



An EVERGREEN UV Company

**Maintenance • Service • Safety
Recommendations For Lumalier UVGI Air &
Surface Disinfector
FA SERIES**



ENVIRONMENTAL DISINFECTION SINCE 1963
1931 Thomas Rd. Memphis, TN 38134
901-800-1709 email@evergreenUV.com
EPA ESTABLISHMENT NO. 91347-TN-001

Maintenance

Scheduled Maintenance Procedures

Quarterly – Visually inspect lamps wearing safety glasses to ensure all lamps are operational.

Semi-Annually – If the lamps show visual dust accumulation, they should be cleaned.

To clean lamps:

- De-energize by switching the toggle switch to the “off” position.
- Remove the front metal cover.
- Using soft cotton gloves, carefully remove the lamps from the UV unit.
- Using a soft cotton cloth, with isopropyl alcohol, wipe the lamps and allow to dry.
- Replace the lamps.
- Reinstall the front metal cover.
- Inspect the lamps wearing safety glasses to insure all lamps are energized.

Annually – Replace the lamps.

To replace lamps:

- De-energize by switching the toggle switch to the “off” position.
- Remove the front metal cover.
- Remove the used lamps from the UV unit.
- Wearing soft cotton gloves and using a soft cotton cloth, with isopropyl alcohol, wipe the new lamps and allow to dry.
- Install the new lamps.
- Inspect the lamps wearing safety glasses to ensure all lamps are energized.

Service

LUMALIER/EvergreenUV replacement parts and lamps can be purchased from factory, for information call 901-800-1709.

What is UVGI?

UV-C, also known as “germicidal ultraviolet”, has a **specific wavelength of 253.7nanometers (253.7 billionths of a meter)** and is known to deactivate molds, spores and germs contained in tiny airborne droplet nuclei that transmit diseases such as measles, tuberculosis, and influenza from person to person. With significant penetrating ability, UV-C can penetrate the cell wall of a microorganism and destroy it but it cannot penetrate the outer layer of human skin or the cornea of the eye. Although overexposure may lead to a temporary, minor eye irritation or skin reddening it does not cause serious or long-term health effects.

Safety

Personal Protective Equipment



Employees must wear personal protective equipment whenever UV radiation measurements are being made close to the lamp source in order to document lamp output, or when maintenance procedures must be performed in areas where UVGI systems are activated. Personal Protection Equipment includes:

- Safety glasses with side shields
- Head, neck and face covering opaque to UV radiation
- Soft cotton gloves
- Long-sleeved, tightly woven fabrics with SPF 15 or greater

Reporting UV Exposure

Should any eye or skin irritation that develops after acute exposure to UV radiation one should contact their supervisor or physician.



FA SERIES PARTS LIST				
	Manufacturer	Part No.	Description	
Ballast	Advance	IUV-2S36-M2-LD	Multi voltage 120 thru 277	CE for 230V; CSA NRTC/C; UL listed 704G
Sockets	Edwin Gaynor	286SC	75W/600V	CSA / UL
Wire	TEWN	18 ga.	Black, white, green, red, blue, yellow	CSA CL1251; AWM3173; 
Lamps	Philips	PL-L 36W, 60W, 95W TUV		UL; CSA
Squeeze Connectors	3M	L501	Drop-down	CSA 





Philips Lighting Company

MATERIAL SAFETY DATA SHEET

PRODUCT: 36W, 60W TUV Germicidal lamp **Page 1 of 3**

SECTION 1: MANUFACTURER

Manufacturer's Name and Address: Philips Lighting Company
A Division of Philips Electronics
North America Corporation
200 Franklin Square Drive
P.O. Box 6800
Somerset, NJ 08875

Emergency Telephone Number: (800) 424-9300 CHEMTREC
(732) 563-3197 Safety and Compliance

Other Information Calls: (732) 563-3691

SECTION 2: HAZARDOUS INGREDIENTS

	OSHA PEL	ACGIH	WT. PERCENTAGE
Mercury (7439-97-6)	.05 mg/m3	.05 mg/m3	Approx. .1%
Glass (inert)	N/A	N/A	Approx. 99%

Mercury is inside the lamp, breakage may result in exposure.

SECTION 3: PHYSICAL CHEMICAL CHARACTERISTICS

This item is a glass light bulb. The mercury is inside the bulb, chemical characteristics of the bulb are not applicable. This bulb can crack if hit with a heavy object.

SECTION 4: FIRE AND EXPLOSION DATA

Glass is not a combustible, melting point is over 900oF. Fire and explosion data are not applicable. Under extreme heat, this bulb might crack or melt.

SECTION 5: REACTIVITY DATA

Stability: Lamp is stable Incompatibility: Glass can be attacked by hydrofluoric acid
Polymerization: Not Applicable



A division of
Philips Electronics North America Corporation

200 Franklin Square Drive
P.O. Box 6800
Somerset, NJ 08875-6800
Tel: 732.563.3000

SECTION 6: HEALTH EFFECTS

DANGER: These lamps emit ULTRAVIOLET RADIATION (UVC). Avoid exposure. Ultraviolet radiation is harmful to the skin and the eyes and can cause serious skin burns and eye injury either from direct or reflected radiation. To reduce the risk of personal injury, install only in a fixture which provides adequate protection to area occupants. Should not be used for illumination purposes.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

Consult the fixture manufacturer regarding the suitability of the fixture for this lamp. Operate with proper auxiliary equipment. Turn off lamps before installing, replacing, cleaning or performing any maintenance work near fixtures.

Handle lamps carefully to avoid breakage. Broken glass can cause cuts.

Waste Disposal Method: At the end of rated life, when this lamp is removed from service, it will be subjected to the current Toxic Characteristic Leaching Procedure (TCLP) prescribed by the Environmental Protection Agency. This test is used to determine whether an item is a hazardous waste or a non-hazardous waste under current E. P. A. definition. These lamps would fail the TCLP test and would be considered hazardous under the Universal Waste Rules. Generators should evaluate all of the disposal options, which may be available in the particular state in which the generator's facility is located. The generator should check with federal, state and local officials for their guidance. Philips encourages recycling of its products by qualified recyclers.

SECTION 8: CONTROL MEASURES

Do not operate under these lamps without personal protective equipment. (Goggles, glove, skin protection)

Respiratory protection: If large numbers of these lamps are being broken appropriate respirator should be considered, note grinding of lamps on site may require a permit from state or federal authorities. We recommend recycling as the preferable disposal option.

Ventilation: avoid inhalation of airborne dust

Hand and eye protection should be worn when handling broken glass.

SECTION 9: REGULATORY INFORMATION

As a product these mercury containing lamps being shipped in the manufacturer's original packaging are not regulated by air, truck or ocean shipment. As a waste, these spent fluorescent lamps would be regulated in various states and local communities. This material safety data sheet does not constitute "knowledge of the waste", in certain jurisdictions.

PHILIPS



1931 Thomas Road ~ Memphis, TN 38134 ~ 901-800-1709 ~ www.EvergreenUV.com

Product Limited Warranty

SCOPE of WARRANTY:

Evergreen UV LLC manufactures all Evergreen UVC Air and Surface Disinfection Products in our Memphis, Tennessee, USA, factory. Evergreen UV LLC warrants that all Evergreen products (the "Product") will be free from defects in materials and workmanship during the **Applicable Warranty Periods of five years from the Date of Professional Installation**. If the Product fails in normal use and service within the Stated Warranty Period due to a defective part, Evergreen UV will, at its option, repair or replace the defective part. The replacement part will be warranted for only the unexpired portion of the original Applicable Warranty Period. If a part of the Product fails and an exact replacement is not available, Evergreen UV reserves the right to provide a substitute of equal or greater value, or provide a credit in the amount of the original cost of the defective part towards the purchase of a new Evergreen product similar in function and features to your Product. **Replacement parts are NOT pro-rated**, meaning that any part or component that fails during the warranty period will **be replaced or credited** (if replacement is no longer available) **at original purchase cost**.

EFFECTIVE DATE of LIMITED WARRANTY COVERAGE:

The Effective Warranty Date is the date of the Product's first installation, if properly documented; otherwise it is the date of purchase plus one (1) month.

APPLICABLE WARRANTY PERIODS for VARIOUS PARTS:

UV Fixture: Product parts and components are warranted for an Applicable Warranty Period of Five (5) years after the Effective Date.

UV Lamps: UV lamps are warranted for an Applicable Warranty Period of two (2) years after the Effective Date.

Fans: Fans used in certain UV fixtures are warranted for an Applicable Warranty Period of one (1) year after the Effective Date.

STANDARD PROVISIONS and CONDITIONS:

EXCLUSIONS – THIS LIMITED WARRANTY WILL NOT APPLY:

- (a) To damages, malfunctions or failures resulting from failure to properly install, operate or maintain the Product in accordance with the manufacturer's instructions;
- (b) To damages, malfunctions or failures resulting from abuse, accident, fire, flood and the like;
- (c) To parts used in connection with normal maintenance, such as cleaning or replacing air filters;
- (d) To Products that are not installed in accordance with applicable local codes, ordinances, facility requirements, and good trade practices;
- (e) To damages, malfunctions or failures caused by the use of any attachment, accessory or component, or to any modifications not authorized by the manufacturer;
- (f) To damages, malfunctions, or failures caused by misuse, accident, contaminated or corrosive atmosphere, vandalism, freight damages, fire, flood, freeze, lightening, acts of war, acts of God and the like.

SHIPPING COSTS:

This Limited Warranty does NOT cover shipping costs. You, or your installing contractor, will be responsible for the cost of shipping warranty replacement parts from our factory to the location of your product. You also are responsible for any shipping cost of returning the failed part to Evergreen UV, and for incidental costs incurred locally, including handling charges.

LABOR COSTS:

This Limited Warranty does NOT cover any labor expenses for service, or for removing or reinstalling Products. All such expenses are your responsibility, unless a labor service agreement exists between you and your installing contractor.

HOW TO OBTAIN WARRANTY CLAIMS ASSISTANCE:

You must promptly report any failure covered by this Limited Warranty to the installing contractor. Normally, the installing contractor from whom the unit was purchased will be able to take the necessary corrective action by obtaining any replacement parts. If the contractor is not available, please contact any other local contractor handling Evergreen products. If necessary, the following office can advise you of the nearest distributor:

1931 Thomas Road, Memphis, TN 38134, 901-800-1709

REPLACEMENTS ARE MADE SUBJECT TO VALIDATION BY EVERGREEN UV OF WARRANTY COVERAGE. Any part to be replaced must be made available in exchange for the replacement.

EXCLUSIVE WARRANTY – LIMITATION OF LIABILITY:

This Limited Warranty is the ONLY warranty for the Product given by Evergreen UV LLC. No one is authorized to make any warranties on behalf of Evergreen UV LLC. ANY IMPLIED WARRANTIES, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE APPLICABLE WARRANTY PERIODS SPECIFIED ABOVE. EVERGREEN UV LLC'S SOLE LIABILITY WITH RESPECT TO DEFECTIVE PARTS OR FAILURES SHALL BE AS SET FORTH IN THIS LIMITED WARRANTY, AND ANY CLAIMS FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARE EXPRESSLY EXCLUDED. Some states do not allow limitations on how long an implied warranty lasts, or for the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**Evergreen UV LLC
1931 Thomas Road
Memphis, TN 38134**

In the spirit of continuous improvement, we reserve the right to make changes without notice.