



Biosafety Technology for the Modern World

The world's first continuous, autonomous
disinfection ecosystem

Buildings of the future are smart and healthy

Humans spend 90% of our time indoors, so the buildings where we work, live, and play have a huge impact on our overall health.

R-Zero's intelligent biosafety platform continuously collects data about how a space is being utilized, and uses that data to quantify risk of exposure to harmful microorganisms with advanced risk modeling. This connected disinfection ecosystem made up of smart sensors and UV-C devices then works to mitigate exposure risk in the air and on surfaces continuously and autonomously. Real-time data streaming provides advanced analytics and actionable insights based on how your space is actually being used. R-Zero Connect software provides a holistic view of all disinfection activity in your buildings from anywhere in the world.

R-Zero's thoughtfully designed and data-enabled disinfection ecosystem goes beyond typical UV-C to continually evaluate risk and enhance layered prevention protocols in healthcare settings. R-Zero's suite of thoughtfully designed, hospital-grade technologies and science-backed protocols reduce the number of harmful microorganisms in the air and on surfaces. Through the use of sustainable UV-C disinfection, we enable safer indoor environments and healthier shared spaces with significant economic benefits. For more information, visit www.rzero.com/healthcare.

Meet Arc



Intelligent, whole-room UV-C disinfection

Performance

Disinfects 1,000 sq ft in just 7 minutes

ROI

Enables R-Zero's +2:1 ROI by resetting risk of microbial exposure to almost zero in unoccupied rooms

Sustainability

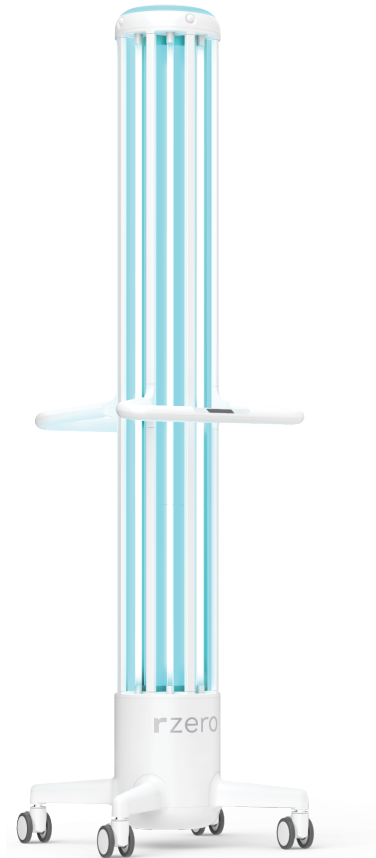
Increases safety 210x and contributes 250x less waste than using chemicals

Connectivity

Provides visibility to a traditionally invisible disinfection process

Support

Empowers customers to credibly communicate the extra care they are taking to make spaces clinically clean



Hospital-grade UV-C disinfection for unoccupied spaces

Germicidal Light Engine

UV Source	8 high-output UVC lamps
Posterior Reflectors	8 Al w/ UV-C reflective coating
Light Distribution	360°, floor to ceiling
Rated Lamp Life	16,000 hours
Wavelength	254nm
Room Size	Up to 3,500 square feet

Controls

On Unit	Integrated OLED display
Remote Operation	Web interface
Cycle Times	5 - 60 min, 1 min resolution
Average Cycle Time	7 min

Electrical

Input Voltage	120V AC
Current	12A
Total Power Consumption	1,440W
Power Connection	Standard 3-prong wall outlet

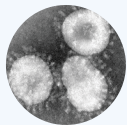
Physical

Height	78"
Base	24" x 24"
Weight	75 lb
Handles	2 ergonomic push/pull
Wheels	4 large 3" locking casters

Safety

Pre-Cycle Countdown	30 sec
Motion Sensors	4 long-range PIR sensors
Cycle Interruption	Auto-off and auto-resume

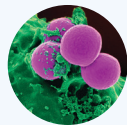
Independently validated to inactivate 99.99% of microorganisms in 1,000 square feet in 7 minutes or less*



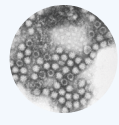
>99.99%
Human coronavirus



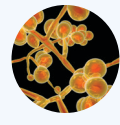
99.99%
E. coli



99.99%
MRSA



>99.99%
Feline calicivirus



99.99%
Candida auris



>99.99%
C. difficile

*Third-party testing of SARS-CoV-2, feline calicivirus, MRSA, and E. Coli on hard, non-porous surface in seven minutes, samples taken at eight feet.

Meet Vive



Revolutionary far UV air and surface disinfection for occupied spaces

Performance

Reduces airborne and surface-borne microorganism load with the only UV-C light safe for human exposure

Efficacy

Continuously and autonomously disinfects occupied spaces

Sustainability

Prioritizes the environment with our sustainable UV technology that minimizes waste and chemical use

Connectivity

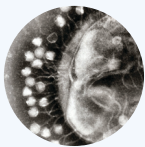
Provides visibility to a traditionally invisible disinfection process through our IoT platform, R-Zero Connect

Support

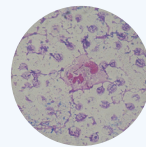
Empowers customers to credibly communicate the extra care they are taking to make spaces clinically clean



Independently validated to inactivate harmful microorganisms, including:



>99.99%
T1
Bacteriophage



>99.99%
Klebsiella
aerogenes



>99.99%
Staphylococcus
epidermidis

Autonomous air and surface disinfection in occupied spaces

Overall Specifications

Mount Height	2.5m to 5m (8.2 ft to 16.4 ft)
Light Distribution	116°, floor to ceiling
Typical Startup Time	<1 second
Adjustable Angle Bulbs	45°
Coverage Area	up to 200 square feet
Connectivity	BLE, WiFi
Applicational	Indoor only
IP Grade	IP20

UV Bulbs

Wavelength	222nm
UV Source	3 Krypton Chloride excimer bulbs
Light Filtration	3 monochromatic filters
Rated Lamp Life	5,000 hours

Physical

Dimensions	13.5" x 12" x 4.5"
Base	24" x 24"
Weight	4.6 lb
Mounting Location	Ceiling or wall
Ambient Operating Temp	0° C to 35° C (32° F to 95° F)

Electrical

Input Voltage	Universal 100-240 VAC
Input Power	Typical 60W
Input Frequency	50 - 60Hz



Autonomous UV-C air disinfection for occupied spaces

Meet Beam

Autonomous upper room UVGI air disinfection

Inactivates 99.99%+ of certain airborne viruses and bacteria in as little as 5 minutes

- tuned to the most germicidal wavelength of UVC (265nm)
- Provides 12 additional eACH in typical deployments: equivalent to changing total amount of air in the room 12 times per hour with disinfected air

Delivers superior efficacy

- Offers a less expensive alternative to HVAC upgrades; more effective than other solutions like bipolar ionization

Safely disinfects air in large spaces

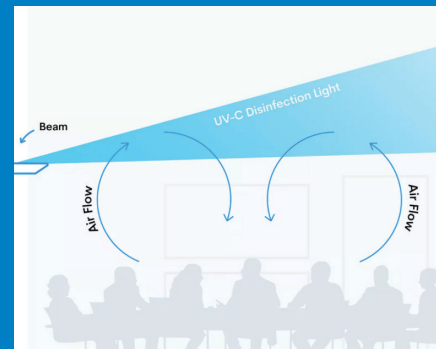
- Shoots a powerful veil of UV light across the top of an occupied room

Automatically reduces risk

- Senses occupancy and automatically powers on to reduce microbial exposure risk while connecting with R-Zero Connect device dashboard for device management and tracking

How it works

Potentially contaminated air rises and passes through the zone of irradiation, where it is disinfected. Natural airflow then recirculates the disinfected air in the occupied space.



Upper room ultraviolet germicidal irradiation (UVGI) is an air disinfection method generally recommended by ASHRAE and the CDC. R-Zero's upper room UVGI solution, Beam, has been independently validated for its ability to inactivate and **inactivate 99.99% of microorganisms, including T1 bacteriophage, Staphylococcus epidermidis, and Klebsiella aerogenes.**

Germicidal Light Engine

UV Source	4 Proprietary LED bars, 12 LEDs per bar
Rated LED Life	10,000 hrs, up to 3 years under normal operating conditions
Wavelength	Nominal 265 nm (range 260-270 nm)
Coverage Area	500 square feet
Disinfection Power	can add 12+ eACH
Added Equivalent Air Exchanges	12 eACH

Controls

On Unit	Device status indicator, on/off switch
Remote Operation	Web interface (R-Zero Connect)
Auto Operation	Touchless power-on when room is occupied
Connectivity	WiFi (2.4 GHz)

Electrical

Input Voltage	120-240 VAC
Current	1.6A (at 120 VAC)
Typical Power Consumption	120W
Max Power Consumption	200W
Power Connection	IEC C14 socket (cable Included)

Physical

Dimensions	77 inches tall, 16 inches wide
Weight	25 lb
Mounting	Wall
Minimum Mounting Height	7 feet from floor

Environmental

Indoor/Outdoor	Indoor only
Altitude	0-3000m
Temperature	10-40C
Relative Humidity	10-90%

Safety

Motion Sensors	2 long-range PIR sensors in the irradiance zone 1 long range PIR sensor in occupied zone
Physical Features	Baffle under LEDs to direct light and keep occupant exposure below limits to direct UV-C light

Regulatory

UL 1598, CSA C22.2 No. 250, UL 8750	Passed 2022
FCC Part 15C	Passed August 2021

Meet Sensors

Indoor space health and occupancy intelligence

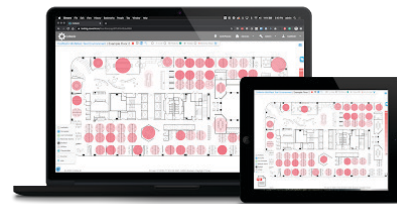
Optimize footprint for shared indoor spaces

- Calculate vacancy costs
- Identify utilization trends
- Compare across all spaces in portfolio



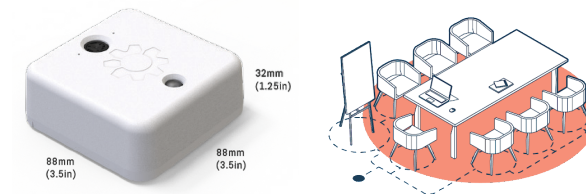
Drive more efficient janitorial workflows

- Optimize based on utilization
- Export map to streamline cleaning
- Audit and track quality of work



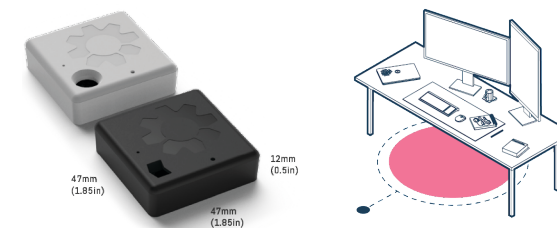
Help occupants find safe & available spaces

- Help occupants find an unused space
- Send alerts on over-occupancy events
- Share air health data with occupants



Occupancy Counters

Description	Sensors that use an infrared sensor and AI for counting humans. Counters may be used in a variety of applications wherein multiple occupants may be present.
Detection Technology	Thermal object detection
Detection Radius	300-400 square feet
Power Source	Battery-powered with 5+ year lifespan Optional power over ethernet
Communication Method	Low-power BT beacon
Mounting Location	Wall mounted 10-12 feet high



Occupancy Sensors

Description	Sensors for detecting human activity. While traditionally used to provide high-res occupancy data on workstations, these devices may also be used to monitor small meeting spaces where the number of occupants is not needed.
Detection Technology	Passive infrared detection
Detection Radius	15-20 square feet
Power Source	Battery-powered with 5+ year lifespan
Communication Method	Low-power BT beacon
Mounting Location	Mount directly on ceiling or furniture



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