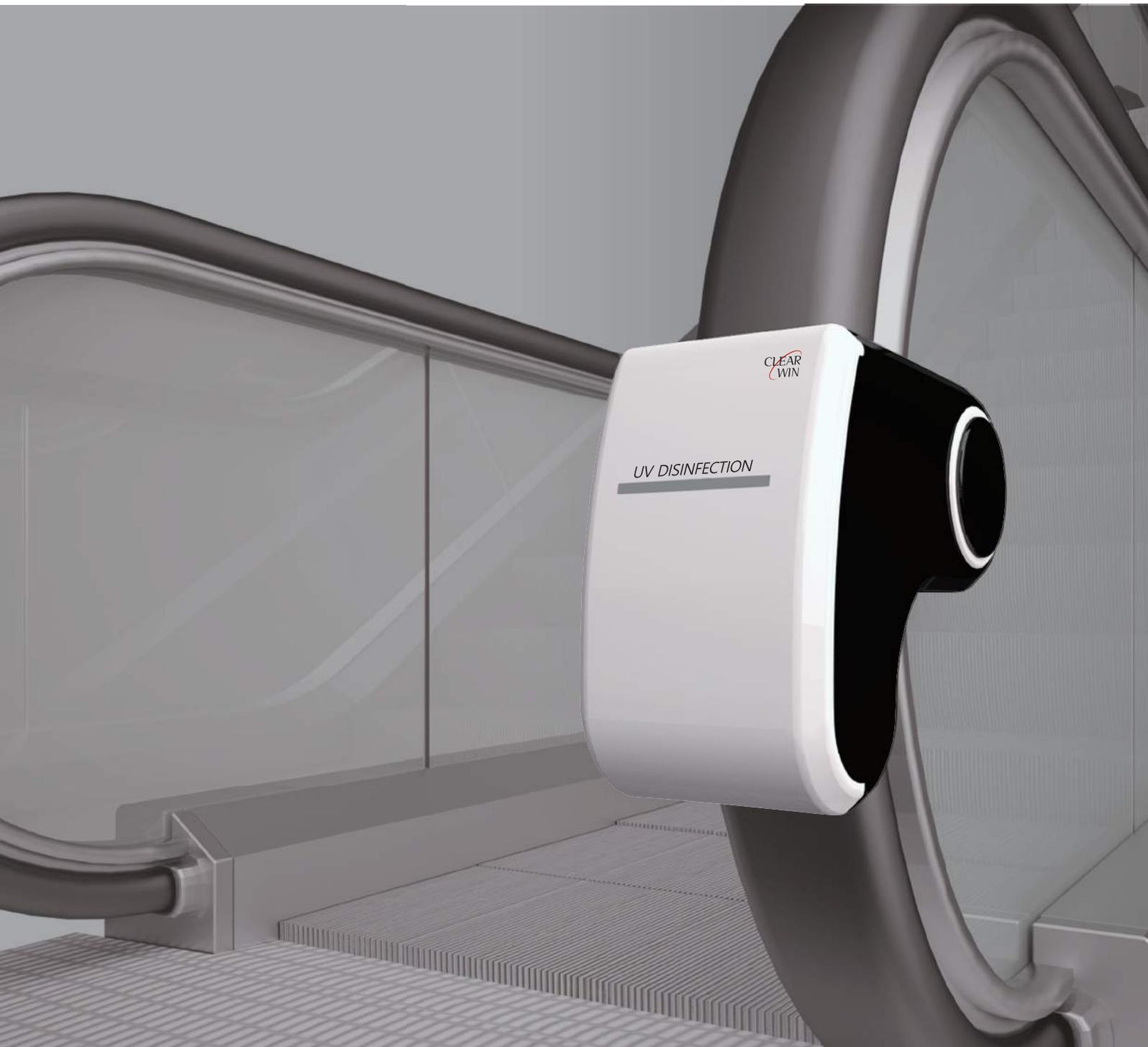




*Non-Powered*  
**Escalator Handrail Sanitizer**



This product aims to improve the hygiene of our environments by sanitizing against bacteria and viruses, achieved by a simple installation on escalator or moving walkway handrails

# Characteristics



## Continuous sanitization

Strong and continuous sanitization along with escalator drive



## Easy installation

Maintain existing facilities as they are



## Compact and safe design

No disruption to the passenger



## UV-C Sanitization

99.99% UV-C sanitization most suitable method for handrails



## Self generation

Safe self generation method without the danger of electrical hazards



## Promotional printing

Company logo printing is available on the front cover

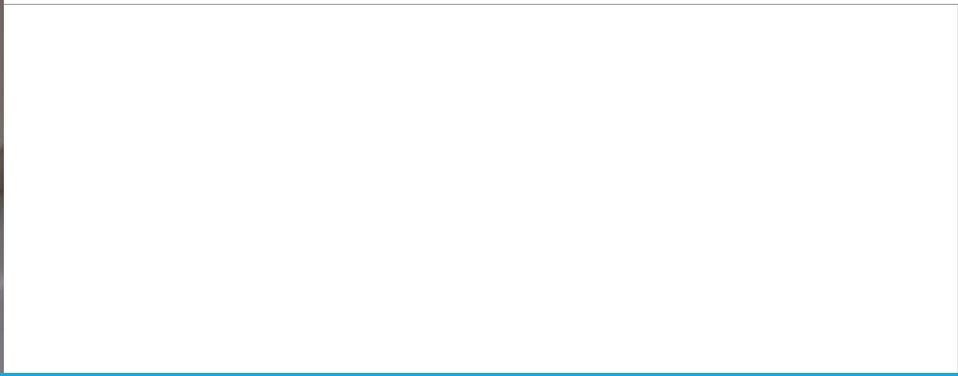


## Safety

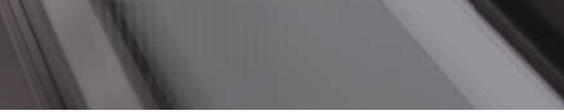
Multiple safety devices to prevent finger entrapment



MADE IN KOREA



# *Escalators and Moving walkways installation facility*



Hospital



Airport



Subway



Department & Shopping mall

# PRODUCTS

## | SUS TYPE |

For stainless steel balustrade  
escalators/walkways

## | GLASS TYPE |

For tempered glass balustrade  
escalators/walkways

### ■ STANDARD VERSION Original patent design



### ■ WIDE VERSION Improved safety feature design



**Housing**  
Strong L-shape structure  
Stainless steel

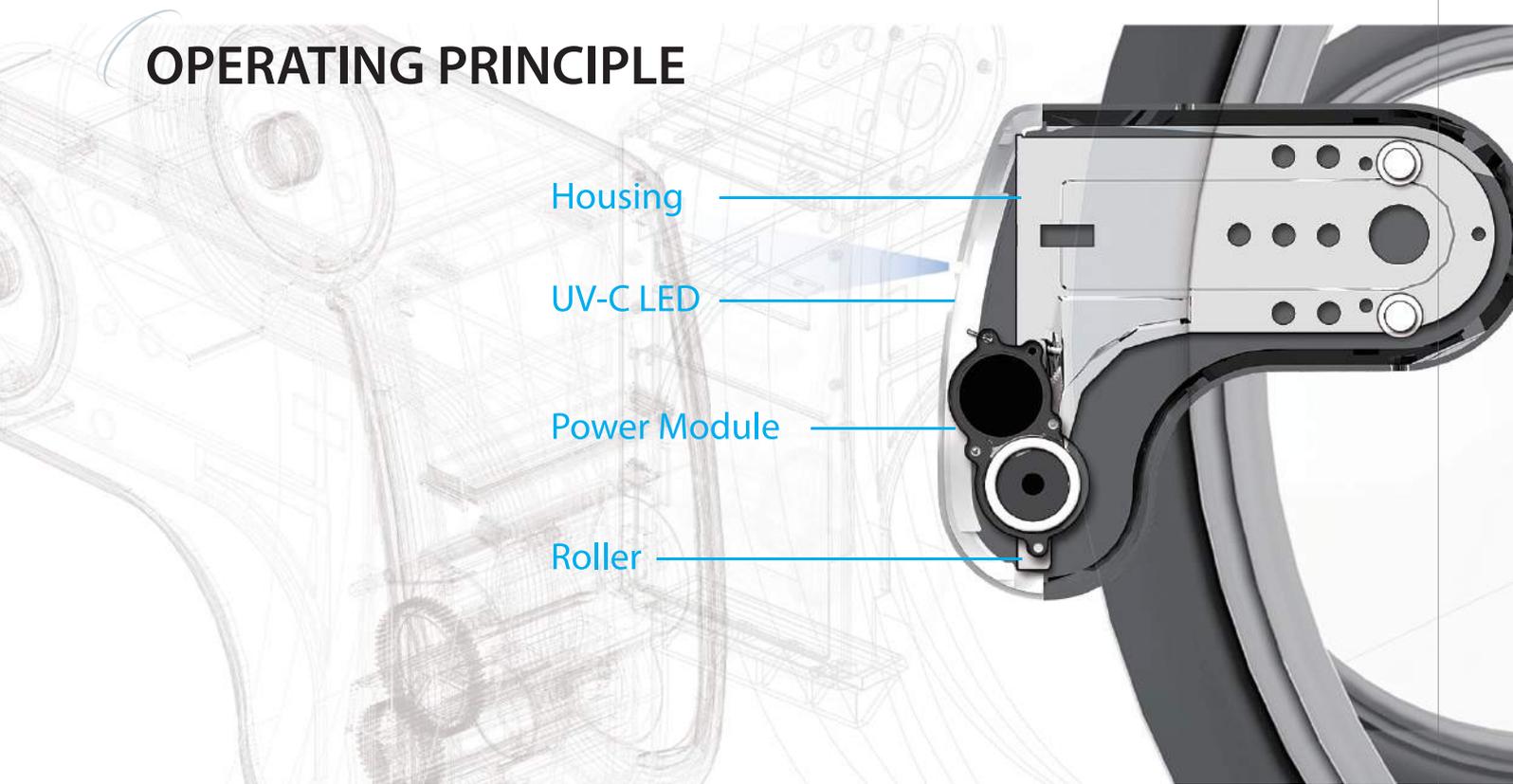


**UV-C LED**  
Effective Ultra Violet C-wavelength  
Dual UV-C LED lamp



**Power module**  
Convert rotary motion of  
handrail into electric power

# OPERATING PRINCIPLE



**A** The main body is fixed to the balustrade of the escalator / moving walkway.



**B** The torsion spring makes roller contact at a constant pressure on the handrail.



**C** The rear roller and the handrail's rotational force, generates power.



**D** The generated power activates the UV-C Germicidal lamp and operation indicator.

# SPECIFICATION

Product name	CLEARWIN	Generator output	24V, 4.0~4.5W
UV-C LED lamp	6.5mW Wavelength: 265nm	Cover	PC ABS Black and White
Product size	130x220x260mm	Origin	Made in Korea
Product weight	GLASS: 2.8kg / SUS: 1.8kg	Patent No.	10-1665676

# CLEARWIN

## Comparison between UV-C sanitization and other sanitization methods

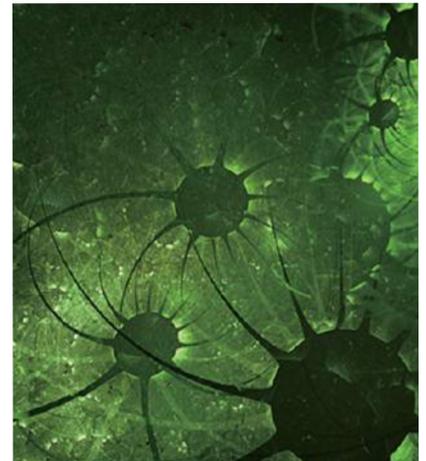
	UV-C sanitization	Heat sanitization	Ozone sanitization	Chemical sanitization	Radio-sanitization
Sanitization of mycetoma	Effective against all	Effective against all	Effective against all mycetomas	Effective against specific	Effective against all
Physical property change (Handrail)	Little change	Occasional	Occasional	Occasional	Little change
Permeability	No permeability (except air and water)	Effective even inside the object	Effective on the object surface	Effective even inside the object	Effective even inside the object
Sanitization time	Short	Considerably	Long	Considerably	Short
Usage	Easy	Occasionally	Difficult	Easy	Difficult



UV-C Sanitization dose not corrode or deform material unlike other harsh chemicals of heating systems



This CLEARWIN device can be easily installed even when the escalator is in motion.



Effective sanitization against bacteria, viruses and germs.

# Certified for sanitization against Staphylococcus Aureus and E. Coli and Coronavirus by using the germicidal dual UV-C LED lamps.

## TEST REPORT

**COVID-19 TEST REPORT**  
Efficacy test for sanitizing device against CORONAVIRUS

JEONBUK NATIONAL UNIVERSITY  
INDUSTRY-ACADEMIC JOINT RESEARCH

Report No.: 201000041  
Host Representative: Jeonyang Cho, Kwangsu Yoo  
Company: CLEARWIN KOREA Co., Ltd  
Address: #703, 88 Jeonpa-ro, Dongan-gu, AnYang city, Gyeonggi province, Republic of Korea

Test period: 2020.06.01 ~ 2020.07.08

**Test goal**  
- Evaluation of the efficacy of the virus sanitizer device commissioned by CLEARWIN KOREA Co., Ltd. in an in-vitro Environment

Sample name: Escalator Handrail Sanitizer

UV reaction times	log <sub>10</sub> CFU/ml	UV reaction times/virus removal efficiency (%)
Unexposed	7.56	
1 time	8.56	90%
10 times	3.33	>99.99%
20 times	<0.5	>99.99%
30 times	<0.5	>99.99%

Attested by Notary Public: Kwangsu Yoo, Head of subjective research

KoZRI (Korea Zoonosis Research Institute)

**TEST REPORT**  
No: C120-11522E

Test Items	Test method	Test Results			Testing Environment
		Early Conc. (CFU/mL)	After 30 time operation Conc. (CFU/mL)	Reduction rate (%)	
Antibacterial test : Staphylococcus aureus	BLANK UV-LED [[Escalator Handrail Sanitizer (Model name : ClearWin / CWK-B3001)]]	1.1 × 10 <sup>6</sup>	1.1 × 10 <sup>6</sup>	-	(37.0 ± 0.2) °C
		1.1 × 10 <sup>6</sup>	< 10	99.9	

Test bacteria: Staphylococcus aureus ATCC 8538

KCL (Korea Conformity Laboratories)

## CERTIFICATE

Ministry of Public Safety and Security (MPSS)

Approval: Transport vehicles

Approval: Escalator safety inspection and certification inspection related authorization

Attachment: Escalator alternative transaction of items

Legal approval and recommendation by Korea Government Safety Department.

Patent USA

Patent USA

EC Declaration of Conformity  
EMC Directive 2014/30/EU

CE

CERTIFICATE OF COMPLIANCE

UL US-200144621

UL

**Certified by**

KCL (Korea Conformity Laboratories) / Korean Intellectual Property Office  
KOZRI (Korea Zoonosis Research Institute) / UL, USA (UL-CA-2000959-0)  
Ministry of Public Safety and Security, Korea. (Escalator Safety section-1248)

# Hygiene is not an option, it's essential.



WMATA - USA



Texas Houston Airport - USA



Arsenal Football Club - UK



Manchester Airport - UK



Okinawa Na Ha Airport - Japan



SM MEGAMALL - Philippines



Samitivetch Hospital - Thailand



CapitaLand - Singapore



Emirates HQ - UAE



Grand mosque - Saudi Arabia



COSTCO - Korea



CGV - Korea