



OPERATING MANUAL

Handheld UV Lamps



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1.0 General Information

1.1 Introduction

Thank you for choosing Ultra-Lum, Inc. for your Instrument needs. We strive to build quality into each and every product we manufacture. We all hope that the product purchased meets and exceeds your goals and expectations. Please feel free to contact us with any questions as our knowledgeable sales and customer support staff are ready and willing to work with you. Please refer to the following contact information:

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Handheld lamps by Ultra-Lum are powerful Ultraviolet sources. A wide range of models in variety of UV wavelengths (UVA, UVB, UVC) and wattage's (4, 6, and 8 Watt) are available. Each Handheld lamp is manufactured with a silver- anodized, durable and attractive aluminum housing. It's narrow profile fits comfortably in the hand. The strap handle allows easy carrying and facilitates the use of each lamp. In each Handheld lamp a specular aluminum reflector is used to optimize the Ultraviolet Intensity produced. Properly placed for finger tip control, the on/off switch is located at one end of the Handheld lamp assembly. Standard with all Ultra-Lum (UVB and UVC) Handheld lamps is the extended UV transmitting filter glass, assuring UV Intensity for thousands of hours of operation. The Handheld lamps are available in three UV wavelengths (254nm (UVC), 300nm (UVB), and 365nm (UVA). Dual wave Handheld lamps are also available. Flex mount stands are also available to allow mounting of the Handheld lamp for bench top use. These stands will allow the lamp to be positioned in any desired angle or direction. For proper selection contact your Ultra-Lum distributor or Ultra-Lum direct. This product is intended for indoor use only.

Unpacking and inspection

- 1.1.1 Opening the shipping container.
 - 1.1.1.1 Using a utility knife or equivalent cut through the packing tape that secures the flaps together.
- 1.1.2 Carefully remove the Handheld lamp from the container and place the container aside.
 - 1.1.2.1 We suggest saving the container for later device storage, moving from one lab to another, or returning the unit for service if required.
- 1.1.3 Inspect the unit for damage.
 - 1.1.3.1 Broken lamps.
 - 1.1.3.2 Dented or damaged enclosure.
 - 1.1.3.3 Fractured or cracked filter glass.
 - 1.1.3.4 Anything else that may be considered unacceptable.
- 1.1.4 Ensure that all of the items purchased are included with the shipment. Listed here are the standard items that ship with each unit.
 - 1.1.4.1 This operation manual..... 81-0005-23
- 1.1.5 If any items are missing or damaged please contact customer service so that the apparent problems may be addressed.

1.2 Warranty

Ultra-Lum, Inc. products are guaranteed to be free of defects in materials, workmanship, and manufacture for a period of two (2) years from the date purchased. Consumable and disposable products including but not limited to Ultraviolet lamps are guaranteed to be free from defects in materials and manufacture for a period of ninety (90) days from the date purchased. If a product failure should occur during the warranty periods listed above Ultra-Lum, Inc. will examine the inoperative product and have the option of repairing or replacing any parts which in the judgment of Ultra-Lum, Inc. were originally defective or became so under conditions of normal usage and service.

No warranty shall apply to any product or part thereof that has been subjected to accident, negligence, alteration, abuse, or misuse by the end-user. However, Ultra-Lum, Inc. makes no warranties, whatsoever, with respect to parts not supplied by Ultra-Lum Inc. or that have been installed, used or serviced, other than in strict compliance with the instructions appearing in the operating manual supplied by Ultra-Lum, Inc.

In no event shall Ultra-Lum, Inc. be responsible to the end user for any incidental or consequential damages, whether foreseeable or not, including but not limited to property damage, inability to use equipment, lost business, lost profits, or inconvenience arising out of or connected with the use of products supplied by Ultra-Lum, Inc., nor is Ultra-Lum, Inc. liable for or responsible for any personal injuries occurring as a result of the use, installation, or servicing of products.

2.0 Specifications

2.1 Safety Precautions

2.1.1 **CAUTION:** Dangerous Ultraviolet Radiation



- 2.1.1.1 Ultraviolet transilluminators are a powerful source of dangerous ultraviolet radiation. It is **VERY IMPORTANT** to protect your eyes and skin from exposure.
- 2.1.1.2 The **UV blocking shield** blocks some of the dangerous ultraviolet radiation from exiting the UV transilluminator, but under no circumstances should the unprotected eyes or skin be exposed to the radiation. Ultra-Lum UV blocking covers, UV blocking shields, UV blocking glasses, UV blocking goggles, and UV blocking full face shields are available which when used in conjunction with long sleeve shirts or lab coats and gloves should provide adequate protection and allow safe handling of ultraviolet products without adverse effects. Ensure that all personnel in the area who are using or observing this equipment are adequately protected.
- 2.1.1.3 **DO NOT** attempt to use an ultraviolet transilluminator without the UV blocking shield, as this will cause undesired exposure to dangerous Ultraviolet radiation.
- 2.1.1.4 Refer to accessories section 2.6 for recommended ultra-violet safety equipment.

2.1.2 **CAUTION:** Electrical Exposure



- 2.1.2.1 Do not attempt to operate the transilluminator with the filter enclosure cover removed as this will expose the user to the **HIGH VOLTAGE** lamp power supply output circuitry as well as the **HIGH VOLTAGE** AC main's circuitry.
- 2.1.2.2 When lamp replacement is required, ensure that the AC mains line cord is **NOT** plugged into the AC wall receptacle. If the AC line cord is plugged in, there may be **DANGEROUS HIGH VOLTAGE** present at the lamp connectors.
- 2.1.2.3 Never operate the system in or near water, or environments with high levels of moisture in the air.

2.1.3 **CAUTION:** Read Manual



- 2.1.3.1 Refer to the manual before operating this device.

2.1.4 **CAUTION:** Lamps contain Mercury



- 2.1.4.1 Dispose according to Local, State, or Federal Laws

2.2 Safety Features

2.2.1 AC Mains Switch

- 2.2.1.1 The AC Mains power switch can be used at any time to turn off and shut down the transilluminator.

2.3 Electrical Ratings

- 2.3.1 Single Input AC Line Voltage 100VAC, 115VAC, or 230VAC (see ratings label)
- 2.3.2 AC Line Frequency 50/60Hz
- 2.3.3 AC Line fuse..... 1A 250 VAC Time Delay

2.4 Mechanical

2.4.1 4 - Watt Handheld lamps

- 2.4.1.1 Exterior Dimensions 7in x 2.75in x 3in
- 2.4.1.2 Weight 1lbs.
- 2.4.1.3 Filter Size

2.4.2 6 - Watt Handheld lamps

- 2.4.1.4 Exterior Dimensions 10in x 2.75in x 3in
- 2.4.1.5 Weight 2 lbs.
- 2.4.1.6 Filter Size

2.4.3 8 - Watt Handheld lamps

- 2.4.1.7 Exterior Dimensions 13.25in x 2.75in x 3in
- 2.4.1.8 Weight 2.5 lbs. (3.6 Kg)
- 2.4.1.9 Filter Size

2.4 Environmental Conditions for Instrument Operation

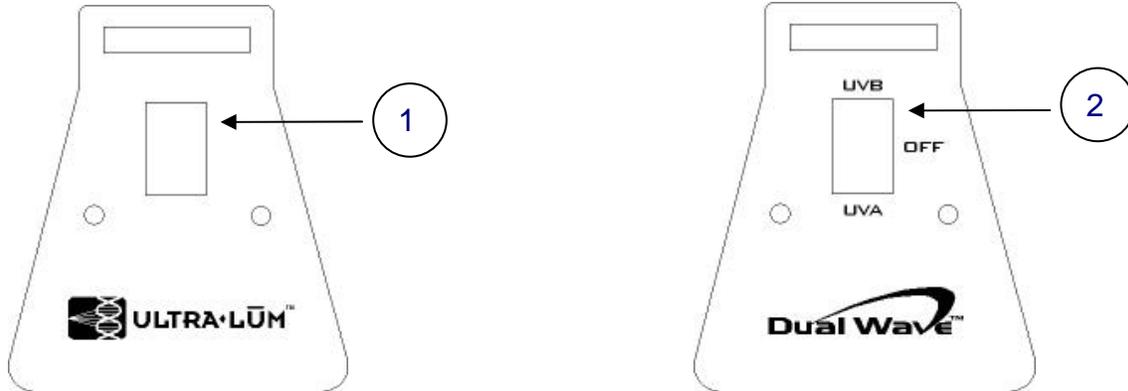
- 2.4.1 Relative Humidity..... 5-95%
- 2.4.2 Temperature..... 10-40 Degree's C
- 2.4.3 Installation category.....II
- 2.4.4 Pollution Degree..... 2

2.5 Accessories and Parts

- 2.5.1 Ultra-100 UV blocking spectacles..... 990-0501-01
- 2.5.2 Ultra-200 UV blocking goggles 990-0502-01
- 2.5.3 Ultra-300 UV blocking face shield 990-0503-01

2.6 Handheld Lamp Controls Defined

1. AC Mains power switch.
2. AC main power switch and Lamp selector for Dual Wave devices



3.0 Operating Instructions

3.1 Operating the Handheld Ultraviolet Lamps

- 3.1.1 This device is provided with an adjustable strap to allow the user to hold on to the lamp.
- 3.1.2 The Handheld Lamps have been designed to operate using one of the following Voltages: 100 VAC, 115 VAC, or 230 VAC line from 47 to 63 Hz. Refer to the Ratings label located near to the AC line cord entry point.
- 3.1.3 Plug the Handheld lamp into the appropriate AC line power receptacle.
- 3.1.4 Ensure that both the product user and any personnel in the area are adequately protected from ultraviolet radiation. See the Safety Precautions section 2.1 of this manual for further information.
- 3.1.5 Turn on the Handheld lamps AC main power switch. The switch will illuminate green and the UV lamps should light. There is a warm up period of approximately 5 minutes for the UV lamps to reach maximum intensity. The Handheld lamp is now ready for use.

4.0 Care and Maintenance

4.1 Cleaning Recommendations

- 4.1.1 Clean all exterior surfaces using a mild non-abrasive cleaner such as glass cleaner with soft paper towels.

4.2 Lamp replacement

- 4.2.1 Replacing the lamp(s) requires (1) end panel removal.
 - 4.2.1.1 Unplug the AC line cord from the wall receptacle.
 - 4.2.1.2 Remove the filter glass by unscrewing the (2) screws located on either side of the unit.
 - 4.2.1.3 Carefully slide the filter glass out of the silver housing. Be careful not to scratch the glass filter or place it on a surface that could cause it to fracture or crack.
 - 4.2.1.4 The lamps need to be rotated in the socket to remove and replace. To remove rotate lamp until the lamps pin entry slot on the lamp socket is vertical. Then lift upward to remove.
 - 4.2.1.5 When installing the lamps reverse the steps noted above.
 - 4.2.1.6 Turn ON the AC Main switch.
 - 4.2.1.7 Check to see if all of the lamps have lit.

5.0 Service

5.1 Trouble shooting

- 5.1.1 **Problem:** Unit does not operate.
 - 5.1.1.1 Ensure device is plugged in and has power.
 - 5.1.1.2 Ensure that the lamp(s) are properly seated, both pins on each side of the lamp should make contact with the metal contact in each connector.
 - 5.1.1.3 Replace the lamp. The lamp may have an open filament (there is one in each end) or the vacuum may be gone in the lamps glass envelope.
 - 5.1.1.4 Contact customer Service for replacement parts.

5.2 Customer Service

5.3.1 Contact Information

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For software technical support, contact the software manufacturer.