

# UPPER-ROOM UVGI

GERMICIDAL ULTRAVIOLET DISINFECTION LIGHTING

*“Essential for Airborne Infection Control”*

**For Healthcare Facilities:**

**Doctor’s Offices**

**Dental Offices**

**Hospitals**

**Care Centers**

**Trauma Centers**

**Pediatricians**

**Emergency Rooms**

**Waiting Rooms**

**Medical Labs**

**Nurses Stations**

## Why Germicidal UVGI is Essential for Airborne Infection Control

“Germicidal UV, primarily upper room UV, has for over 80 years provided a safe and highly effective way to disinfect air in occupied rooms where person to person transmission is likely to occur, Quantitatively, where applicable, no other technology approaches the equivalent air changes per hour that can be produced by upper room UV, silently, safely and cost-effectively. **For COVID-19, it is essential** that engineering strategies target transmission in occupied rooms, more so than in the ventilation system, given the paucity of evidence of recirculated virus”. **“It is no exaggeration to claim that the most effective, evidence-based, cost effective, safe, sustainable, and available engineering intervention to disinfect air is germicidal ultraviolet (GUV) air disinfection”**.”

*Harvard Medical School*



Dentist Exam Room



Healthcare Waiting Room

### Why Germicidal UVGI is Essential for Airborne Infection Control

Quantitatively, where applicable, no other technology approaches the equivalent air changes per hour that can be produced by upper-room UV, silently, safely and cost effectively. For COVID-19, it is essential that engineering strategies target transmission in occupied rooms—more than in the ventilation system given the paucity of evidence of recirculated virus.

**Harvard Medical School**



Doctor's Office Exam Room

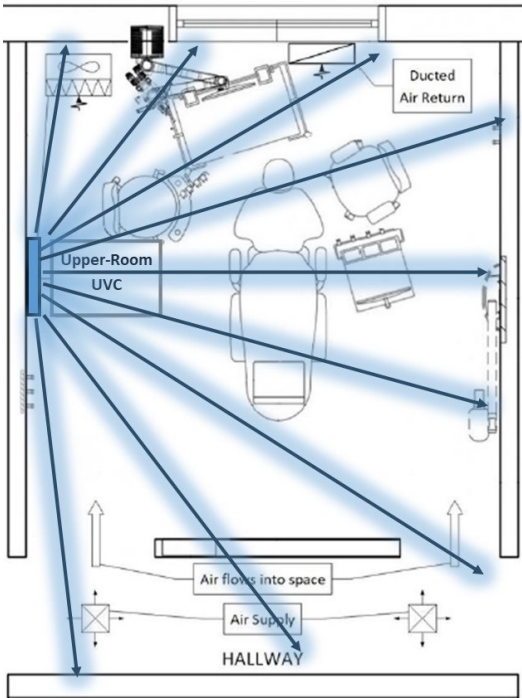


Hospital Emergency Room

**Upper-room UVGI Recommended by:** CDC, ASHRAE, National Hospital Association, American Society of Health Care Engineering, National Institute of Allergy & Infectious Diseases, EPA, U.S. Dept. of Energy, Harvard Medical School, Johns Hopkins School of Public Health, Lancet COVID-19 Commission, U.S. Dept. of Defense, Homeland Security, Duke Medical School, AIA, U.S. Dept. of Education, DHEC, American Medical Association, Center for Infectious Disease, IES, U.S. Army Public Health Center, OSHA, IFMA, NIOSH, NCBI, American Journal of Infection Control, National Academies of Science Engineering and Medicine, National Environmental Agency, U.S. Dept. of Labor, APTA (American Public Transportation Assoc.), NNSA (National Nuclear Security Administration), and every major Medical, Engineering and Scientific Institution

**Germicidal 253.7 nm Ultraviolet Disinfection Upper-Room Unit**

**Upper-room UVGI KILLS all bacteria, mold, pathogens and viruses in the room where they occur in seconds. Runs 24/7/365, affordable, maintenance free and is safe for occupied spaces.**



- Operates 24/7/365
- Safe for Occupied Rooms
- Maintenance Free
- Chemical Free
- Ozone Free
- Silent
- Automated Lamp Replacement Notice
- Proven for over 80 Years in Hospitals to Stop Airborne Infections
- Disinfects and Cleans the Air to the Equivalent of Fresh Air

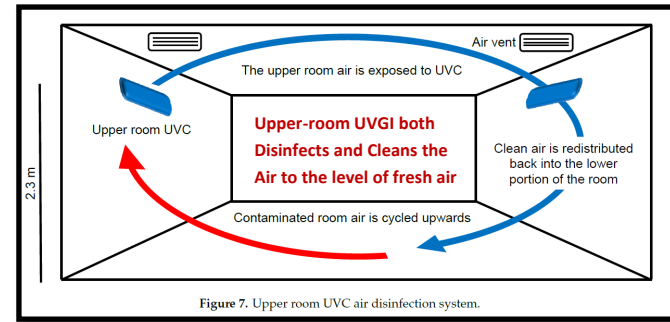
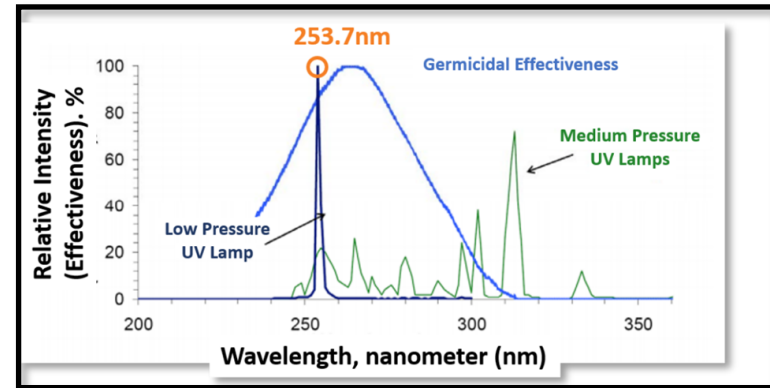


Figure 7. Upper room UVC air disinfection system.

**At 253.7 nm (nanometers), UVC peaks and becomes Germicidal**



**Why Upper-Room GUV is so Effective and Cost-Effective Compared to other Technologies**

“ In contrast to mechanical ventilation and room air-cleaners, upper room GUV air disinfection with good air mixing has been shown under real-life conditions to produce the equivalent of adding as much as 24 room air changes per hour quietly, safely and sustainably. Under high-risk conditions, especially where few buildings have efficient mechanical ventilation systems, **the only approach to the environmental control of airborne infection is upper room GUV.** Upper room GUV is so highly effective because such large volumes of room air are decontaminated at one time.”

**Harvard Medical School**



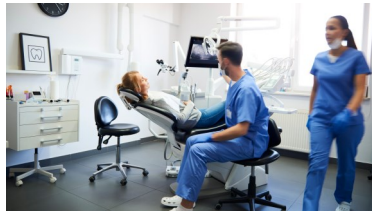
The First UL Tested and Listed GUV Technology

**UL 1598  
UL 8802  
UL IEC62471 Photobiological Safety Testing  
UL IEC62471 Efficacy Testing  
UL: Exempt-No Risk**



EPA Establishment No. 98440-GA-1  
EPA Establishment No. 98440-SC-1





**“Upper-room UVGI kills pathogens in the room where they are released. For airborne viral particles, upper-room UVGI systems provide air changes per hour that are similar to the introduction of clean air into the space.”**

*The CDC*

**“It is not an exaggeration to claim that the most effective, evidence-based, cost-effective, safe and available engineering intervention to disinfect air is germicidal ultraviolet (GUV) air disinfection. “**

*Harvard Medical School*

**ASHRAE Journal Supplemental October 2020**

“One of the oldest applications of germicidal UV for space infection control, upper-room/air systems work by effectively intercepting pathogens and viruses at their source in the room air.

**Operating 24/7/365, upper-room/air germicidal fixtures can inactivate these microbes in a matter of seconds.**

Upper-room/air UV-C fixtures utilize the natural rise and fall of convection or mechanical air currents to circulate airborne infectious agents into the upper room, where they are exposed to UV-C and killed.

First-pass kill or inactivation ratios of up to 99 percent have been modeled, with concentrations further reduced with each subsequent pass of recirculated air (multiple dosing). “

**ASHRAE**



The NetZero USA LEASING PROGRAMS powered by Wells Fargo can design Leasing solutions for GUV installations that avoid any up-front or out-of-pocket cost.

- No Closing Cost
- No Down Payment
- Low Monthly Payments / \$1.00 Buyout
- 36, 60, 72 & 84 Month Terms
- Non-Encumbering Equipment Lease
- Material & Installation



www.nzguv.com / Contact: Brian Lawrence at 864-483-2173 or brian.lawrence@netzero-usa.com