

SANITRON™ ULTRAVIOLET WATER PURIFIERS

GERMICIDAL ULTRAVIOLET

- For over 35 years, Atlantic Ultraviolet Corporation has been a recognized leader in ultraviolet water disinfection technology. During this time, ultraviolet has become increasingly popular as an exceptional water disinfection alternative.
- **SANITRON™** Ultraviolet Purifiers utilize germicidal ultraviolet lamps that produce short wave radiation lethal to bacteria, viruses and other microorganisms present in water.
- Economical and safe, **SANITRON™** Ultraviolet Purifiers offer rapid water treatment without the use of heat or dangerous chemicals - often for the lowest cost available by any means.
- An ever-growing range of industries and consumer applications have found ultraviolet to be the ideal solution for their water treatment requirements.

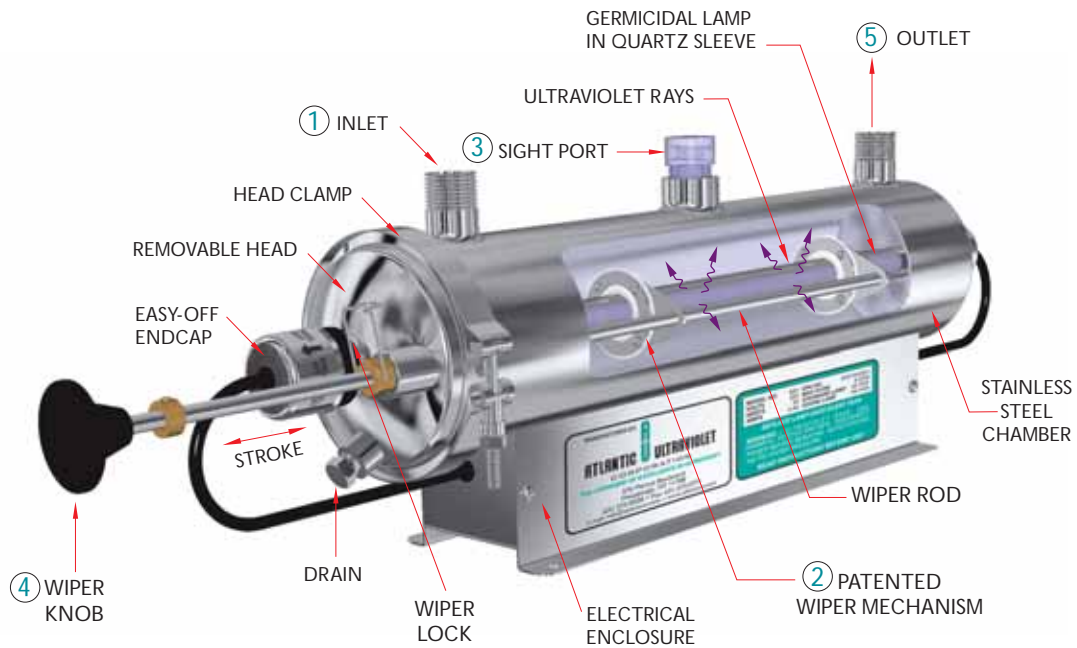
ADVANTAGES OF THE SANITRON™ SYSTEM

- **EFFECTIVE** - Virtually all microorganisms are susceptible to **SANITRON™** disinfection.
- **ECONOMICAL** - Hundreds of gallons can be purified for each penny operating cost.
- **SAFE** - No danger of overdosing, no addition of dangerous chemicals.
- **FAST** - Water is ready for use as soon as it leaves the purifier - no further contact time required.
- **EASY** - Simple installation and maintenance. Compact units require minimum space.
- **AUTOMATIC** - Continuous or intermittent disinfection without special attention or measurement.
- **NO CHEMICALS** - No chlorine taste or corrosion problems.
- **VERSATILE** - Capacities available from two to thousands of gallons per minute (g.p.m.).



Sanitron™ Water Purifiers are manufactured under patents owned by the
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PRINCIPLE OF OPERATION



- ① The water enters the purifier and flows into the annular space between the quartz sleeve and the outside chamber wall.
- ② The wiper segments induce turbulence in the flowing liquid to assure uniform exposure of suspended microorganisms to the lethal ultraviolet rays.
- ③ Translucent sight port provides positive indication of germicidal lamp operation.
- ④ The wiper assembly facilitates periodic cleaning of the quartz sleeve without any disassembly or interruption of purifier operation.
- ⑤ Water leaving the purifier is instantly ready for use.

INSTALLATION AND MAINTENANCE

The purifier is installed as close as possible to the point of use. Connection of the inlet and outlet to water supply and insertion of plug into 3-wire grounded outlet is all that is required.

Ordinary maintenance consists of cleaning the quartz sleeve with the manual wiper once monthly or more frequently where conditions dictate. Lamp replacement is recommended every 10,000 hours of operation (approximately 14 months of continuous service).



SANITRON™ ULTRAVIOLET WATER PURIFIERS

GERMICIDAL LAMP DATA

Technical Specifications

LAMP NUMBER	PURIFIER MODEL NO.	NOMINAL LAMP LENGTH	POWER ①	ULTRAVIOLET OUTPUT ②	RATED EFFECTIVE LIFE
05-1400	S14	8 ¹⁵ / ₁₆ " (227mm)	10 Watts	2.3 Watts	10,000 Hrs.
05-1098	S17	11 ⁷ / ₈ " (302mm)	14 Watts	3.7 Watts	10,000 Hrs.
05-1097	S23	17 ³ / ₄ " (451mm)	20 Watts	6.4 Watts	10,000 Hrs.
05-1343	S37B	33 ⁷ / ₈ " (860mm)	39 Watts	13.8 Watts	10,000 Hrs.
05-1334	S50B	45 ⁷ / ₈ " (1165mm)	50 Watts	19.3 Watts	10,000 Hrs.
05-1311 ^③	S2400C	46 ¹ / ₄ " (1175mm)	110 Watts	42 Watts	10,000 Hrs.

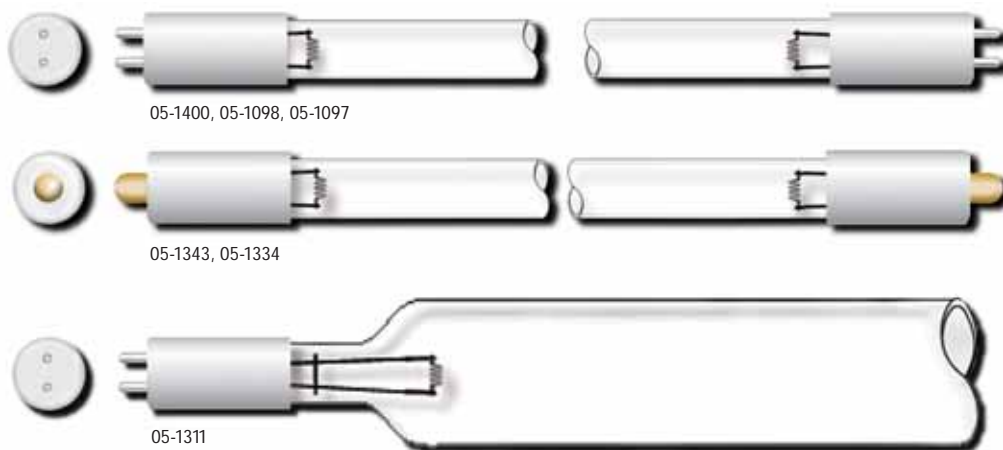
The lamps listed above have been especially developed and are recommended for use with SANITRON™ Water Purifiers.

- ① Wattage is lamp watts only and does not include ballast loss.
 ② Maximum rated output at 254 nanometers.
 ③ Patented by Atlantic Ultraviolet Corporation.

All **STER-L-RAY™** lamps used in SANITRON™ units are low pressure type which afford the maximum efficiency in producing the required germicidal rays. In addition to the obvious advantages of high efficiency and low power requirements, there is no possibility of the unit overheating (as is the case with some other lamp types). Consequently, the need for additional equipment to combat overheating is eliminated.

GENUINE **STER-L-RAY™** GERMICIDAL LAMPS

STER-L-RAY™ germicidal lamps are shortwave, low pressure mercury vapor discharge tubes that produce ultraviolet wavelengths lethal to microorganisms.



Call for our **STER-L-RAY™** Germicidal Lamp Catalog

STER-L-RAY™ germicidal lamps are manufactured by the Atlantic Ultraviolet Corporation.

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

CAUTION: Overexposure 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.

ULTRAVIOLET DOSAGE

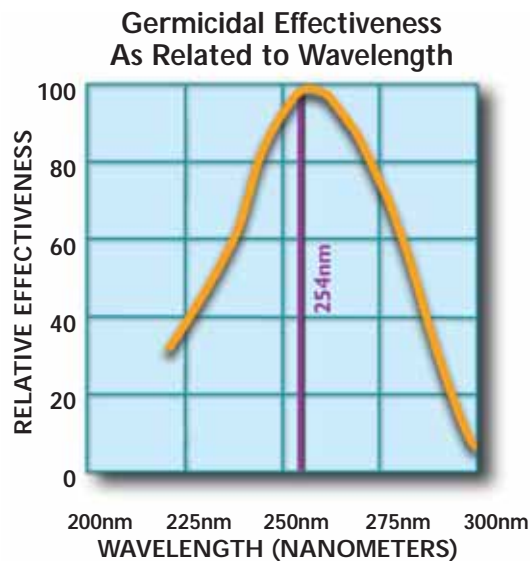
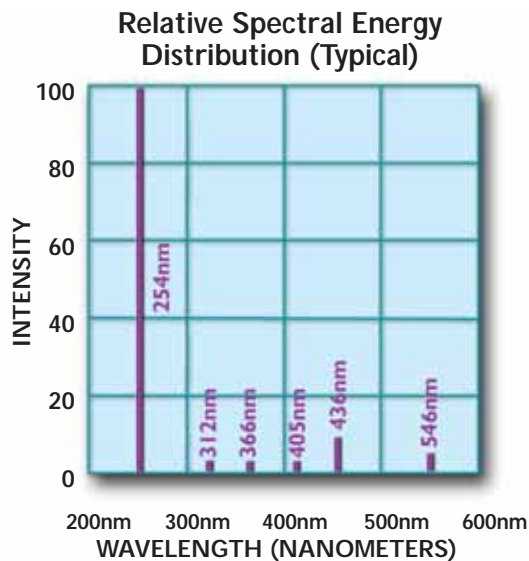
Germicidal lamps provide effective protection against microorganisms. A small cross-section is shown below.

ORGANISM	ALTERNATE NAME	TYPE	DISEASE	Dose*
<i>Bacillus subtilis</i> spores	<i>B. subtilis</i>	Bacteria	_____	22,000
Bacteriophage	Phage	Virus	_____	6,600
Coxsackie virus	_____	Virus	Intestinal infection	6,300
<i>Shigella</i> spores	_____	Bacteria	Bacterial Dysentery	4,200
<i>Escherichia coli</i>	<i>E. coli</i>	Bacteria	Food poisoning	6,600
Fecal coliform	_____	Bacteria	Intestinal infection	6,600
Hepatitis A virus	Infectious Hepatitis virus	Virus	Hepatitis of the liver	8,000
Influenza virus	Flu virus	Virus	Influenza	6,600
<i>Legionella pneumophila</i>	_____	Bacteria	Legionnaires' Disease	12,300
<i>Salmonella typhi</i>	_____	Bacteria	Typhoid Fever	7,000
<i>Staphylococcus aureus</i>	Staph	Bacteria	Food poisoning, Toxic Shock Syndrome, etc.	6,600
<i>Streptococcus</i> spores	Strep	Bacteria	Strep throat	3,800

When used as directed to disinfect clear water, **SANITRON™** Water Purifiers provide an ultraviolet dosage in excess of 30,000 microwatt seconds per square centimeter ($\mu\text{WSec}/\text{cm}^2$).

*Nominal Ultraviolet dosage ($\mu\text{WSec}/\text{cm}^2$) necessary to inactivate better than 99% of specific microorganism. Consult factory for more complete listing.

OPERATING CHARACTERISTICS



Approximately 95% of the ultraviolet energy emitted from **STER-L-RAY™** germicidal lamps is at the mercury resonance line of 254 nanometers, the region of germicidal effectiveness most destructive to bacteria, mold and virus.

SANITRON™ ULTRAVIOLET WATER PURIFIERS

SPECIFICATIONS FOR STANDARD MODELS

MODEL	G.P.M.	G.P.H.	INLET and OUTLET SIZE ^⑥	REPLACEMENT LAMP(S)	POWER CONSUMPTION ^⑦	UNIT DIMENSIONS (INCHES)			SHIPPING DATA	
						Length	Width	Height	Gross Wt. (Lbs.)	Net Wt. (Lbs.)
S14 / S14A	2	120	1/2" NPT	051400	14 Watts	16 ³ / ₈	5 ⁷ / ₁₆	8 ³ / ₁₆	11	7
S17 / S17A	3	180	3/4" NPT	051098	18 Watts	19 ³ / ₈	5 ⁷ / ₁₆	8 ³ / ₁₆	11	8
S23 / S23A	6	360	3/4" NPT	051097	24 Watts	25 ³ / ₈	5 ⁷ / ₁₆	8 ³ / ₁₆	14	11
S37C	12	720	1" NPT	051343	44 Watts	39 ³ / ₈	5 ⁷ / ₁₆	9 ¹ / ₂	30	20
S50C	20	1,200	1 ¹ / ₂ " NPT	051334	54 Watts	52 ³ / ₈	5 ⁷ / ₁₆	9 ¹ / ₂	36	29
S2400C	40	2,400	2" NPT	051311	140 Watts	52	6 ⁵ / ₈	11 ¹ / ₂	49	36
S5,000C ^①	83	5,000	2" NPT	051311 (2 Lamps)	280 Watts	52	17 ¹ / ₄	15	116	85
S10,000C ^②	166	10,000	2" NPT	051311 (4 Lamps)	560 Watts	52	21	34 ³ / ₄	267	188
S15,000C ^③	250	15,000	2" NPT	051311 (6 Lamps)	840 Watts	52	21	53 ⁷ / ₆₄	400	263
S20,000C ^④	333	20,000	2" NPT	051311 (8 Lamps)	1120 Watts	52	21	71 ⁴⁹ / ₆₄	534	396
S25,000C ^⑤	416	25,000	2" NPT	051311 (10 Lamps)	1400 Watts	52	21	90 ⁷ / ₆₄	670	520

① Two S2400C's connected in series, 1 inlet and 1 outlet.

② Two S5,000C's connected in parallel, 2 inlets and 2 outlets.

③ Three S5,000C's connected in parallel, 3 inlets and 3 outlets.

④ Four S5,000C's connected in parallel, 4 inlets and 4 outlets.

⑤ Five S5,000C's connected in parallel, 5 inlets and 5 outlets.

⑥ All inlets and outlets are male pipe threads.

⑦ Total power consumption including ballast loss.

• Maximum recommended operating pressure for all purifiers is 100 p.s.i.

• Pressure drop at maximum recommended flow rate is less than 5 p.s.i.

• 120 Volt 60 Hz and 220 Volt 50 Hz units are standard.

• 12 and 24 Volt DC units also available.

• Sanitron™ is available for operation on public power supplied through out the world.

• Consult factory with specific power requirements.

COMMERCIAL & INDUSTRIAL SYSTEMS

SANITRON™ systems of 5,000 g.p.h. and higher utilize interchangeable single lamp chambers.

This modular configuration offers advantages found only in SANITRON™ high-capacity systems.



Model S10,000C
(10,000 g.p.h.)

• Flexibility

System components are readily reconfigured to meet changing flow and process requirements.

• Independent Monitoring

Single lamp chamber design enables separate output monitoring of each ultraviolet lamp.

• Standby Capacity

Reserve chambers permit shutdown or replacement of individual components without interruption of service.

• Special Options

Protective Coating - for seawater & corrosive environments.

Sanitary & Custom Fittings - for system compatibility.

Special Configurations - for TOC and ozone reduction.



Model S15,000C
(15,000 g.p.h.)

Consult factory for more information or with custom requirements.

SPECIAL FEATURES OF SANITRON™ WATER PURIFIERS

STAINLESS STEEL CONSTRUCTION

Chamber, head and clamp are electropolished and passivated stainless steel for an attractive finish and dependable service.

QUICK LAMP CHANGE

Exclusive Easy-Off Retainer Cap™ enables effortless lamp replacement without shut down of water pressure or drainage of tank. No tools required.

PATENTED DUAL ACTION WIPER MECHANISM

Facilitates periodic cleaning of quartz sleeve without interruption of purifier operation. No disassembly required. Complies with U.S. Public Health Guidelines.

DRAIN PLUG

Convenient, in-place drainage of purifier chamber.

WIPER LOCK

Locks wiper mechanism in retracted position.

REMOVABLE FLANGED HEAD

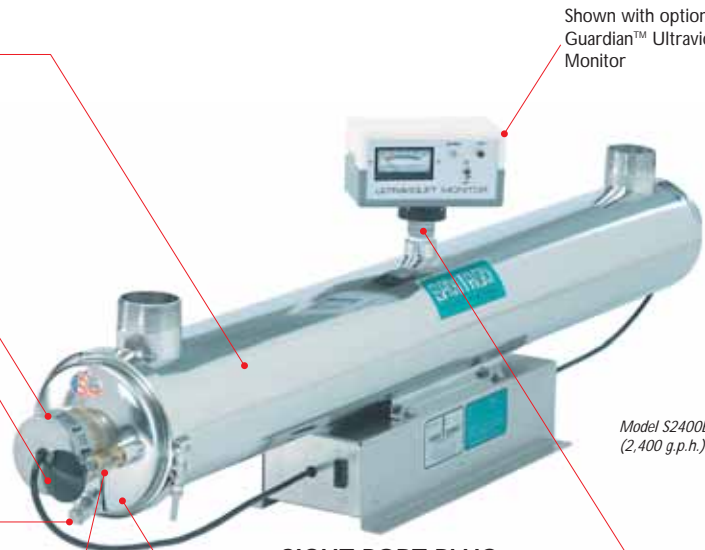
Units disassemble completely and easily in the event that repairs are necessary. No special tools or fixtures required.

SIGHT PORT PLUG

Visible glow provides positive indication of germicidal lamp operation. (Unit shown with optional Guardian™ Ultraviolet Monitor in sight port).

FUSED QUARTZ SLEEVE

Insures optimum lamp output at normal potable water temperatures. (See interior detail page 3).



Shown with optional Guardian™ Ultraviolet Monitor

Model S2400B
(2,400 g.p.h.)

OPTIONAL ACCESSORIES

Monitoring Options (Select Guardian™ or Sentry™)



* **Guardian™ Ultraviolet Monitor**
Analog meter indication of germicidal lamp energy within the disinfection chamber. Controls Solenoid Valve and Audio Alarm.



* **Sentry™ Safety Sensor**
Basic monitoring of electrical operation. Indicates alarm condition and operates Solenoid Valve and Audio Alarm.

* Audio Alarm

Activated by the Guardian™ or Sentry™ alerts user to any malfunction detected.



* Solenoid Valves

Operates with the Guardian™ or Sentry™ and prevents flow during detected malfunctions. Available in nylon or brass.



* Flow Control Valves

Limits water flow to rated capacities. Available in brass, PVC and stainless steel.



Elapsed Time Indicator

Real-time, non-resettable display of accumulated operating hours.



* Time Delay Mechanism

Provides a 2-minute warm-up period for lamp to achieve full germicidal output.



Wall Mounting Kit

Stainless steel, quick, easy and professional finish. Pre-drilled and ready to assemble. Optimizes free air circulation to cool ballast housing.



* Use of this option is recommended by U.S. Public Health Service "Criteria for Acceptability of an Ultraviolet Disinfection Unit." Originally issued April, 1966.

These options may be obtained at purchase time or added at a later date. For further details, refer to Atlantic Ultraviolet's *Optional Accessories* sheet, Document Number 98-1057 or visit our website at www.ultraviolet.com.