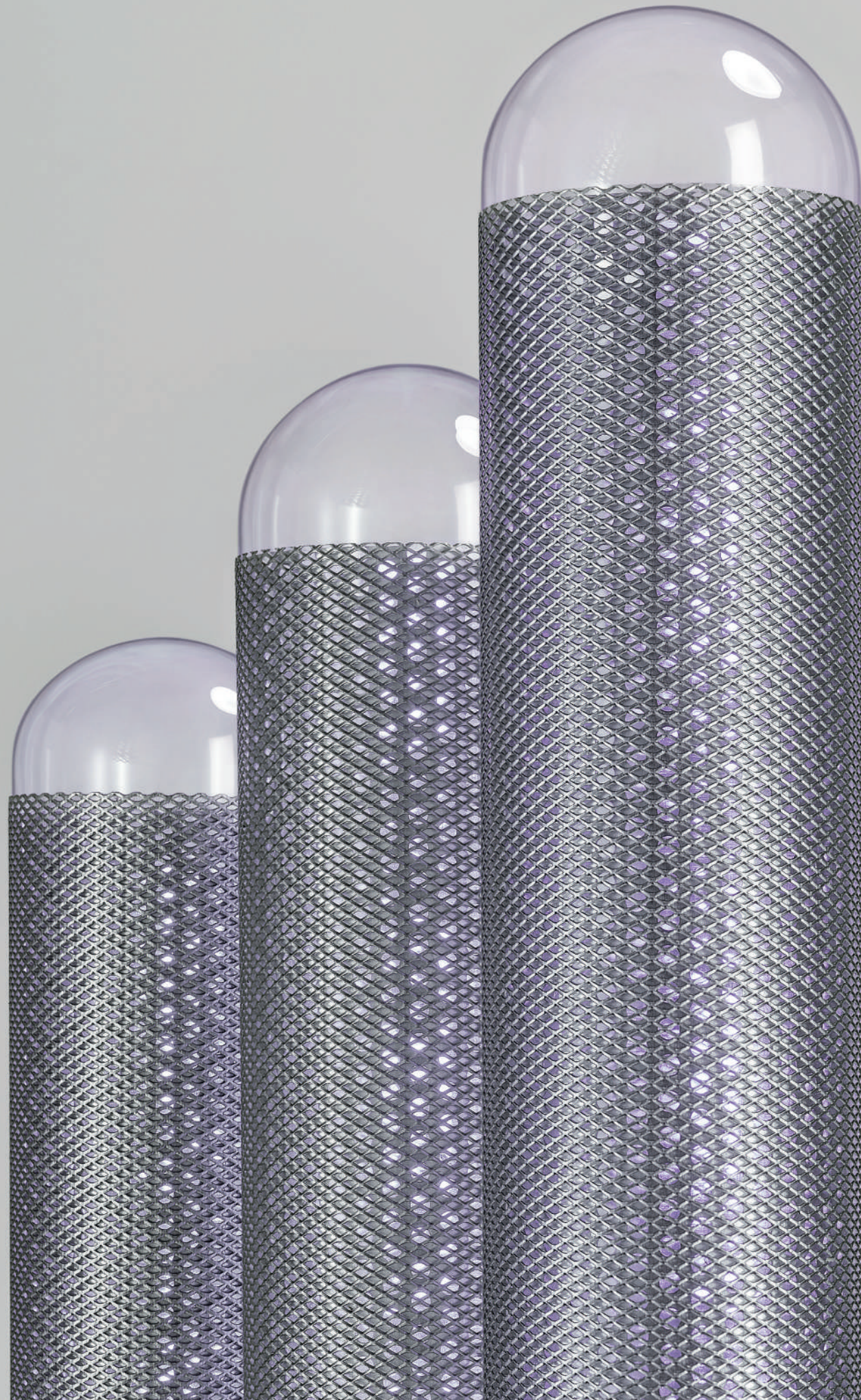


Shinyoung Airtech #701 Suntech city 2, Sagimakgol-ro 52, Jungwon-gu,
Seongnam-si, Gyeonggi-do, Republic of Korea (13210)
+82-31-709-7591 | www.wulute.com

wulute
Safe air technology



Wulute air sterilizer for your safe place from germ & viruses

Verified by many cases from prestigious institutions, Wulute's performance demonstrates that 99.7% of germs and viruses are sterilized within 30 minutes, through effective plasma technology.

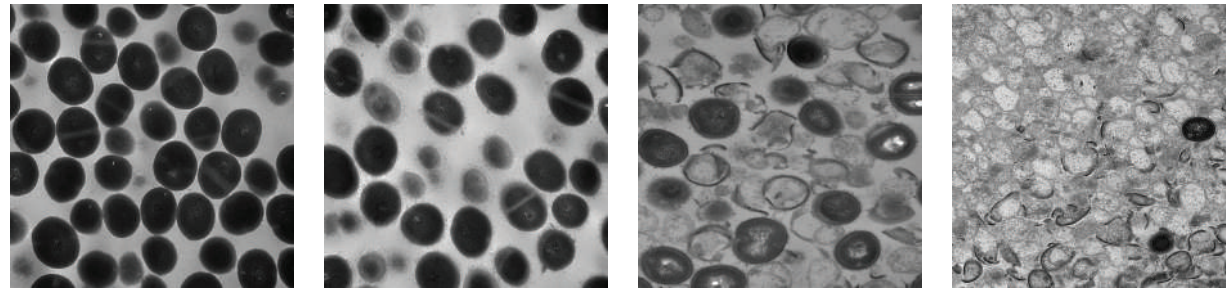
In addition, Wulute has acquired KOUVA AS 02 certification, which is one of the most stringent certificates in the domestic sterilizer industry. It is the product that is safer and more effective than any other products based on chemical disinfection or Ultraviolet technology.

Based on the plasma technology, Wulute has published many articles in peer-reviewed journals and possessed verification materials confirmed by public certificate authority, winning Minister Award of Industrial Material in 2018.

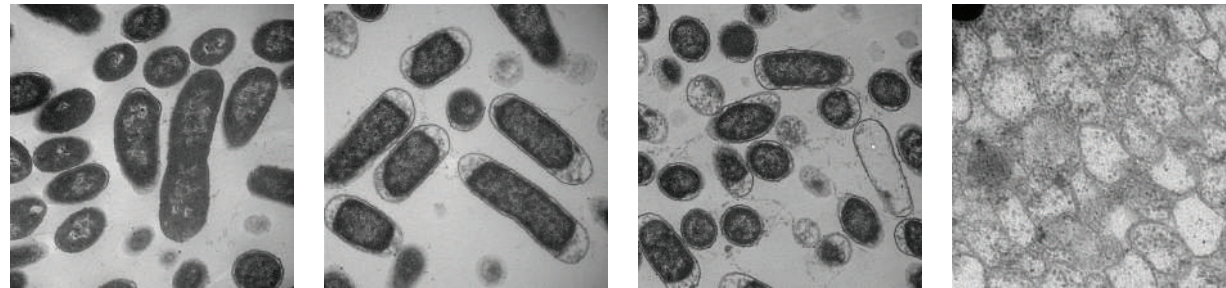
Currently, Wulute works with Korean National Tuberculosis Association, National Masan Hospital, Seoul National University Hospital, Korea Expressway Corporation, Korea Aerospace Research Institute, as an official partner of 2020 Prevention of Infectious Disease in Public Place.

BEFORE

WULUTE



S. aureus



E. coli

※Hanyang University microscope, 2018

Wulute prevents infectious diseases through safe plasma system, without air filter

Wulute generates low-temperature plasma by employing Dielectric Barrier Discharge (DBD). Plenty of low-temperature plasma contains Reactive Oxygen Species (ROS) and Reactive Nitrogen Species (RNS). They destroy viruses; microorganism; and cell membrane and DNA of pathogen, converting the entities to H₂O and O₂, which is not innoxious to human.

Under the same mechanism, low-temperature plasma engulfs TVOC and HCHO (formaldehyde) and then decompose them, annihilating altogether. For fine dust, the plasma induces the dust to aggregate itself and then settle, the process that prevents the ingestion of dust through human respiratory system.

Unlike air sterilizer using the other technology, Wulute effectively and safely sterilizes various viruses and pathogens either in atmosphere or on surfaces

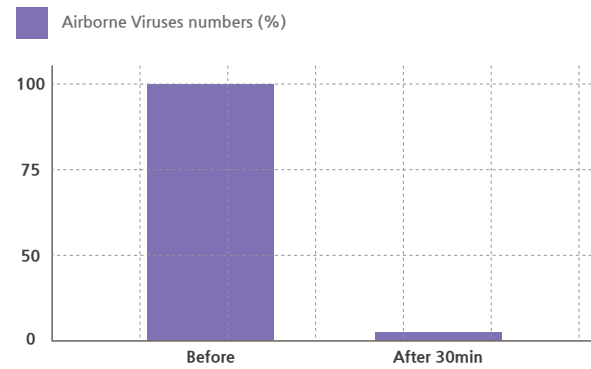


Test results of Wulute

WULUTE obtained the test results with KOUVA AS 02, the nation's top-level sterilizer test.

Korea Testing Laboratory

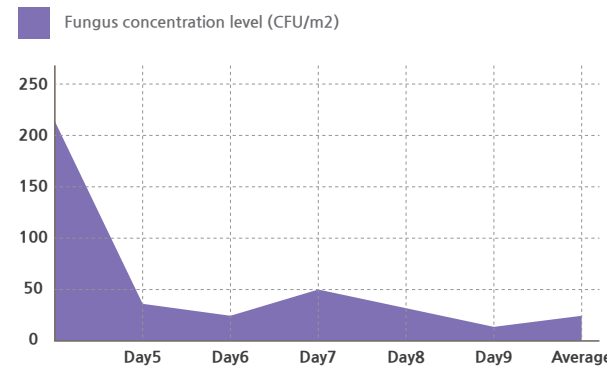
94.5% Airborne virus reduction



94.5% Airborne virus reduction
[Feb,2020 Korea Testing Laboratory/Phi-X174]

Seoul National University, School of public health

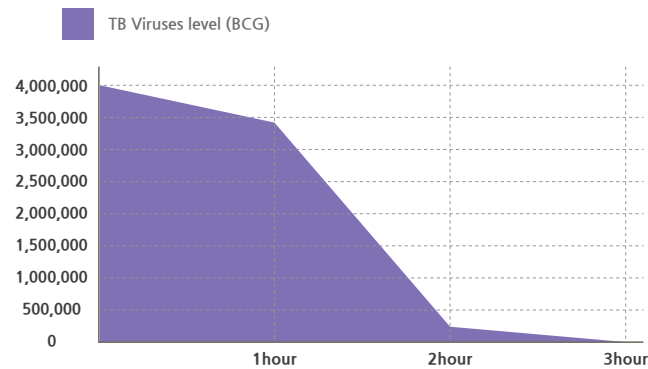
Fungus 90% Sterilized



Fungus Sterilization
Fungus 245CFU/ m2 ->25CFU/ m2 microorganism, VOC Reduced
[2003, Seoul National University, School of public health]

International tuberculosis Research center

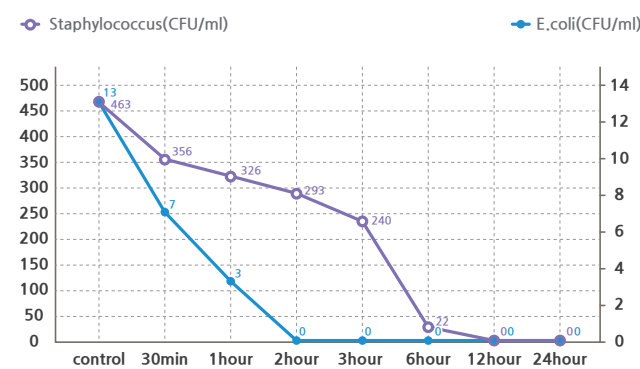
TB Viruses 99.99% Sterilized



Before WULUTE, 3,400,000 Viruses /ml
After 3 hours non-detection of Viruses
[Feb,2016 International tuberculosis research center]

Staphylococcus & E. coli

100% Sterilized



Hanyang University,
Seoul National University School of public health
[2018, Korean industrial hygiene association]

| Contents | Test | Place | Test agency | Year | Hour | Results |
|------------------|--|--|--|-------|--|--|
| Microbe | Tuberculosis | Masan National Tuberculosis Hospital | Masan National Tuberculosis Hospital | 2017 | 9 hours | 100% Sterilized |
| | | International Tuberculosis Research Center | International Tuberculosis Research Center | 2016 | 3 hours | 100% Sterilized |
| | Fungus | Seoul National University School of Public health | Seoul National University School of Public health | 2017 | - | From 250 CFU/m ³ to 21 CFU/m ³ 92% reduction |
| | | Keon-kuk University Animal Testing Lab | Keon-kuk University Animal Testing Lab | 2005 | 72 hours | From 294 CFU/m ³ to 40 CFU/m ³ 90% reduction |
| | Fungus Viruses | Osong Tuberculosis Research Lab - cold storage | Osong Tuberculosis Research Lab | 2017 | 24 hours | 100% Sterilized |
| | | A general hospital | A general hospital | 2017 | 8 hours | 92% Sterilized |
| | Viruses | Korea testing laboratory | Korea testing laboratory | 2020 | 30 min | 94.5% reduction |
| | Germs Bacteria | Waiting room | K general hospital | 2016 | 5 hours | From 31 CFU/m ³ to 11 CFU/m ³ 65% reduction |
| | | YWCA sanatorium | YWCA sanatorium | 2016 | 6 hours | From 78 CFU/m ³ to 9 CFU/m ³ 82~88% reduction |
| | | Korea University Guro Hospital Dental Clinic | Korea University Guro Hospital | 2008 | 24 hours | From 706.7 CFU/m ³ to 186.7 CFU/m ³ 73.6% reduction |
| | | MRSA | Yonsei Severance Hospital | 2008 | 1 hour | 100% Sterilized |
| | | Staphylococcus | Yonsei Severance Hospital | 2008 | 1 hour | 100% Sterilized |
| | Formaldehyde | J Hospital | J Hospital | 2017 | 8 hour | 97.10% Reduced |
| | | Kyobo | Institute of Industrial Pollution | 2008 | - | 100% Sterilized |
| | Benzene | Seoul University of Public health | Seoul National University School of Public health | 2004 | - | From 0.02ppm to 0.0001ppm 99.5% Reduced |
| | Styrene(Xylene) | GS Civil engineering | GS Civil engineering | 2013 | 100 minutes | 100% Sterilized |
| | Toluene | LG Factory - Gumi | LG Factory - Gumi | 2011 | 1hour | VOCs and Toluene 75%Reduced |
| | Nitrogen dioxide | Korea Testing and Research Institute for Chemical Industry | Korea Testing and Research Institute for Chemical Industry | 2005 | 30minutes | From 2.00ppm to 0.43ppm 78.5%Reduced |
| Ammonia | Suwon Food Waste Treatment Plant | Suwon Food Waste Treatment Plant | 2013 | 1hour | From 1.34ppm to 0.12ppm 91%Reduced | |
| | Keonguk University Animal testing center | Keonguk University Animal testing center | 2005 | - | From 0.968ppm to 0.046ppm 95% Reduced | |
| Hydrogen sulfide | Suwon Food Waste Treatment Plant | Suwon Food Waste Treatment Plant | 2013 | 1hour | From 0.16ppm to 0.01ppm 94% Reduced | |
| Methyl mercaptan | Suwon Food Waste Treatment Plant | Suwon Food Waste Treatment Plant | 2013 | 1hour | 100% Sterilized | |

Case Studies in Korea and other countries

| Contents | Test | Place | Test agency | Year | Hour | Results |
|---------------------------|------------------------------|---|---|------|--|--|
| Odor or Harmful Substance | Nitrogen dioxide | Korea Testing & Research Institute | Korea Testing & Research Institute | 2005 | 0.5 hour | From 2.00ppm to 0.43ppm 78.5% reduction |
| | Ammonia | Suwon Food-Recycling Plant | Institute of Industrial Pollution | 2013 | 1 hour | From 1.34ppm to 0.12ppm 91% reduction |
| | | Keon-kuk University Animal Testing Lab | Keon-kuk University Animal Testing Lab | 2005 | - | From 0.97 ppm to 0.05 ppm 95% reduction |
| | Hydrogen sulfide | Suwon Food-Recycling Plant | Institute of Industrial Pollution | 2013 | 1 hour | From 0.16 ppm to 0.01 ppm 94% reduction |
| | Methyl mercaptan | Suwon Food-Recycling Plant | Institute of Industrial Pollution | 2013 | 1 hour | In 0.14 ppm to (-) 100% reduction |
| | Form aldehyde | J general hospital pathology department | J general hospital pathology department | 2017 | 8 hours | 97% Sterilized |
| Kyobo books Kwanghwamun | | Institute of industrial Pollution | 2008 | - | 26.8 $\mu\text{g}/\text{m}^3$ < Standard (120 $\mu\text{g}/\text{m}^3$) | |
| Fine Dust | 10 μm (PM · 10) | Kyobo books Kwanghwamun | Institute of industrial Pollution | 2008 | - | 125.4 $\mu\text{g}/\text{m}^3$, < Standard (150 $\mu\text{g}/\text{m}^3$) |
| | 2.5 μm (PM · 2.5) | Eulji University | Eulji University | 2014 | 1 hour | From 28 $\mu\text{g}/\text{m}^3$ to 3 $\mu\text{g}/\text{m}^3$ 89% reduction |
| Human Validation | Brainwave stability | KITECH | KITECH | 2015 | - | Concentration improved, recovery power improved, release stress Effectiveness proved |
| | Allergic coryza [rhinitis] | Eulji University | Eulji University | 2014 | - | Improved allergic rhinitis Effectiveness proved |

WULUTE USED IN



- HYUNDAI MOBIS
- POSCO
- KCC AUTOMOBILE
- GS Caltex
- LG Factory
- SK Energy
- AMORE PACIFIC
- HOTEL SHILLA(Samsung)
- HOTEL Fourseasons
- HOTEL Ambassador
- Highway service of Korea
- KYOBO BOOKS
- YOUNG POONG BOOKS
- MBC (Broadcasting)
- Green Cross
- DONG A Pharm,
- ILDONG Parm,
- ILDONG Foodis
- NONG HYUP BANK
- MANDO
- NH Investment
- National Medical Center
- National MASAN TB hospital
- National MOKPO hospital
- Severance hospitals- Gangnam
- Severance hospitals- Yeongdong
- CHA hospital
- St.Mary hospital GANGNAM
- Seoul National University of Hospital
- KOREA University Hospitals
- In-ha University Hospital
- Jeonbuk Univ Hospitals
- Choongnam Univ Hospital
- Busan National medical center
- Seoguipo National medical center
- Ansan Danwon Hospital
- Busan Medwill Hospital group
- Mir Dental hospital
- WOORIDEUL Hospital
- The classic 500 (Silver home)
- Hong kong subway for SARS
- ROLEX
- Kimhae national Quarantine Station
- Korea national plant and animal Quarantine center
- Bundanggu-health center
- Gweonseon-health center
- Kiheung gu-health center
- Jungwongu-health center
- Seongnam city Senior Medical center
- ShinHan Bank
- ShinHan center
- ShinHan bank VIP center
- Woori Bank
- Nonghyup Bank
- Nonghyup center
- IBK Korea - Industrial bank
- Shinhan Card
- Seongnam Art center
- DUO BACK
- ORDA KOREA
- KOREA NAVY
- KOREA POLICE
- Seoul KUKJE High
- Chungnam science High
- PAJOO English town
- Seoul Daejin High
- Bundang Daejin High
- ILSAN Daejin High
- SUSEO Element
- Singoo Element
- Sinsong High
- Daegok Element
- Daemo Element
- Daehyun Element
- Bong yeong High
- Yeonshin Element
- Yangjung Middle
- Wolchon Middle
- Incheon Nonhyun High
- Yesan Middle
- Hanyang Element

WULUTE PORTABLE



WULUTE 2 Series

SIZE 428*130*188 ENERGY 30w
 WEIGHT 4kg CERTIFIED KC/CE/FDA
 CAPACITY 50~99m² COLOR White/Silver



WULUTE 3 Series

SIZE 436*196*274 ENERGY 25w
 WEIGHT 10kg CERTIFIED KC/CE/FDA
 CAPACITY 99m² COLOR White/Dark grey



WULUTE 4 Series

SIZE 720*630*210 ENERGY 33w
 WEIGHT 11kg CERTIFIED KC/FDA
 CAPACITY 165m² COLOR White

※IoT Control system available



WULUTE 5 Series

SIZE 470*620*300 ENERGY 35w
 WEIGHT 11kg CERTIFIED KC/CE/FDA
 CAPACITY 165m² COLOR Light blue/Black

※IoT Control system available

WULUTE INDUSTRY



WULUTE R Series

SIZE 800*380*205 ENERGY 90w
 WEIGHT 8kg CERTIFIED FDA
 CAPACITY 115m²



WULUTE IC Series

SIZE Depending on the installation conditions
 WEIGHT 7.2kg~9kg ENERGY 60w
 CAPACITY 400/500/800/1000m² CERTIFIED FDA

