
OPERATOR'S MANUAL

SPECTROLINE[®] E-Series Ultraviolet Hand Lamps



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DANGER — Ultraviolet radiation emitted from this product. Avoid exposure. ALWAYS WEAR PROTECTIVE CLOTHING. EXPOSURE MAY CAUSE PREMATURE AGING OF THE SKIN AND CANCER. ALWAYS WEAR PROTECTIVE EYEWEAR; FAILURE TO DO SO MAY RESULT IN SEVERE BURNS OR LONG TERM INJURY TO EYE. Never look directly into the lamp. Exposure can cause eye and skin allergy and allergic reactions. Medications or cosmetics may increase your sensitivity to ultraviolet radiation. Consult physician before operating this product if you are using medications or have a history of skin problems or believe yourself especially sensitive to sunlight.

For Laboratory Use Only



WARNING

Please read the instructions for this lamp carefully before using it. Never use this lamp in any manner not specified in these instructions or not intended for products of its type. Do not use if a tube, cord or plug is not fully serviceable. We recommend using Spectroline UV-absorbing protective eye and face wear (i.e., UVS-30 spectacles, UVG-50 goggles or UVF-80 face shield.

OPERATION

1. Connect the plug to a power outlet that complies with the electrical requirements specified on the lamp's label. The E-Series lamps are available in 120V/60Hz, 230V/50Hz or 100V/50-60Hz versions.
2. The power supply cord is the disconnect for this unit.
3. To turn on the 120V and 100V models, *press and hold* the dimple on the rocker switch(es) for approximately *5 seconds* to power the tube(s). To power the 230V *F* and *FB* models, press the rocker switch to the ON (I) position. The 230V models designed to produce two wavelengths have a 3-position power switch. The tube(s) should become energized and emit a steady light. The light may initially flicker, especially if the lamp is cold, but should stabilize after a few seconds.
4. To turn off the 120V and 100V models, *press down on the opposite side of the switch*. Press the rocker switch to the OFF (O) position on the 230V models.

NOTE: For even greater comfort and convenience, *all* E-Series hand lamps are now equipped with a carrying handle. Or for *hands-free* operation, the SE-140 lamp stand is available. Any E-Series lamp may be slipped easily into and out of this stand. To increase fluorescent contrast, all 4-, 5-, and 6-watt E-Series lamps may be used with Spectroline CM-Series UV viewing cabinets.

OPERATOR SERVICING

The following servicing instructions are intended for limited maintenance of the lamp. **Do not perform any servicing other than that contained in these instructions.** Return the lamp to the factory for maintenance not covered in this section.



To avoid the risk of electrical shock, always unplug the lamp from its power source before cleaning or servicing.

HOUSING AND FILTER MAINTENANCE

The aluminum lamp housing is designed for protection of the internal parts. Using a soft cloth, immediately clean spills from the housing with water and a mild detergent and wipe dry. **Take care not to allow any liquids to leak into electrical components.** Periodically clean the filter with a glass cleaner and a soft cloth.

TUBE AND REFLECTOR MAINTENANCE

To clean the tubes and/or reflectors, remove the tubes according to the instructions outlined in the "TUBE REPLACEMENT" section below. Using a soft cloth, the reflectors may be cleaned with a glass cleaner, while the tubes may be cleaned with a mild detergent solution. Wipe dry with a soft cloth.

TUBE REPLACEMENT

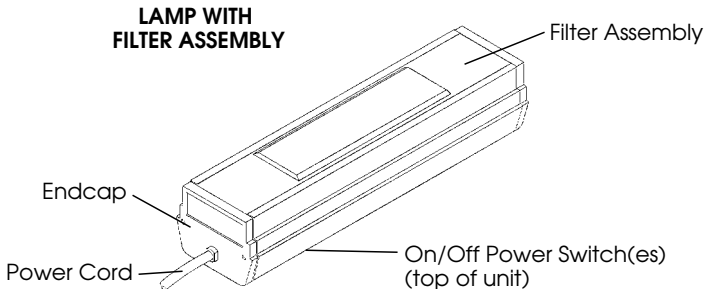
If a tube fails to operate correctly, review the procedures outlined in the "OPERATION" section. If the problem persists and it is found necessary to replace a tube, unplug the lamp from its power source before proceeding.

1. Lay the lamp housing on a flat, level surface.
2. Remove the 2 screws that secure the endcap opposite the power cordset. For lamps without a filter, proceed to Step #4.
3. Slide the filter assembly off the lamp housing's open end, and set aside.
4. Grasp the tube by the metal bases located at each end. Applying even pressure, gently rotate the tube a quarter of a turn until it loosens. The tube may now be easily removed from its sockets.
5. Install the new tube by reversing the above procedure.
6. Where applicable, replace the filter assembly by reversing the procedure in Step #3.
7. Replace the endcap removed in Step #2 and test the function of the new tube.
8. If installation of the new tube fails to yield correct lamp operation, check to make sure the two pins at each end of the tube are properly connected with the two copper contacts in each socket.

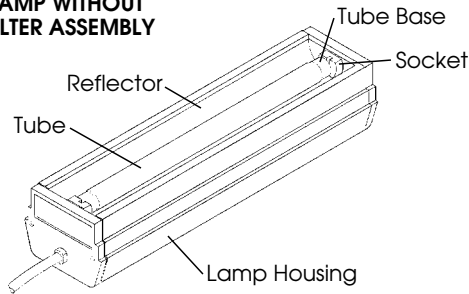
NOTE: The tubes in the EA-240 are wired in series. Therefore, if one tube fails the other tube will not light, even though it may be in good operating condition.

FILTER REPLACEMENT

If it is necessary to replace the filter assembly, follow Step #3 in the "TUBE REPLACEMENT" section to remove the old filter. Install the new filter by reversing this procedure.



LAMP WITHOUT FILTER ASSEMBLY



ENVIRONMENTAL CONDITIONS

The E-Series UV lamps are designed to be safe under the following conditions:

- Indoor use;
- Altitude up to 2,000 m (6,562 ft.);
- Temperature 5°C to 40°C (41°F to 104°F);
- Maximum relative humidity 80% for temperatures up to 31°C (88°F)
decreasing linearly to 50% relative humidity at 40°C (104°F);
- Mains supply voltage fluctuations not to exceed $\pm 10\%$ of the nominal voltage;
- Installation Category II;
- Pollution Degree 2.

WARRANTY

The warranty policy for the E-Series lamps is provided on the Certificate of Limited Warranty enclosed separately with each unit.

NOTE: For assistance of any kind, including help with a lamp under warranty, contact the Customer Service Department at Spectronics Corporation. In the U.S. and Canada, call toll-free 1-800-274-8888. Give full details of the difficulty and include the model and serial numbers of the unit and date of purchase.

If return of the lamp to the factory is deemed necessary, shipping instructions will be provided. If an estimate of charges for non-warranty work or other service work is required, a quote will be furnished upon evaluation of the unit. Out-of-warranty service work will not be performed without customer approval.

SHIPPING

Carefully pack the lamp in the original shipping container and packing materials. Insure it for full value and ship it prepaid to the factory.

ACCESSORIES



LAMP WITH CARRYING HANDLE



SE-140 LAMP STAND



CM-26 UV VIEWING CABINET

E-SERIES ELECTRICAL SPECIFICATIONS

MODELS ¹ /F ² /FB ² /J ³	WAVELENGTH	TUBE	FILTER
EA-140I; /F ² ; /FB ² ; /J ³	UV-A	BLE-220B	
EN-140; /F; /FB; /J	UV-A	BLE-270W	
EN-140L; /F; /FB; /J	UV-A	BLE-270W	2F003
EA-240; /F; /FB; /J*	UV-A	Two BLE-220B*	
EA-150; /F; /FB; /J	UV-A	BLE-50H	
EA-160; /F; /FB; /J	UV-A	BLE-480B	
EN-160; /F; /FB; /J	UV-A	BLE-6T365	
EN-160L; /F; /FB; /J	UV-A	BLE-6T365	2F005
EA-180; /F; /FB; /J	UV-A	BLE-760B	
EN-180; /F; /FB; /J	UV-A	BLE-8T365	
EN-180L; /F; /FB; /J	UV-A	BLE-8T365	2F082
EN-280L; /F; /FB; /J	UV-A	Two BLE-8T365	2F082
EB-160C; /F; /FB; /J	UV-B	BLE-6T312	2F006
EB-180C; /F; /FB; /J	UV-B	BLE-8T312	2F018
EB-280C; /F; /FB; /J	UV-B	Two BLE-8T312	2F018
EF-140C; /F; /FB; /J	UV-C	BLE-2537S	2F001
EF-160C; /F; /FB; /J	UV-C	BLE-6254S	2F006
EF-180C; /F; /FB; /J	UV-C	BLE-8T254	2F018
EF-260C; /F; /FB; /J	UV-C	Two BLE-6254S	2F006
EF-280C; /F; /FB; /J	UV-C	Two BLE-8T254	2F018
ENF-240C; /F; /FB; /J	UV-A & UV-C	BLE-270W BLE-2537S	2F001
ENF-260C; /F; /FB; /J	UV-A & UV-C	BLE-6T365 BLE-6254S	2F006
ENF-280C; /F; /FB; /J	UV-A & UV-C	BLE-8T365 BLE-8T254	2F018
ENB-260C; /F; /FB; /J	UV-A & UV-B	BLE-6T365 BLE-6T312	2F006
ENB-280C; /F; /FB; /J	UV-A & UV-B	BLE-8T365 BLE-8T312	2F018
EBF-260C; /F; /FB; /J	UV-B & UV-C	BLE-6T312 BLE-6254S	2F006
EBF-280C; /F; /FB; /J	UV-B & UV-C	BLE-8T312 BLE-8T254	2F018
EF-140; /F; /FB; /J	UV-C	BLE-2537S	
EF-160; /F; /FB; /J	UV-C	BLE-6254S	
EF-180; /F; /FB; /J	UV-C	BLE-8T254	

¹All domestic models (without /F, /FB, /J) are 120V, 60Hz and 0.2 amps*

²All /F, /FB models are 230V, 50Hz and 0.2 amps. All units conform to CE standards

³All /J models are 100V, 50-60Hz and 0.2 amps*

*Dual tube units of the same wavelength are 0.4 amps, with the exception of the EA-240 models, which are 0.2 amps.

Long Wave (UV-A): 365nm Medium Wave (UV-B): 312nm Short Wave (UV-C): 254nm



LAMP CONTAINS MERCURY
Manage in Accord with Disposal Laws
See: www.lamprecycle.org