rzero

Beam

Autonomous upper room UVGI air disinfection

Efficacy

Provide top notch air disinfection by adding 12+ eACH to your space, the equivalent of changing air in a room every 6 min. While typical buildings have 1-3 air changes per hour (ACH), new standards from ASHRAE, the CDC, and Lancet requires 5, 6, or much higher ACH.

ROI

Improve your disinfection practices. Enhancing ventilation efficiency and disinfection protocols have been shown to increase reduce HVAC costs, peace of mind, employee productivity, student achievement, and reduce viral risk.

Sustainability

Achieve your IAQ goals with 90%+ less energy costs and greenhouse gas emissions than HVAC.

Autonomous

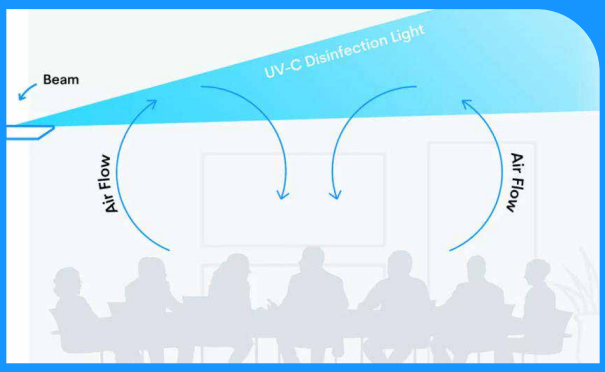
Labor-free disinfection that automatically powers on/off to maximize efficacy and bulb life while minimizing energy usage.

Connected Platform

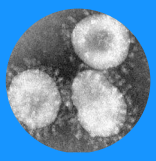
R-Zero's software platform, Connect, integrates data from all devices, extracts insights, and manages workflows. Location and operation of each device is recorded and can be shared in reports to key stakeholders.

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.

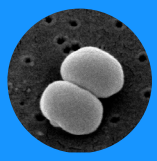


Upper room ultraviolet germicidal irradiation (UVGI) is an air disinfection method generally recommended by ASHRAE and the CDC. R-Zero's upper room UVGI solution, Beam, has been independently validated for its ability to inactivate and destroy microorganisms, including*:



99.99% SARS-CoV-2

99.99% Klebsiella bacteria



99.99% Staph epidermidis

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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)
Disinfection Power	99.99% reduction in SARS-CoV-2
Added Equivalent Air Exchanges	14.3 eACH in 500 sqft. | 9.7 eACH in 1,000 sqft. | 12.6 eACH in 2,000 sqft. (2 units) | 9.2 eACH in 3,000 sqft. (2 units)[1]
Controls	
On Unit	Device status indicator, on/off switch
Remote Operation	Web interface (R-Zero Connect)
Automatic 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 wide, 16 inches deep
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	Long-range PIR sensors: 2 in the irradiance zone, 1 in occupied zone
Physical Features	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	Passed March 2022
FCC Part 15C	Passed August 2021

1 Assumptions: 9 ft ceilings for rooms ≤1,000 sqft, 10 ft for ≥2,000 sqft; 15% ceiling reflectance; SARS-Cov-2 pathogen and light simulation; power limited by ACGIH TLV standards *Third-party testing of SARS-CoV-2, feline calicivirus, MRSA, and E. Coli on hard, non-porous surfaces in seven minutes, with samples taken at eight feet. UV environmental disinfecting is supplemental to, not a replacement for, physical surface cleaning and is effective only on exposed surfaces and in circulating air exposed to UV light.