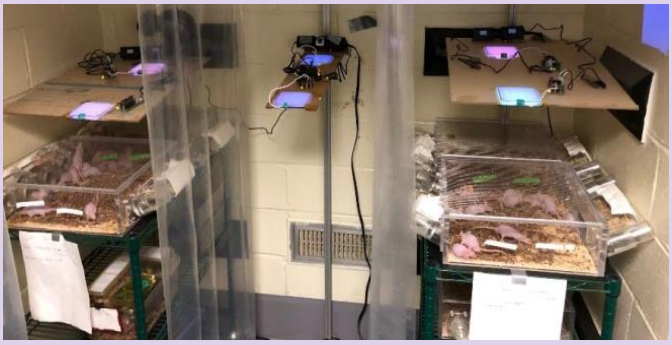
Manuela Buonanno, David Welch, Igor Shuryak & David J. Brenner

A direct approach to limit airborne viral transmissions is to inactivate them within a short time of their production. Germicidal ultraviolet light, typically at 254 nm, is effective in this context but, used directly, can be a health hazard to skin and eyes. By contrast, far-UVC light (207–222 nm) efficiently kills pathogens potentially without harm to exposed human tissues. We previously demonstrated that 222-nm far-UVC light efficiently kills airborne influenza virus and we extend those studies to explore



Before study, Aug 2019

Typical screening image

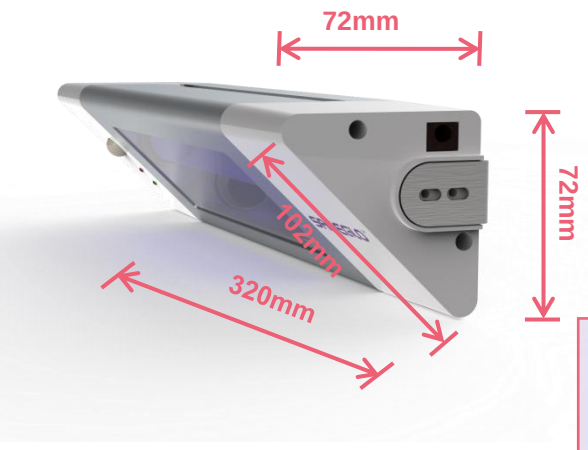


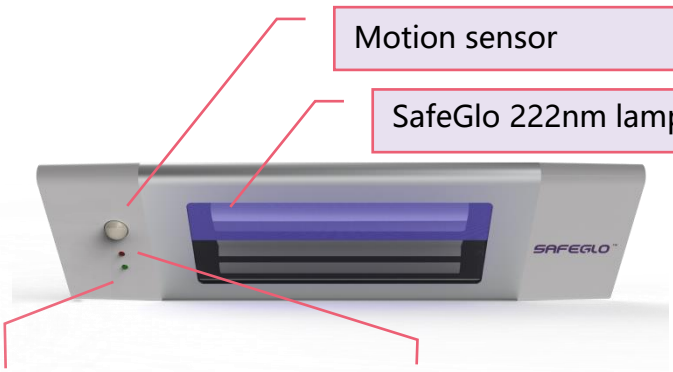
# Specifications



| Name | SafeGlo FAR-UVC disinfection lamp |
|---|---|
| Item number | SGED01 |
| Power | 15W |
| Adapter Voltage | AC100-240V |
| Product Voltage | DC24V |
| Weight | 880g |
| Warranty | 1 year |
| Lamp life | 3000 hours |

## Form and function




indicator (green)
- Steady – disinfecting
- Blinking – standby mode

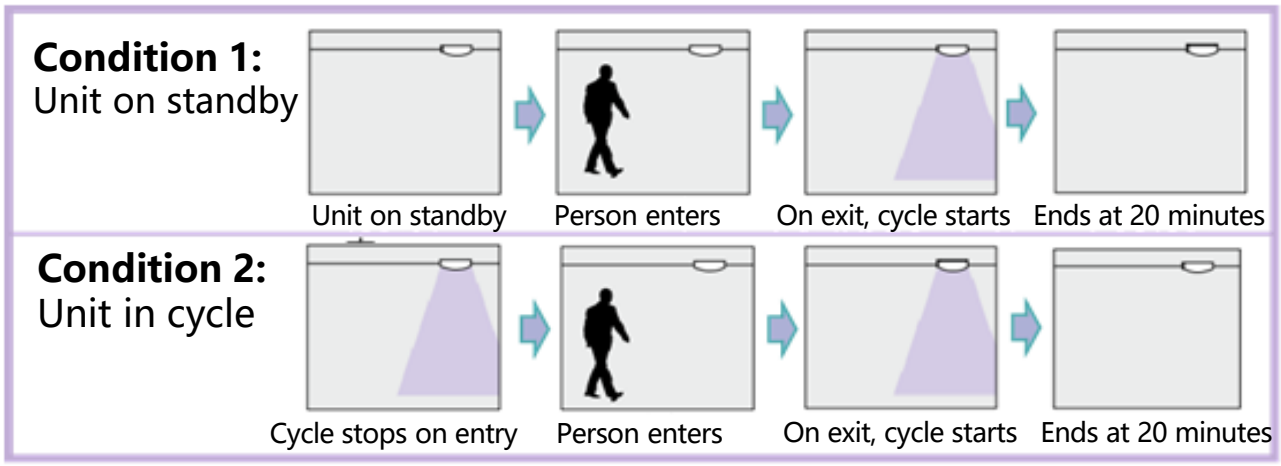
indicator (red)
- Steady – need replacement
- Blinking – error condition

# Operating modes

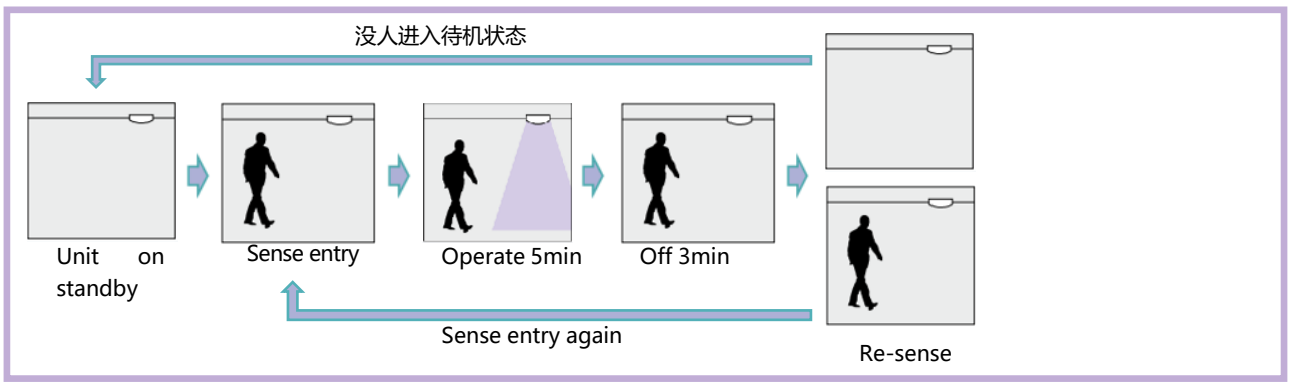


The built-in motion sensor provides two options: disinfect on exit or disinfect on entry (Operating mode is set at the factory)

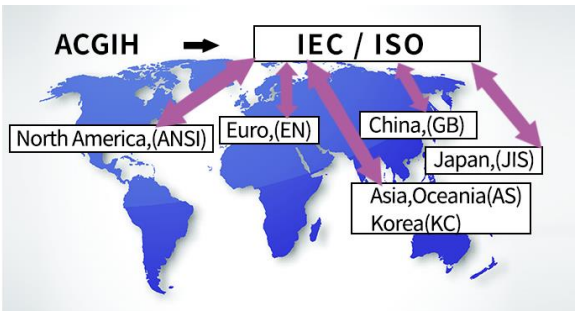
## Exit disinfection




## Entry disinfection




## Far UVC 222nm exposure recommendations




| Standard | Exposure value |
|---|---|
| **ACGIH** | 160 mJ/cm² (on eyes)<br>478mJ/cm² (on skin) |
| **IEC/ISO** | 22 mJ/cm$^2$ |

Note: Typical exposure to a SafeGlo Far UVC Lamp falls well within these guidelines

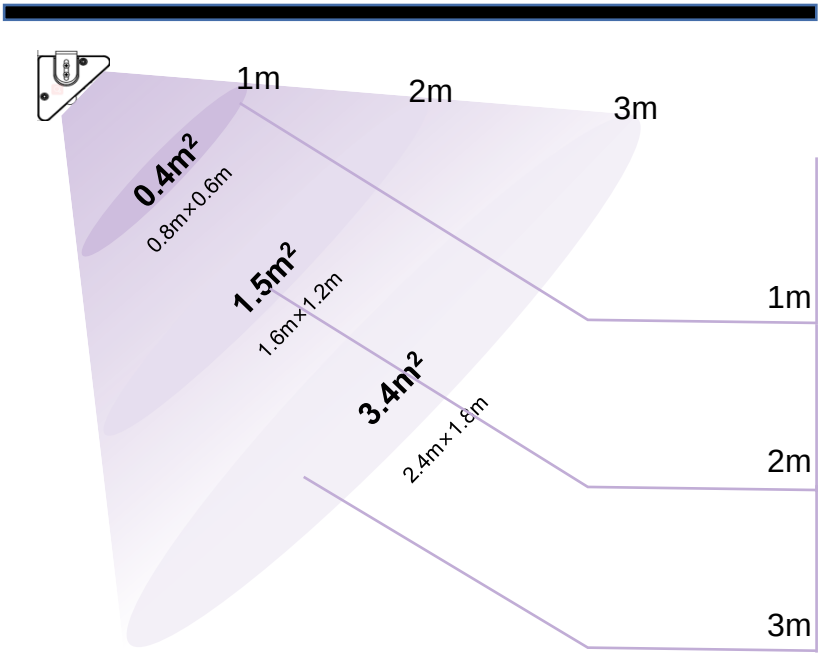
# Effectiveness



| Distance (mm) | coverage (mm) | High intensity (μW/cm²) | Low intensity (μW/cm²) |
|---|---|---|---|
| 10 | 8×6 | 1565 | 1152 |
| 30 | 24×18 | 1369 | 1082 |
| 50 | 40×30 | 966 | 837 |
| 100 | 80×60 | 439 | 385 |
| 150 | 120×90 | 219 | 208 |
| 200 | 160×120 | 134 | 129 |
| 500 | 400×300 | 24.3 | 24.1 |
| 1000 | 800×600 | 6.4 | 6.3 |
| 1500 | 1200×900 | 3.2 | 2.7 |
| 2000 | 1600×1200 | 1.85 | 1.6 |
| 2500 | 2000×1500 | 1.27 | 1 |

## Airborne disinfection

### Irradiation time and coverage



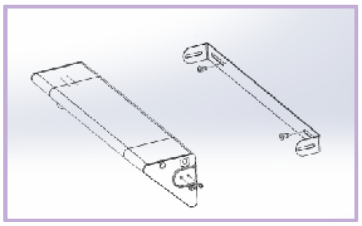

| Time to 90% disinfection | Time to 99.9% disinfection |
|---|---|
| About 60 Secs | About 3.1 mins |
| About 3.5 mins | About 10.8 mins |
| About 9.4 mins | About 29.4 mins |

Note: This is not a demonstration of a real room. Disinfection efficacy varies depending on usage environment and irradiation conditions -- Reference: Buonanno,et al., Sci. Rep. 10, 10285 (2020).

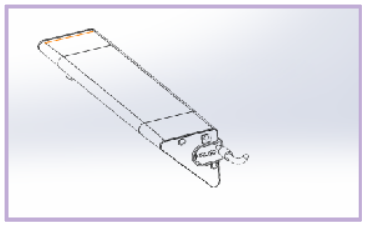
# Installation



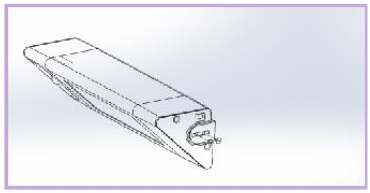
## Easy 3-step installation



1. Screw bracket to the wall



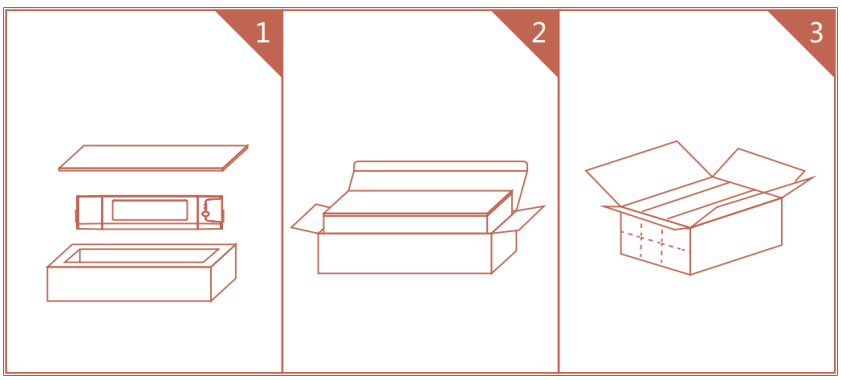
2. Use screws to attach lamp to bracket

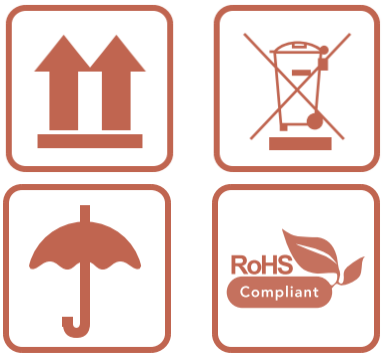


3. Connect power adapter, insert DC cable

## Packing information

| | | | |
|---|---|---|---|
| Item number | SGED01 | Box size | 35.7*18.5*10.3cm |
| Net weight | 0.88 kg | Carton size | 39*37.2*34cm |
| Gross weight | 1.32 kg | PCS per Carton | 6 PCS/CTN |
| Carton weight | 6.95 kg | Container Load | 20GP:3162PCS |



# About the product



## What is it?

The SafeGlo Far UVC Disinfection Lamp provides a unique layer of protection, using safe ultraviolet light to purify and disinfect elevators and other small rooms.

## Is it effective?

SafeGlo' s Far UVC is the only safe, proven method to disinfect in one step -- not only germs on surfaces, but airborne germs as well (including Covid viruses). But for all this power, SafeGlo' s 222nm Far UVC is harmless to human tissue, even sensitive skin and eyes.

## Is it safe?

SafeGlo' s 222nm ultraviolet wavelength is far too gentle to penetrate human tissue – but it' s deadly and utterly destructive to the simple microstructures of germs and viruses.

## Is the light very bright?

Not at all -- the powerful disinfecting ultraviolet that the lamp produces isn' t visible to the human eye. So when it' s operating, the lamp shows only a a soft gentle purple glow

## How hard is it to use?

The Lamp is designed to be simple.
Easy to install – 3 simple steps.
Near-zero maintenance. Silent and odor-free. No sprays or harsh chemicals. No consumables to replace.

## What is the life span of the lamp?

Because of its intelligent sensor technology, the Lamp works only when it' s needed – a short cycle after the space has been occupied. So, there' s no exact way to calculate the lamp' s effective life. But its 3000 hour operational capacity means it should last for many, many months in most installations.

# Notes



1. Install and use according to the product manual.

2. Keep the lamp window clean to assure optimal results. Turn off power before cleaning, and wait for the surface to cool. (Use a damp cloth only, as the unit is not watertight.)

3. A red status light indicates an error condition or the end of the lamp’ s effective life. Unplug and do not operate the unit. Seek professional assistance.

4. The unit has no user-serviceable parts. Do not attempt to repair or replace parts. Unplug the unit at any sign of cracks or breakage.

5. Some items may be affected by repeated, long-term exposure to ultraviolet, including Far UVC. These include sensitive plants, certain papers, some resin products, and fragile artwork.

# 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.

# Awards and honors

## Our core values:

## Gratitude

## Innovation

## Win-win





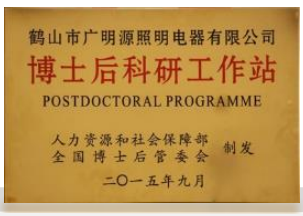





































SAFEGLO™

# Thank you!

GMY LIGHTING TECHNOLOGY CO., LTD.

No.328,XinXing Road,GongHe Town,HeShan City,GuangDong,China

www. gmylight.com