

Uveco

UV Sterilization Device Products Guide



Company Introduction

Brand Introduction



Developed by combining the dictionary definition of 'UV' which stands for Ultraviolet (UV Ray) and 'Eco' meaning Ecology (Ecosystem / preservation of environment). The ultimate definition which the trademark wishes to hold is a brand making an eco-friendly sterilization and air purifying product using UV sterilizing LED.

※ **Designated Product** : UV Sterilizer, Ion-sterilizer, sterilizer, sterilizing device, disinfection device, hand sanitizer, hand-piece sterilizer, portable air purifier, portable sterilizer, sterilizer for mask, air deodorizer, home-ultrasonic sterilizer, air-sterilizing disinfectant, filter for air purifier, air sterilizer, disinfectant for food, sterilizer for vehicle, portable UV sterilizer, air purifier



CEO Message

We believe that because of the great interest and support from the customers allows us to put in great effort having us consistently grow without falling behind in the 21st century known as the time of fierce competition. And to satisfy to it, us executive members prioritized customer building the business policy of "Customer Success" as goal and take another step forward towards the customer. Many electronics such as communication device, computer, media devices and so on are being developed and regressing due to the rapid change of the electronic industry. Which is why the interest towards printed circuit board which is the basic component of these electronics and research are actively carried out and also receives attention as an industry with endless possibility of development. We are going to do our best in developing a new PCB based on the trust and support of the customers in order to take a step forward from such reality. We will leap as the best PCB company with [technology/delivery/quality business] as goal, and promise to put in our best by having all executive members as one for responsibility and sincerity for all small and big works you all have given us.

Status of Patent and Certification



CE-EMC Certification



KC electromagnetic suitability certification



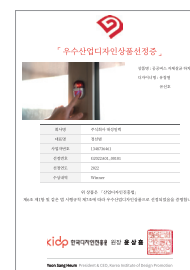
RoHS Certification



Domestic Design Registration



Domestic Invention Registration



Certification for Good-Design



International PCT patent application



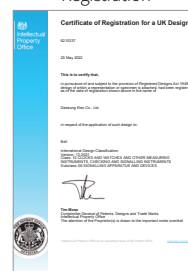
Singapore Design Registration



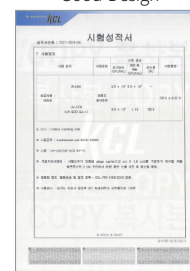
Singapore Trademark Registration



Japan Design Patent Registration



England Design Registration



KCL Sterilization Test Report 99.9%

UVECO Surface sterilizer outline

Why is a sterilizer needed on a contact button?

The attack of the virus continuously evolving!

Swine flu, COVID-19, to monkey pox, a day where we are anxious about the attack from the evolving virus!
We become concern about elevator button, smart phone, kiosk, things that are touched by many people being infected.

Elevator button / smartphone, full of 'disease bacteria'... becarful of fingertip being infected.

Domestic researchers have invested 40 smart phones, 140 elevator buttons and 30 ATM machines. And as result pathogenic microorganism, a bacteria that may cause septicemia, cerebromeningitis etc. when infected were found from all devices. (YTN released: 31 October, 2019)

Worn out and torn... The effect of anti-bacterial film for COVID-19?

The copper ingredient from the anti-bacterial film has a research report saying that it sterilizes the COVID-19 virus but with a controversy, and even if it had effect it cannot reach the virus outside of the film as the copper is trapped inside the film. (Yonhap News TV : 14 October, 2020)

The reason why we need to use the UVECO surface sterilizer!

UVECO surface sterilizer! That sterilizes any place that is touched by a human hand!

The surface sterilizing products of UVECO makes a world one can touch without worrying through outstanding sterilizing power compared to the anti-bacterial film.



Surface sterilization effect

Protects the operating the kiosk screen and contact button(inside an elevator and outside calling button) and has outstanding sterilization ability.



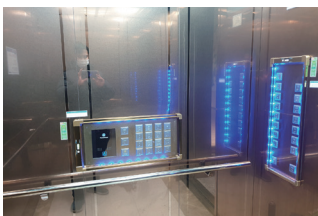
Advertisement effect

Can prevent a secondary infection from virus and harmful bacteria by installing a UVECO surface sterilizer on unmanned-store or complex facilities operated by installing kiosk(POS device) and elevators, and provide advertising effect to attract customers towards the business owner while providing business advantage by securing facility safety.



Easy installation

UVECO surface sterilizing products can be cut into the length according to the size of the operating button(or screen) of the kiosk(POS device) and elevator for installation.



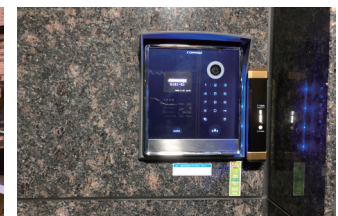
In/Outside button of an elevator



Unmanned laundry mat



Ordering kiosk



Common door button

UVECO surface sterilizer technical document

Sterilization test – COVID19 test result and sterilizing power

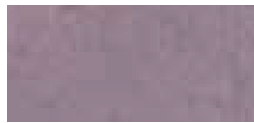
- **Test light source :** UVC LED-275nm 10mW/ identical module with UVECO EV-1 UVC LED
- **Test distance :** Distance between light source and virus 200mm
(Distance between UVECO EV-1 and elevator button less than 50mm)
- **Test result :** 30 seconds after being exposed to light source -90% /
90 seconds - 99.9% sterilization
- **UVECO EV-1 :** 99.9% sterilizing power confirmed within 12.5~15 seconds when
sterilizing point distance is less than 50mm.
Our company product repeats sterilization over minimum 30 seconds
when detecting motion.

BR35ZF275SO1X (UV-C 3535b 10mW)

- **Testing Facility :** Zoonotic infection disease research laboratory in Chonbuk National University
- **Testing Subject :** COVID19 Virus(1.58×10⁴ TCID₅₀ /ml)



Testing Time : 0
Sterilizing Power : 0

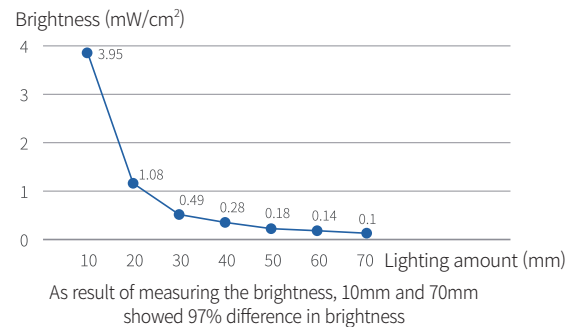


Testing Time : 30 Seconds
Sterilizing Power : 90%



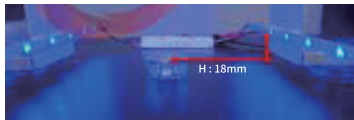
Testing Time : 90 Seconds
Sterilizing Power : 99.9%

Test result							
Investigation distance (mm)	10	20	30	40	50	60	70
Lighting amount (mW/cm ²)	3.95	1.08	0.49	0.28	0.18	0.14	0.1

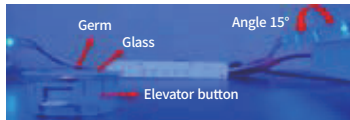


Sterilization Test – colon bacillus, salmonella, bacillus pyocyaneus, staphylococcus aureus

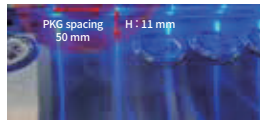
- **Test light source :** UVC LED-275nm 10mW (Number: 12EA)
- **Test distance :** Distance between light source and bacteria less than 150mm / Investigation distance: 11mm
Produce size : 150mm(W)×330mm(L)
- **Test condition :** Check sterilization by dividing bacteria into 1point and 2point /
Investing time (40sec, 60sec, 75sec, 90sec)
- **Testing Facility :** Point Engineering Corp (UVON UVC LED manufacturer) / DAESUNG ELEC Co., Ltd.
Our company product repeats sterilization over minimum 30 seconds when detecting motion.



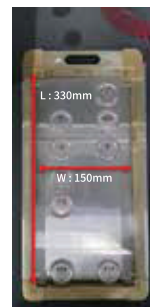
Test front 1



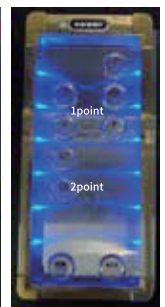
Test front 2



Internal side



Sterilization product



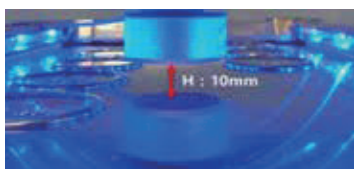
Sterilization product

- **Test result :** After being exposed to light source 45sec-98%/60sec-99.9%/75sec-99.9%/90sec-99.9% sterilization

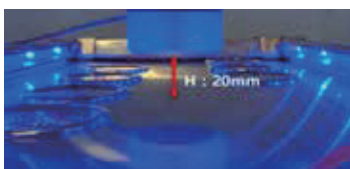
1 point				2 point			
45 Seconds	60 Seconds	75 Seconds	90 Seconds	45 Seconds	60 Seconds	75 Seconds	90 Seconds

Safety – Result of measuring UV brightness

- **Test light source :** UVC LED-270nm 10mW (Number: 12EA)
- **Test distance :** 10mm/20mm/30mm from bottom of button panel
- **Test result :** UV brightness discharge 10mm(0.01mJ/cm²)/20mm(0.01mJ/cm²)/30mm(0.01mJ/cm²)
- **UVECO EV-1 :** UV brightness not measured from distance more than 10mm(0.01mJ/cm²-surrounding effect error value) from the front of the product



10mm from the bottom



20mm from the bottom



30mm from the bottom



Produce Center region brightness measurement x 0.01 by surrounding effect is error value

Product Introduction_ UVECO EV-1

Elevator button UV LED sterilizer



“Still being anti-bacterial? Sterilize now!”

Elevator is used by hundreds of people a day from shopping mall, mart, hospital and apartments. Elevator buttons we must press, would the anti-bacterial film block the bacteria and virus? UVECO-EV-1 is a sterilizing device that manages the infection of the contacting side while using the facility installed as it is!



Can install by maintaining the existing facility



Improve the difficulty of reading Braille when using anti-bacterial film



Regular sterilizing action



Secure advertisement and facility safety attracting customer



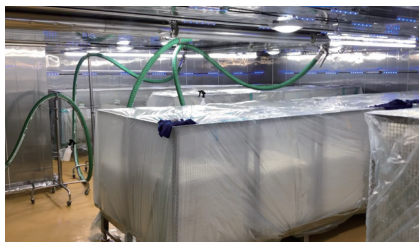
Product that actually sterilized instead of just being anti-bacterial

Example of applying UVECO EV-1

Elevator contact surface sterilizer



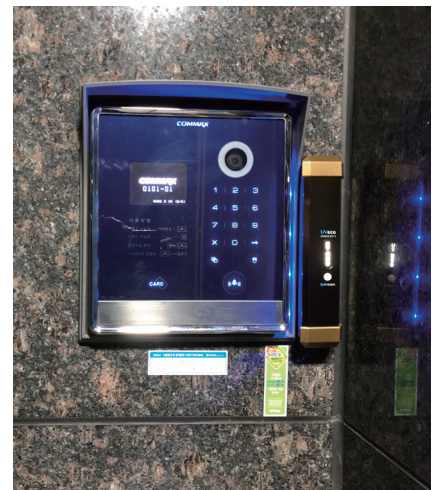
Fresh food storage sterilizer



Microphone sterilizer



Lobby-phone sterilizer



Product Introduction_ UVECO EV-1S

Kiosk contact surface sterilizer (Popular type)

“Increasing kiosk? Be safe when ordering!”

Many places are installing kiosk ordering system because of various advantages. Virus and bacteria we may be infected anytime even if we take care with anti-bacterial film and chemical sterilizer! Are we really safe? Now order through kiosk without worrying with UVECO EV-1S!



Example of applying UVECO EV-1S

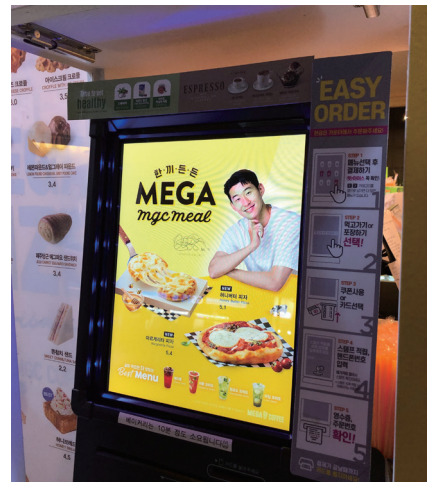
Movie ticket kiosk



Unmanned store kiosk



Food store kiosk



Unmanned laundry mat



Self-check out from convenient store



Unmanned check out from resting areas



—
WITH
PEOPLE
WITH
—

Uveco

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