AIRsteril
infection & odour free environment

Upper Room Indirect Germicidal Ultraviolet Air Disinfection Fixture

Application

Utilizing ultraviolet lamp technology, the AirSteril UR products kill up to 99.9% of airborne bacteria and viruses, black mold and fungal growth, reduce odors and respiratory allergens and reduce airborne transmission of influenza, colds, and viruses.

laboratories hospitals clinics maternity areas labor & delivery areas pathology labs kidney dialysis labs operating rooms methadone clinics burn centers TB clinics homeless shelters prisons and jails detention centers nursing homes universities schools veterinary clinics animal husbandry kennels food industry food processing dairy processing bakeries office buildings conference rooms clean rooms pharmaceutical mfg. electronic production cosmetic production

Construction / Finish

Anodized aluminum extrusion housing.
Solid extruded high reflective twin focus reflector design.
Wall mount construction.
On/off switch is standard.
Shipping weight 5 kg.
Minimum mounting height is 7.2ft. (2.2 meter)

Advantages

Economical
System requires very little power to operate.

Safe
Low risk of over-exposure.

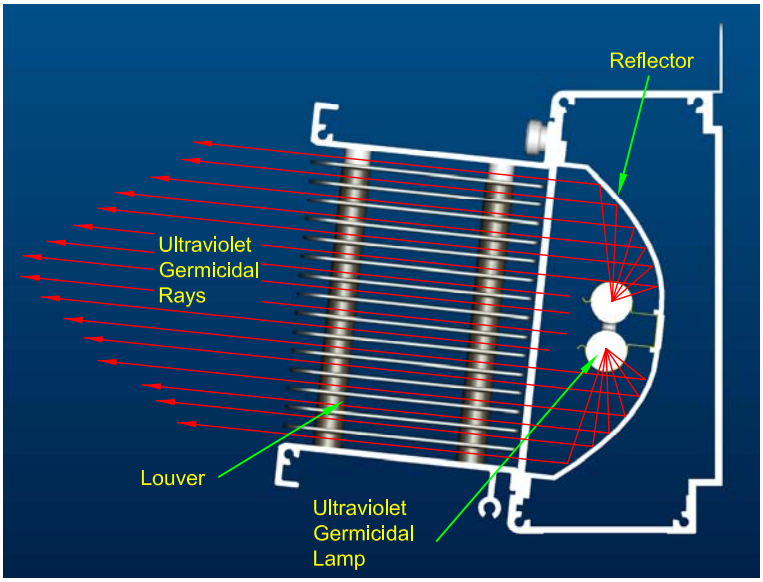
Fast
Disinfects air in seconds, reducing the risk of cross infection and exposure of occupants to infectious airborne microbes.

Automatic
Continuous disinfection without special attention.

Durable
Extruded aluminum construction.

Low Maintenance
Annual lamp replacement and periodic cleaning is all that is required

Principle of operation



The AirSteril UR design has been carefully conceived to provide germicidal ultraviolet rays to purify the upper room air of occupied spaces in order to reduce the risk of cross infection and exposures of occupants to infectious airborne microbes. The dosage ,as it applies to ultraviolet disinfection, is a function of time, and the intensity, of ultraviolet radiation, to which the air is exposed. The exposure time, in seconds, is the total time it takes the air to move through the ultraviolet field, produced by the germicidal lamp. Exposure time is related to the airflow rate, the higher the airflow, the lower the exposure time or the lower the airflow, the higher the exposure time.

The operation of the AirSteril is as follows:

1. Ultraviolet rays project across the upper room air.
2. Bacteria and viruses that are carried into the ultraviolet field by convection currents or air circulation are destroyed.
3. The air in the room is continuously being purified.

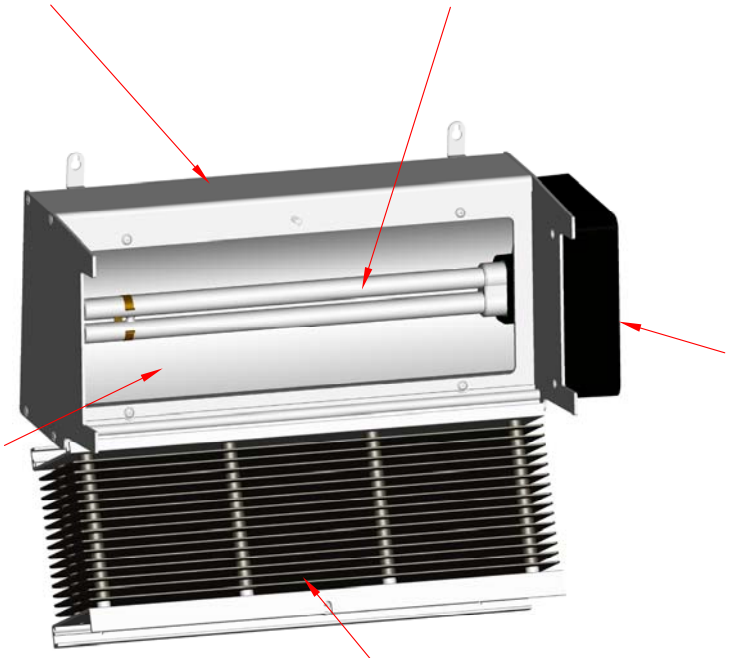
SPECIFICATIONS

Model	Lamp	Power Consumptions	Total Ultraviolet Output	Exterior Housing Dimensions			Rated Average Lamp Life
				Length	Width	Depth	
UR32	AST32-GP	32 Watts	9.5 Watts	460mm	186mm	186mm	9000 Hours

SPECIAL FEATURES

Aluminum Extrusion Construction
The unit is manufactured in solid anodized aluminum extrusion for unparalleled strength, durability and an attractive finish.

High quality double tube PLL germicidal lamp
Lamp is rapid starting and provides the utmost in quality, sustained output and longevity.

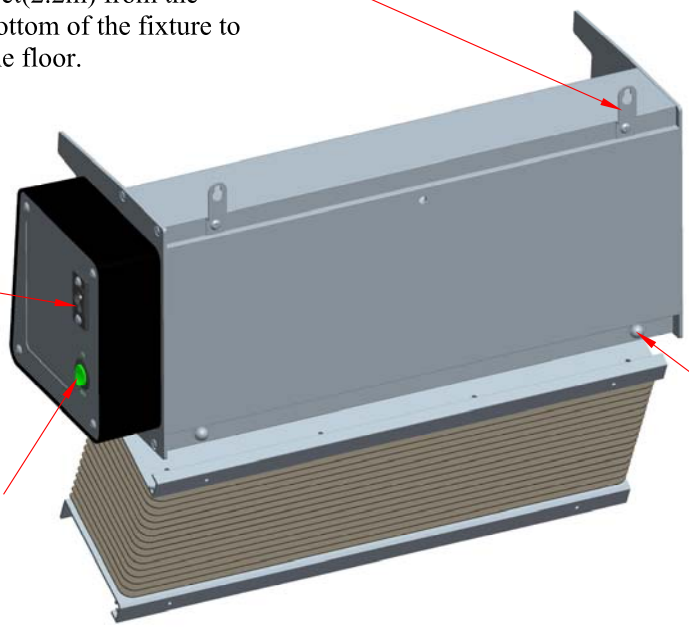


Polished Reflector
Interior surface includes a special twin focus polished reflector which provides a highly reflective surface to maximize ultraviolet intensity.

DigiTronix Electronic Smart Ballast
UL and ENEC listed state-of-the-art high power factor electronic ballasts with 120-277V input are designed to operate ultraviolet lamps
The Smart ballast offers these advantages over conventional ballasts:
-Class P No PCB's
-delivers higher uv lamp output
-preheat soft start low inrush
-eliminates stroboscopic effect
-small and lightweight
-operates cooler for longer life
-saves energy through higher efficiency and provides silent operation

Louvers
Unique construction directs ultraviolet rays to the upper portion of the room

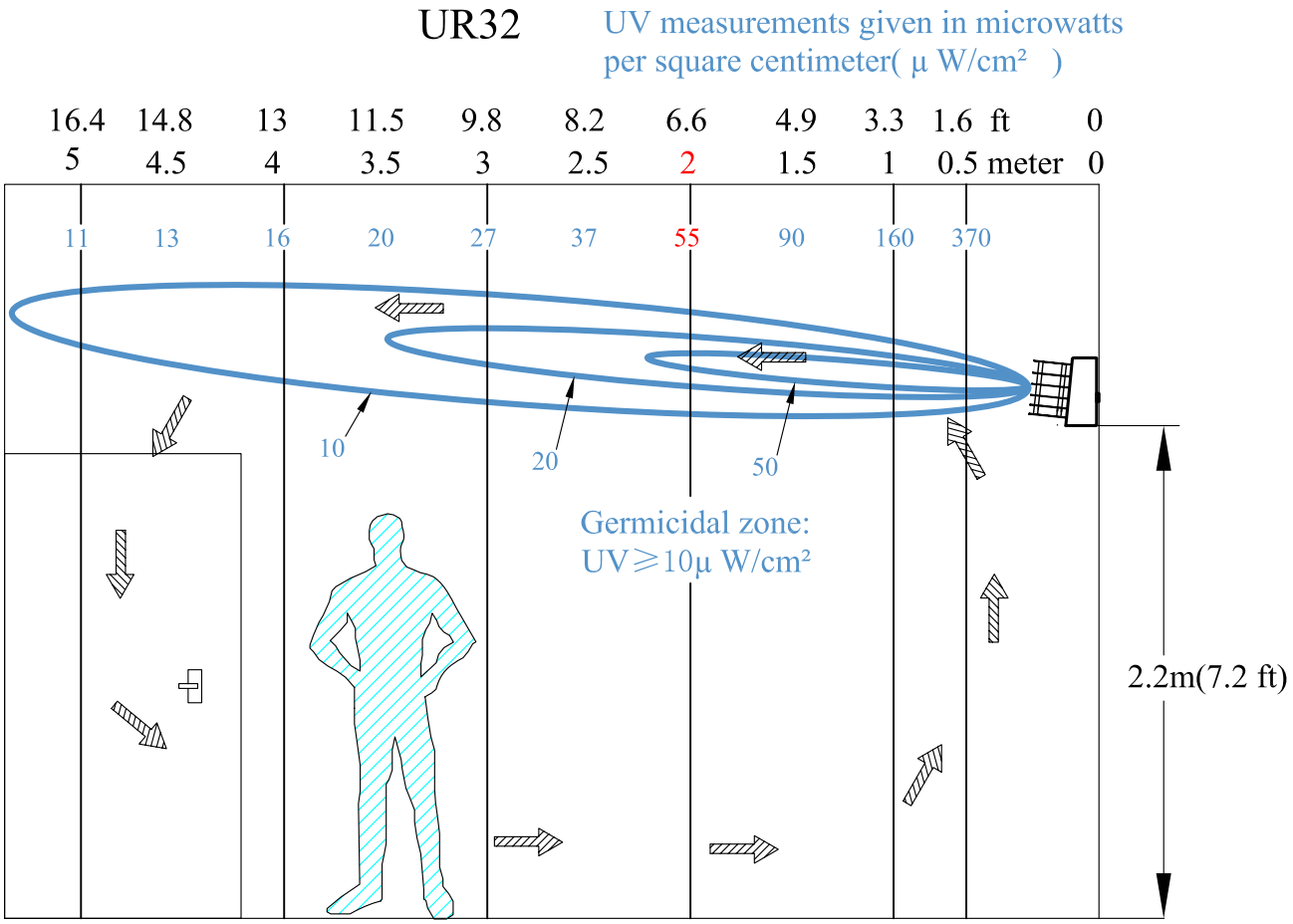
Stainless Steel Mounting Bracket
This fixture is to be mounted on a plumb and vertical surface, at a minimum height of 7.2 feet(2.2m) from the bottom of the fixture to the floor.



Detachable power cable socket

On-off switch

Adjustable screws
Screws give louvers an extra 5 degree toward ceiling adjustment feature while protecting personnel and providing maximum germicidal UV air irradiation..



ULTRAVIOLET DOSAGE

Germicidal lamps provide effective protection against microorganisms. A small cross-section is shown below. Nominal Ultraviolet dosage (μWSec/cm2) necessary to inactivate better than 99% of specific microorganism.

ORGANISM	ALTERNATE NAME	TYPE	DISEASE	DOSE*
Corynebacterium diphtheriae	C. diphtheriae	Bacteria	Diptheria	6,500
Legionella pneumophila	L. pneumophila	Bacteria	Legionnaire's Disease	2,700
Mycobacterium tuberculosis	M. tuberculosis	Bacteria	Tuberculosis (TB)	10,000
Pseudomonas aeruginosa	P. aeruginosa	Bacteria		3,900
Serratia Marcescens	S. marcescens	Bacteria		6,160
Staphlylococcus aureus	S. aureus	Bacteria		6,600
Staphlylococcus epidermidis	S. epidermidis	Bacteria		5,800
Adeno Virus Type III		Virus		4,500
Coxsackie A2		Virus		6,300
Influenza		Virus	Flu	3,400

Example:

Inactivation of airborne Influenza virus requires UV dose of 3400 microwatt seconds per square centimeter.
In a typical 2 meter distance from the UR32 in the ultraviolet irradiation zone, one minute irradiation time would be needed to inactivate the influenza virus.

Calculation:

UV intensity of UR 32 @ 2 meter = 55 microwatts per square centimeter
Time taken to inactivate the influenza virus : 3400 / 55 = 61.8 second