Nutripure®

GERMICIDAL ULTRAVIOLET SANITARY CONDITIONERS

Model 2B-SC, 3B-SC

Model 4B-ASC, 5B-ASC

Model 6B-ASC

ATLANTIC ULTRAVIOLET
CORPORATION® SINCE 1963

ABOUT US

Since 1963, Atlantic Ultraviolet Corporation has pioneered the discovery and development of beneficial uses of ultraviolet energy. Over the years these efforts have led to the development of valuable, cost effective and environmentally sound techniques and products now known and respected throughout the world.

Atlantic Ultraviolet's application specialists assist customers in the selection of germicidal lamps and equipment. Their specialized knowledge is a valuable resource in formulating effective and cost-conscious ultraviolet solutions. Extensive inventories and a dedicated staff enable Atlantic Ultraviolet to fulfill its commitment to provide fast deliveries and responsive customer service.

GERMICIDAL ULTRAVIOLET

Germicidal Ultraviolet is a unique and rapid method of disinfection. It utilizes germicidal ultraviolet lamps producing ultraviolet wavelengths at 254 nanometers (nm)—a level that is lethal to bacteria, virus and other microorganisms.

An ever-growing range of industries and consumer applications have found ultraviolet to be the ideal solution for their air and surface treatment needs.

Atlantic Ultraviolet Corporation® equipment and systems are manufactured in the USA.

Model 2B-SC, 3B-SC

Model 4B-ASC, 5B-ASC

Model 6B-ASC

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ADVANTAGES

Economical
System requires very little power to operate.

Safe
No risk of over-exposure.

Fast
Disinfects air in seconds.

Automatic
Continuous disinfection without special attention.

Durable
Polished Stainless Steel Cabinet.

Versatile
Numerous models available to handle various configurations.

Low Maintenance
Periodic lamp replacement and filter cleaning or replacement is required.

PRINCIPLE OF OPERATION

The **Nutripure**® has been carefully conceived to provide adequate germicidal ultraviolet exposure for air disinfection. The treated air is used in the head space of liquid storage tanks helping to prevent condensation. 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. Our UV application specialists would be happy to perform the necessary calculations to ensure the sanitary conditioner we provide is appropriate for your particular application.

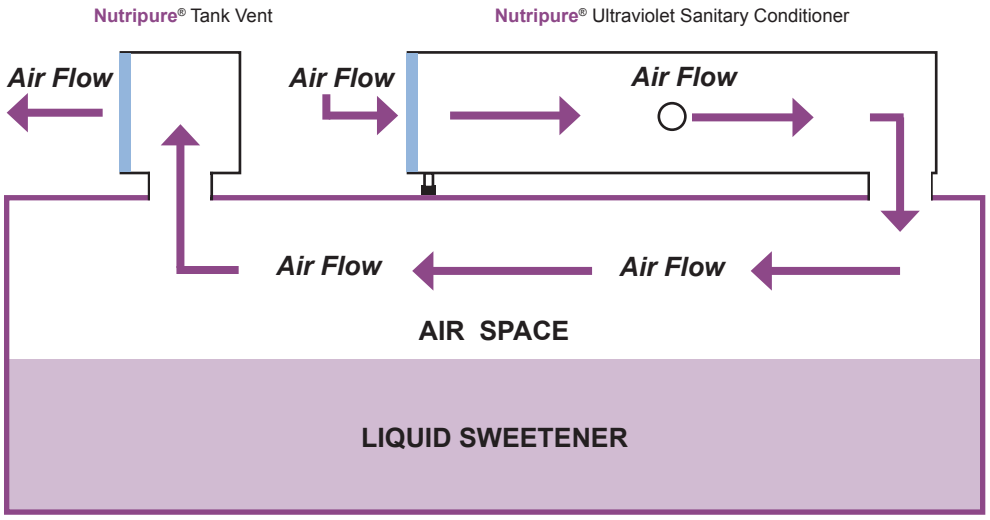


Figure 1 - Nutripure® Ultraviolet Sanitary Conditioner mounted on a liquid sugar tank

The operation of the **Nutripure**® is as follows:

1. Air is drawn into the **Nutripure**® Ultraviolet Sanitary Conditioner through the electrostatic filter.
2. The air is forced into the ultraviolet exposure chamber where it is irradiated by germicidal ultraviolet light (lamp quantity varies per model). These special lamps generate high levels of germicidal ultraviolet radiation lethal to infectious microorganisms such as bacteria, molds and virus, and once exposed, they are inactivated.
3. Observation Port/Sight Glass provides positive indication of germicidal lamp operation.
4. On models with a HEPA Absolute filter, the irradiated air is then forced through this additional filter which removes more than 99.97% of particles as small as 0.3 microns.
5. Circulation of purified filtered air within the tank head space reduces condensation which can be detrimental to the liquid integrity.
6. Air is exhausted out of the tank through a filtered tank vent.

SPECIAL FEATURES

Nutripure® 2B-SC and 3B-SC Ultraviolet Sanitary Conditioners

Nutripure® Ultraviolet Sanitary Conditioners have long been used commercially to ventilate the air space above the liquid in storage tanks. The purpose of this equipment is to provide a sterile condition in the tank head space, defeat contamination from airborne sources and lower condensation levels which can dilute the tank contents. When diluted, some liquids have a strong tendency to promote the growth of bacteria and mold on the liquid surface.

The **Nutripure**® Ultraviolet Sanitary Conditioner ensures that bacteria-free air is used to provide a sanitary environment inside the tank. The **Nutripure**® Ultraviolet Sanitary Conditioner forces bacteria-free air into the air space above the liquid in the storage tank and the tank vent provides an outlet for this air, while at the same time preventing contaminants, insects or debris from entering the storage tank.

Nutripure® Ultraviolet Sanitary Conditioners utilize ***STER-L-RAY***® germicidal lamps which are completely enclosed within a stainless steel exposure chamber and are safe for use in storage tank applications.

STER-L-RAY® Instant Start Germicidal Lamp(s)

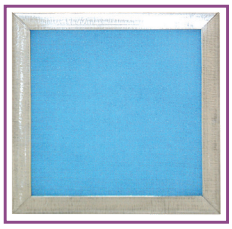
STER-L-RAY® Germicidal Lamp(s) are instant starting and provide the utmost in quality, sustained output and longevity. **ArmorLite™ Safety Shield** protective coating is applied to all ***STER-L-RAY***® Germicidal Lamps installed in **Nutripure**® Ultraviolet Sanitary Conditioners to ensure protection for employees, products and work environments by eliminating the dangers associated with fragments of broken lamps.

Steadfast™ Lampholders

Set includes a stationary and a spring-loaded, telescopic holder that grasps a single pin lamp securely. The spring-loaded feature on one end facilitates convenient, quick and easy lamp changes.

Interlock Safety Switch

The interlock safety switch is a standard feature that disconnects power to the sanitary conditioner when the access panel is removed for lamp or filter replacement.

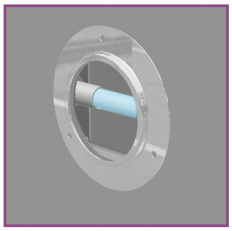


Particulate Filter

Washable Electrostatic Filter.

Model 2B-SC, 3B-SC

(See page 10 for Optional Accessories)



Observation Port/Sight Glass Assembly

A Sight Glass Assembly allows for a **safe** visual inspection of the operation of the lamp(s).

Stainless Steel Enclosure

The sanitary conditioner is manufactured in Type 304 stainless steel for unparalleled strength, durability and an attractive finish.

Polished Reflector

Interior surface is polished aluminum providing a highly reflective surface to maximize ultraviolet intensity within the chamber.

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SPECIFICATIONS

Figure 2 - Nutripure® 2B-SC Ultraviolet Sanitary Conditioner (shown)

Nutripure® 2B-SC and 3B-SC Ultraviolet Sanitary Conditioners are connected directly to liquid storage tanks. Pipe collar, pedestal leg assemblies and lamp(s)(not shown) are included. The **Nutripure®** Tank Vent is an optional accessory. (See below for more information.)

SPECIFICATIONS — Nutripure® 2B-SC & 3B-SC Ultraviolet Sanitary Conditioners

Model	Tank Size (Gallons) ①	Dimensions			Free Air Displacement (CFM)	Volts ②	Power Requirements (Amps)
		Length	Width	Height			
2B-SC	up to 6,000	34-1/2”	7-3/4”	7-3/4”	72	120	1.3
3B-SC	7,000-18,000	34-1/2”	7-3/4”	7-3/4”	140	120	2.9

① Model capacity incorporates an estimated allowance for airflow friction loss across filter and sanitary conditioner.
② Information listed refers to 120 Volt 60 Hz models. Contact factory for specifics on other voltages.

Genuine *STER-L-RAY®* Germicidal Lamp Data

Model	Lamp No.	Lamp Length	Lamp Watts (Quantity)	Ultraviolet Output ①	Rated Average Effective Life ②
2B-SC	05-6011	21-7/8” (556 mm)	26 (1)	8.5 Watts	10,000 hrs
3B-SC	05-6011	21-7/8” (556 mm)	26 (2)	17 Watts	10,000 hrs

① Ultraviolet Output at 254 nanometers at 100 hours and 80 degrees F (approximate).
② Some industries suggest lamp replacement every 6 months to meet specific compliance standards.

SPECIFICATIONS — Nutripure® Tank Vent (optional)

Tank Vent Model	Dimensions		
	Length	Width	Height
2-TV	6-1/32”	7-3/4”	7-3/4”

Contact our UV Specialists to discuss applications.

SPECIAL FEATURES

Nutripure® 4B-SC, 4B-ASC, 5B-SC, 5B-ASC, 6B-SC and 6B-ASC Ultraviolet Sanitary Conditioners

Nutripure® Ultraviolet Sanitary Conditioners have long been used commercially by manufacturers of food, pharmaceuticals and beverages to circulate purified filtered air within the tank head space. The purpose of this equipment is to provide a sterile condition in the tank head space, defeat contamination from airborne sources and lower condensation levels which can dilute sweeteners, oils and other liquids. When diluted, sweeteners and oils have a strong tendency to promote the growth of bacteria and mold on the liquid surface.

The **Nutripure®** Ultraviolet Sanitary Conditioner ensures that bacteria-free air is used to provide a sanitary environment inside the tank. The **Nutripure®** Ultraviolet Sanitary Conditioner forces bacteria-free air into the air space above the liquid in the storage tank and the tank vent provides an outlet for this air, while at the same time preventing contaminants, insects or debris from entering the storage tank.

Nutripure® Ultraviolet Sanitary Conditioners utilize ***STER-L-RAY®*** germicidal lamps which are completely enclosed within a stainless steel exposure chamber and are safe for use in storage tank applications.

STER-L-RAY® Instant Start Germicidal Lamp(s)

STER-L-RAY® Germicidal Lamp(s) are instant starting and provide the utmost in quality, sustained output and longevity. **ArmorLite™ Safety Shield** protective coating is applied to all ***STER-L-RAY®*** Germicidal Lamps installed in **Nutripure®** Ultraviolet Sanitary Conditioners to ensure protection for employees, products and work environments by eliminating the dangers associated with fragments of broken lamps.

Steadfast™ Lampholders

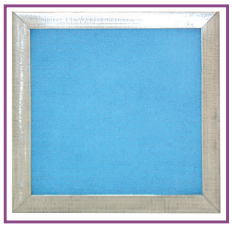
Set includes a stationary and a spring-loaded, telescopic holder that grasps a single pin lamp securely. The spring-loaded feature on one end facilitates convenient, quick and easy lamp changes.

Interlock Safety Switch

The interlock safety switch is a standard feature that disconnects power to the model when the access panel is unhinged for lamp or filter replacement.

Stainless Steel Enclosure

The **Nutripure®** is manufactured in Type 304 stainless steel for unparalleled strength, durability and an attractive finish.

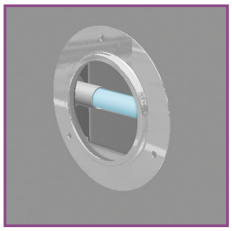


Model 4B-ASC, 5B-ASC
(Models with **ASC** include Absolute HEPA Filter)

Particulate Filter

Washable Electrostatic Filter.

Model 6B-ASC
(Models with ASC include Absolute HEPA Filter)



Observation Port/ Sight Glass Assembly

A Sight Glass Assembly allows for a **safe** visual inspection of the operation of the lamp(s).

HEPA Filter

Models 4B-ASC, 5B-ASC & 6B-ASC include HEPA (Absolute Filter) which removes 99.97% of particles as small as 0.3 microns.

Polished Reflector

Interior surface is polished aluminum providing a highly reflective surface to maximize ultraviolet intensity within the chamber.

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SPECIFICATIONS

Nutripure® 4B-SC, 4B-ASC, 5B-SC, 5B-ASC, 6B-SC and 6B-ASC Ultraviolet Sanitary Conditioners are mounted directly on liquid storage tanks or installed adjacent to tank with interconnecting pipe. Pipe collar, pedestal leg assemblies and lamps (not shown) are included. The Nutripure® Tank Vent is an optional accessory. (See below for more information.)

Figure 3 - Nutripure® Model 4B-ASC Ultraviolet Sanitary Conditioner (shown)
(Models with **ASC** include Absolute HEPA Filter)

SPECIFICATIONS — Nutripure® 4B-SC, 4B-ASC, 5B-SC, 5B-ASC, 6B-SC & 6B-ASC

Model	Tank Size (Gallons) ①	Dimensions			Free Air Displacement (CFM)	Volts ②	Power Requirements (Amps)
		Length	Width	Height			
4B-SC	up to 6,000	32”	10-1/4”	10-1/4”	72	120	2.0
4B-ASC ③	up to 6,000	48”	10-1/4”	10-1/4”	72	120	2.0
5B-SC	6,000-15,000	32”	10-1/4”	10-1/4”	140	120	2.9
5B-ASC ③	6,000-15,000	48”	10-1/4”	10-1/4”	140	120	2.9
6B-SC	15,000 to 30,000	46-1/16”	14-1/4”	12-1/6”	295 / 435	120	4.93
6B-ASC ③	15,000 to 30,000	61-7/16”	14-1/4”	12-1/6”	545 / 760	120	5.86

① Model capacity incorporates an estimated allowance for airflow friction loss across filter and sanitary conditioner.
② Information listed refers to 120 Volt 60 Hz models. Contact factory for specifics on other voltages.
③ Specifically recommended for liquid sugar storage tanks.

Genuine *STER-L-RAY*® Germicidal Lamp Data

Model	Lamp No.	Lamp Length	Lamp Watts (Quantity)	Ultraviolet Output ①	Rated Average Effective Life ②
4B-SC/4B-ASC	05-6011	21-7/8” (556 mm)	26 (1)	8.5 Watts	10,000 hrs
5B-SC/5B-ASC	05-6011	21-7/8” (556 mm)	26 (2)	17 Watts	10,000 hrs
6B-SC/6B-ASC	05-6013	27-7/8” (708 mm)	32 (4)	44.8 Watts	10,000 hrs

① Ultraviolet Output at 254 nanometers at 100 hours and 80 degrees F (approximate).
② Some industries suggest lamp replacement every 6 months to meet specific compliance standards.

SPECIFICATIONS — Nutripure® Tank Vent (optional)

Tank Vent Model	Dimensions		
	Length	Width	Height
4-TV	6”	10-1/8”	10-1/16”
4-ATV	16-1/4”	10-1/4”	10-1/4”
6-TV	14-1/2”	12-1/4”	14-1/4”
6-ATV	22-5/8	12-1/4”	12-1/4”

Contact our UV Specialists to discuss applications.

SPECIAL FEATURES

Nutripure® 7-ASC, 8-ASC and 9-ASC Ultraviolet Sanitary Conditioners

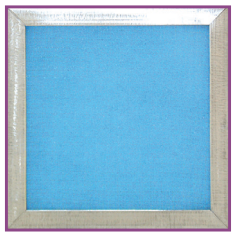
Nutripure® Ultraviolet Sanitary Conditioners have long been used commercially by manufacturers of food, pharmaceuticals and beverages to circulate purified filtered air within the tank head space. The purpose of this equipment is to provide a sterile condition in the tank head space, defeat contamination from airborne sources and lower condensation levels which can dilute sweeteners, oils and other liquids. When diluted, sweeteners and oils have a strong tendency to promote the growth of bacteria and mold on the liquid surface.

The **Nutripure®** Ultraviolet Sanitary Conditioner ensures that bacteria-free air is used to provide a sanitary environment inside the tank. The **Nutripure®** Ultraviolet Sanitary Conditioner forces bacteria-free air into the air space above the liquid in the storage tank and the tank vent provides an outlet for this air, while at the same time preventing contaminants, insects or debris from entering the storage tank.

Nutripure® Ultraviolet Sanitary Conditioners utilize ***STER-L-RAY®*** germicidal lamps which are completely enclosed within a stainless steel exposure chamber and are safe for use in storage tank applications.

STER-L-RAY® High Output Germicidal Lamps

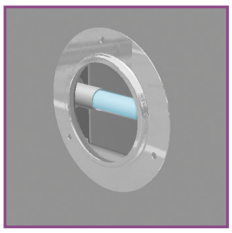
STER-L-RAY® High Output (HO) germicidal lamps are similar in size and shape to conventional germicidal lamps but are capable of operating at higher input power and current. **ArmorLite™ Safety Shield** protective coating is applied to all ***STER-L-RAY®*** Germicidal Lamps installed in **Nutripure®** Ultraviolet Sanitary Conditioners to ensure protection for employees, products and work environments by eliminating the dangers associated with fragments of broken lamps.



Particulate Filter

Washable Electrostatic Filter.

Model 7-ASC



Observation Port / Sight Glass Assembly

A Sight Glass Assembly allows for a **safe** visual inspection of the operation of the lamp(s).

HEPA Filter

HEPA (Absolute Filter) which removes 99.97% of particles as small as 0.3 microns.

Steadfast™ Bayonet Socket Mount Lampholder

Bayonet Socket mount four-pin lampholder fastens the lamp securely while providing convenient, "quick and easy" lamp change.

Interlock Safety Switch

The interlock safety switch is a standard feature that disconnects power to the sanitary conditioner when the access panel is unhinged for lamp or filter replacement.

SENTINEL® Outlet Connector

Allows for easy plug-in and operation of optional **SENTINEL®** Remote Lamp Indicator.

Lamp Replacement Indicator

Resettable Flashing Light signals reminder for lamp change.

Stainless Steel Enclosure

The sanitary conditioner is manufactured in Type 304 stainless steel for unparalleled strength, durability and an attractive finish.

Polished Reflector

Interior surface is polished aluminum providing a highly reflective surface to maximize ultraviolet intensity within the chamber.

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SPECIFICATIONS

Figure 4 - Nutripure® Model 7-ASC Ultraviolet Sanitary Conditioner (shown)
Multiple mounting options available for the Nutripure® 7-ASC, 8-ASC and 9-ASC Ultraviolet Sanitary Conditioner.

SPECIFICATIONS — Nutripure® 7-ASC, 8-ASC & 9-ASC Ultraviolet Sanitary Conditioner

Model	Tank Size (Gallons) ①	Dimensions			Free Air Displacement (CFM)	Volts	Power Requirements (Amps)
		Length	Width	Height			
7-ASC	30,000 to 50,000	63-1/8”	17-15/16”	14-3/8”	560	120 50/60Hz	4.66
8-ASC	50,000 to 150,000	74-1/4”	21-1/4”	20-1/4”	1057	120 50/60Hz	10.02
9-ASC	150,000 +	81-15/16”	27-3/8”	27-7/16”	1828	230 50/60Hz	9.75

① Model capacity incorporates an estimated allowance for airflow friction loss across filter and sanitary conditioner.

Genuine *STER-L-RAY*® Germicidal Lamp Data

Model	Lamp No.	Lamp Length	Lamp Watts (Quantity)	Ultraviolet Output ①	Rated Average Effective Life ②
7-ASC	05-6016	691 mm	65 (4)	92 Watts	10,000 hrs
8-ASC	05-6017	843 mm	87 (6)	168 Watts	10,000 hrs
9-ASC	05-6018	843 mm	172 (6)	324 Watts	10,000 hrs

① Ultraviolet Output at 254 nanometers at 100 hours and 80 degrees F (approximate).
② Some industries suggest lamp replacement every 6 months to meet specific compliance standards.

SPECIFICATIONS — Nutripure® Tank Vent (optional)

Tank Vent Model	Dimensions		
	Length	Width	Height
7-ATV	30-3/16”	15-1/16”	12-9/32”
8-ATV	40-3/16"	22-1/16”	18-9/32”
9-ATV	36.53”	39.95”	21.45”

Contact our UV Specialists to discuss applications.

OPTIONAL ACCESSORIES

SENTINEL® Germicidal UV Lamp Operation Indicator*

The **SENTINEL**® Remote Lamp Indicator monitors lamp operation of one, two, four or six lamp ultraviolet fixtures and is available with a 25, 50 or 100 foot cable.
(Available for ALL **Nutripure**® models. Must be ordered at the time of purchase on Model 2B-SC thru Model 6B-ASC. **SENTINEL**® output connector needs to be installed for easy plug-in and operation. For Models 7/8/9, just purchase the optional **SENTINEL**®.)

Integral Elapsed Time Indicator*

The Elapsed Time Indicator is a real-time, non-resettable display of accumulated operating time. Useful for scheduling and recording maintenance and lamp replacement.
(Available for ALL **Nutripure**® models at time of purchase)

Sanitary Adapter (shown with existing collar)

Available in 3" and 4" for models manufactured before January 2018. Contact factory for alternate inlet/outlet connections.

Sanitary Fitting

Available in 3" and 4" for **Nutripure**® models 2B-SC through 6B-ASC manufactured in or after January 2018. Contact factory for alternate inlet/outlet connections.

Promate™ Face Shield

Lightweight visor with adjustable headgear provides eye and face protection from germicidal ultraviolet rays.

Promate™ Safety Glasses

Safety eyewear should be used as general-purpose safety protection and for additional shielding from germicidal ultraviolet rays.

* Item must be ordered at same time as **Nutripure**® Sanitary Conditioner (installed at factory).

INDUSTRIES

- Liquid Sweeteners
- Corn Syrups
- Sucrose
- Glucose
- Fructose
- Honey
- Molasses
- Maple Syrup
- Liquid Sugar
- Edible Oil
- Liquid Starches
- Beverage
- Dairy
- Meat
- Bakery
- Frozen Foods
- Candy/Confectionery
- Chocolate
- Pharmaceutical
- Flavorings
- Ice Cream
- Snack Foods
- Cookies/Crackers
- Cereal Bars
- Jams/Jellies
- Bread/Rolls/Pastries
- Breweries
- Wineries
- Distillers/Liqueurs
- Fruit Juice
- Juice Concentrate
- Bottled Water
- Sports Drinks
- Soda
- Flavored Waters
- Bottled Tea/Coffee
- Canned Foods
- Prepared Foods
- Contract Packaging
- Condiments
- Vinegar
- Pickled Foods

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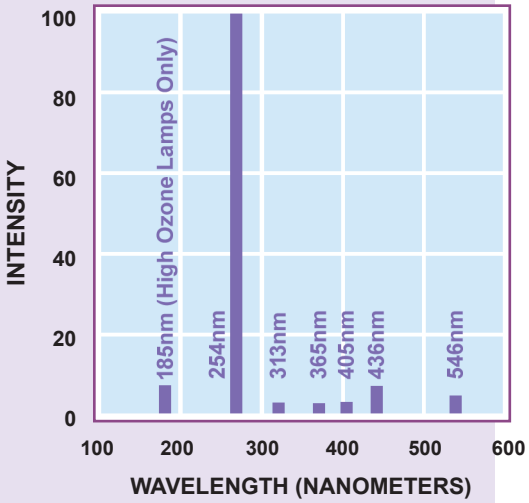
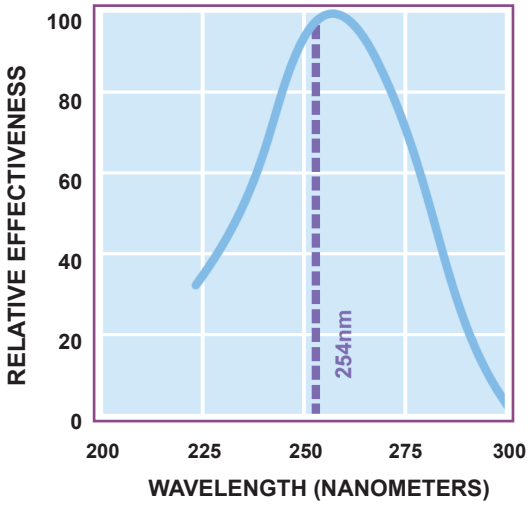
GENUINE *STER-L-RAY*® GERMICIDAL LAMPS

Relative Spectral Energy Distribution (Typical)



Germicidal Effectiveness As Related to Wavelength



STER-L-RAY® **Germicidal Lamps** are shortwave, low pressure tubes that produce ultraviolet wavelengths lethal to microorganisms.

STER-L-RAY® **High Output (HO) Germicidal Lamps** are similar in size and shape to conventional germicidal lamps but are capable of operating at higher input power and current. Approximately 95% of the ultraviolet energy emitted from ***STER-L-RAY***® germicidal lamps is at 254 nanometers, the region of germicidal effectiveness most destructive to bacteria, mold and virus.

STER-L-RAY® and the ***STER-L-RAY***® logo are trademarks of Atlantic Ultraviolet Corporation®

CAUTION: Exposure to direct or reflected germicidal ultraviolet rays will cause painful eye irritation and reddening of the skin. Personnel subject to such exposure must wear suitable face shield, gloves and protective clothing.

Hg - LAMP CONTAINS MERCURY, manage in accord with disposal laws, see: LampRecycle.org.

GERMICIDAL ULTRAVIOLET DOSAGE

Germicidal lamps provide effective protection against microorganisms. A small cross-section is shown below.

ORGANISM	ALTERNATE NAME	TYPE	DISEASE	DOSE*
Corynebacterium diphtheriae	*C. diphtheriae*	Bacterium	Diptheria	6.50
Legionella pneumophila	*L. pneumophila*	Bacterium	Legionnaire's Disease	12.30
Mycobacterium tuberculosis	*M. tuberculosis*	Bacterium	Tuberculosis (TB)	10.0
Pseudomonas aeruginosa	*P. aeruginosa*	Bacterium		3.90
Serratia marcescens	*S. marcescens*	Bacterium		6.160
Staphlylococcus aureus	*S. aureus*	Bacterium		6.60
Staphlylococcus epidermidis	*S. epidermidis*	Bacterium		5.80
Methicillin-resistant Staphylococcus aureus	*MRSA*	Bacterium		6.50
Clostridium difficile	*C. diff*	Spore	Colitis	16.0
Adenovirus Type 3		Virus		4.50
Coxsackie A2		Virus	Hand, Foot, and Mouth Disease, Conjunctivitis, Meningitis	6.30
Influenza		Virus	Flu	6.60
SARS-CoV-2		Virus	COVID-19	5.0

* Nominal Ultraviolet dosage (mJ/cm^2) necessary to inactivate better than 99% of specific microorganism. Consult factory for more complete listing.

The Standard of Excellence In Ultraviolet

Manufacturers / Engineers / Sales / Service – Germicidal Ultraviolet - Equipment & Lamps

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MADE IN THE USA
From U.S. & Imported Parts