



Grid Lamp Assembly Replacement UV EPROM Erasing Cabinets PC-1100A, PC-2200A and PC-3300A

INTRODUCTION

The G750NO2 ultraviolet grid lamps used in the Spectroline® PC-Series UV EPROM wafer erasing cabinets are designed for a long life under normal operating conditions. However, as with all discharge type lamps, the output slowly decreases at a rate dependent upon the lamp's operating parameters, such as lamp current and voltage, cabinet temperature, number of on-off cycles, length of operating time, presence or absence of vibration, and other factors.

Generally, the end of life will correspond to a minimum usable output and not total failure. Even though the grid lamp may appear to be operating satisfactorily because it maintains the blue visible glow, the effective 254nm ultraviolet output may be low. This low output will be evident by unerased memory elements at acceptable erasing times. When the required erasing time becomes unacceptably long, it is time to replace the grid assembly.

To ensure that your cabinet is operating at the UV intensity required, it should be checked periodically. We recommend using the AccuMAX™ XR-1000 readout unit with the XS-254 UV sensor detector or the Spectroline DM-254XA or DM-254HA digital radiometer.

READ ENTIRE PROCEDURE BEFORE PROCEEDING WITH LAMP REPLACEMENT

WARNING—HIGH VOLTAGE

Refer servicing to qualified service personnel.

NOTE:

To reduce the risk of electric shock, disconnect power before servicing.

1. Disconnect power supply cord from outlet.
 2. Place the cabinet on a level surface.
 3. Remove the five Phillips screws from side of the anodized aluminum sections at the top edges of the cabinet.
 4. Remove the three (PC-1100A, PC-2200A) or five (PC-3300A) screws holding the top black cover to the front and back panels.
 5. Lift the top section, as a whole, off the unit and place to one side, being sure to note which side is the front.
 6. Remove the remaining screws from the back panel and carefully lower it to rest on the level surface. Be careful not to stress any wires.
 7. Take off the cabinet's side panels by removing the five screws located at the bottom of each panel and the two located on both sides of the front panel.
 8. Before removing the lamp tray, note the position of the lamp's high voltage wires and their connections in the terminal blocks.
 9. Loosen the two white plastic screws located on the terminal block associated with each grid assembly. Gently pull the high voltage wires upward, through the plastic feed-throughs located in the EPROM drawer slide mounting bracket. **NOTE:** If any resistance is felt in doing so, loosen the white screws from the terminal block further, and attempt to proceed again. Be careful not to cause undue stress to grid assembly connections.
 10. Release the lamp tray from the tray housing by loosening/removing the two screws on each of its sides. Carefully lift off the lamp tray and place on a level surface with the grid lamps facing up.
- NOTE: The grid lamps used in this assembly are manufactured from thin wall blown glass tubing and are extremely fragile. Please use extra care in handling.**
11. To remove the old grid assembly from the lamp tray, remove the four screws that secure it to the tray.
 12. Unpack the new grid assembly. Inspect it for possible damage.
 13. Check contents of the hardware envelope. Each envelope should contain two pieces of polyolefin shrink tubing.
 14. Lead lengths on replacement grids are extra long and must be cut to the proper size. To determine the proper size, measure each lead length on the original grid and add 1 in (2.5 cm). Cut each corresponding lead on replacement grid to this length.
 15. Place the new grid assembly in the lamp tray and secure it with the four screws.
 16. Invert the lamp tray and place it back into the tray housing. Refasten the lamp tray with the four screws loosened/removed in step 10.
 17. To prepare the grid lead wires for connection to the terminal block, perform the following steps:
 - A. Strip approximately 1.5 in (3.8 cm) of the red insulation from the end of each wire. Make certain the wire strands remain tightly twisted together.
 - B. Double back each of the exposed wires to form a loop 0.75 in (1.9 cm) long.

- C. Fill each loop with solder. To avoid corona, make certain the formed soldered loop is smooth and no sharp, pointed solder formations are present. Also be careful not to leave any stray wire strands protruding from the formed soldered loop.
- D. Place the shrink tubing (included with the replacement lamp) over each of the soldered loops. Allow the soldered wire loop to protrude from the shrink tubing so that the shrink tubing overlaps the cut edge of the insulation by 0.12 in (0.3 cm).
- E. Shrink in place with a heat gun.
18. Keeping the high voltage leads crossed, leave a slack loop of lead wire between the lamp and feed-through. Maintaining this slack, drop lead wires directly through feed-through to terminal blocks below.
19. To complete the connection, feed the grid lamp leads into the top of each terminal block. Secure by tightening the white plastic screws, referred to in step 9.
- NOTE: Be careful not to leave any bare wire protruding from the top of the terminal block.**
20. Prior to cabinet reassembly, check the wire connections from the cabinet back panel to ensure no wires have been disconnected or broken inadvertently.
21. Replace the sides, back and top of the cabinet, reversing the procedure described in steps 3 to 7.
22. Plug cabinet cord into properly grounded receptacle and test for proper operation.

