ULTRAVOILET DISINFECTION SYSTEMS

COMPETITIVE ANALYSIS

For International Use

							
	Xenex	**Steris-Pathogen UV Defense System**	**Surfacide-Helios System**	**Lumalier Tru-D SmartUVC System**	**American Air - ARTZ Mobile Room UVC**	**Clorox-Optimum-UV System**	**UV-C Technologies IRS 3200m**
TIME OF ROOM TREATMENT	5 min. per position (avg 3 positions totaling 15 min.)	4-9 min. for Bacteria/Viruses 11-25 min. for C. Diff	15 min.	3-5 min. for line of sight, 20-47 min. total room with 33 min. average	Varies based on room size	4-8 min. for C. Diff/ 1-3 min. for MRSA	6-12 min. average of 10.2 min. on sporicidal. (In 200 sq. ft. room 8-18 min.)
EFFICACY (DEFINED IN LOGS)	3	5-7.42 on Bacteria/Viruses- 2.9-3.97 on C. Diff	4	3 to 4	3	4 for C. Diff/ 5 MRSA	3 to 6 of both sight and shadow areas with calibrated dosage
STATISTICS	53% reduction in C. diff infections, 56% in MRSA 40% for DNA damage Surface 53% reduction/ Air 46%. The study showed a 95 percent reduction in C. diff when the rooms were cleaned with the device. Studies on kill taken at 1-2 meters. In short, rooms treated with Xenex PX-UV had six times fewer CFU of C. diff recovered than the rooms treated with bleach.	57% reduction in MRSA	"Easily eradicated" MRSA, VRE and C.diff	VRE by 98%/ C.Diff 90%/ 99.99% disinfection C. difficile spore log reductions ranged from 1.8 to 2.9. UV Light decontamination cycle times ranged from 72.1 to 146.3 minutes.	unknown	Greater than 99.999% reduction of MRSA in 2 min. at 8 ft./99.992% reduction of C. diff spores inn5 min. at 8 ft.	98% overall reduction in microorganisms. By using their UVGI technology achieves a 99.9% reduction in 10 min, and in 20 minutes achieves a 99.8% reduction of C.difficile.
NUMBER OF UNITS RECOMMENDED	1 unit per room - focuses on epidemiologically significant areas of the room, such as patient bed rails, that will receive a higher dose of UV-C than the corner of the room.	1 unit per room- automatically identifies areas of the room to be treated with a "calculated dose" specific to that room.	Uses 3 towers per room in an attempt to eliminate shadows.	1 unit per room with automated dosage output- uses reflected technology to address dark areas of rooms, states "unit reaches around corner's" etc.	1 unit per room - can be set automatically or amount of dosage can be manually into system for assigned areas only.	1 unit per room containing 4 lamps.	1 for both air and surface
FEATURES	Lifetime maintenance and repair/ Certification & training of staff, green form of energy, intense energy creates multiple pathways of damage to germs. 25% Faster than chemical cleaning.	Wireless operation on Microsoft Windows OS/ Remote Controllable, easy to move	Touch interface via tablet controller/ Cloud based data/ no person needs to be present in room during treatment	Wireless operation- Doesn't require trained individual to operate- Automatically calculates time needed for each room. USB transfer data/ Cloud based data- usage tracking on iPad	Downloadable data	Remote operating control with a range of 50 feet through walls/ Device will resume operation after interruption/remembers condition before unintentional interruptions.	No room prep needed and can room be re-occupied immediately after use. The system can be programmed and monitored from a supervisor's computer, Steri-Trak and features productivity tracking. Provides cleaner air and reduced energy usage.
UV LAMP LIFE (IN HOURS)	8,000	12,000	unknown	10,000	12,000	4,000	unknown

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- UV has a 3-4 log kill and some 5 log at distances of approx. 3 feet, SteraMist achieves six log efficacy on contact and throughout the room.
- Average MSRP cost per UV unit $80,000-$125,000 vs MSRP cost per SteraMist™ unit at $18,000 - $53,385.
- Many UV technologies require furniture to be moved away from walls, reflective paint to be used and multiple devices to be deployed in the room to achieve a 3-4 log kill. SteraMist is a six log spray and kill technology, 100% percent green clean, minimal room preparation.
- There is also evidence of UV causes mutated bacteria from a distance and these bacteria are developing a resistance to UV light in water and possibly air.
- May possibly cause corneal damage. SteraMist is a Green technology, the by products are Oxygen and water (humidity).
- Ultraviolet rays are known to deteriorate plastics. There is no known deterioration after 1,000 treatments using SteraMist.