

G310S REPLACEMENT BACKLIGHT ASSEMBLIES



WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN DISCONNECTED AND THE AREA IS KNOWN TO BE NON-HAZARDOUS.



WARNING - EXPLOSION HAZARD - THE AREA MUST BE KNOWN TO BE NON-HAZARDOUS BEFORE SERVICING/ REPLACING THE UNIT AND BEFORE INSTALLING OR REMOVING I/O, INVERTER, BACKLIGHT, WIRING AND BATTERY.



CAUTION: RISK OF ELECTRIC SHOCK

The inverter board supplies the high voltage to operate the backlight. Touching the inverter board may result in injury to personnel. Disconnect all power before installing or removing backlight assembly.

DETERMINING BACKLIGHT REPLACEMENT KIT

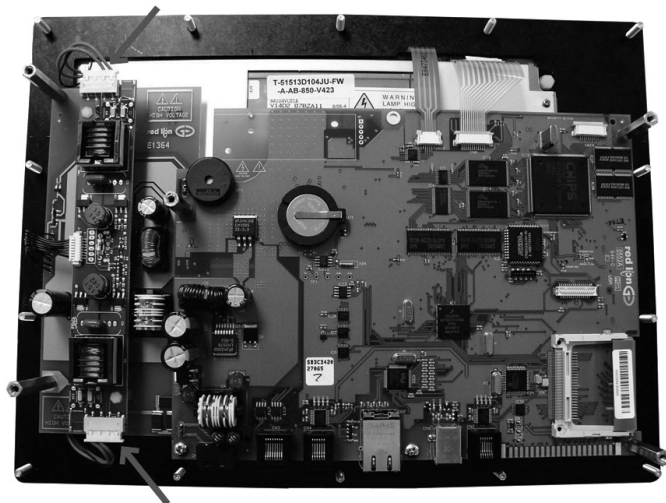
Due to the obsolescence of the original G310S CCFL backlit display (manufactured by Optrex), all new G310S units are being built with an NEC LED backlit display.

Since the original CCFL backlight tubes are also no longer available, any older G310S unit requiring a backlight repair must be converted to an LED backlight. This is easily done by replacing the original CCFL inverter with an LED driver board and the CCFL backlights with the LED backlights.

Refer to the examples below to determine which unit you currently have:

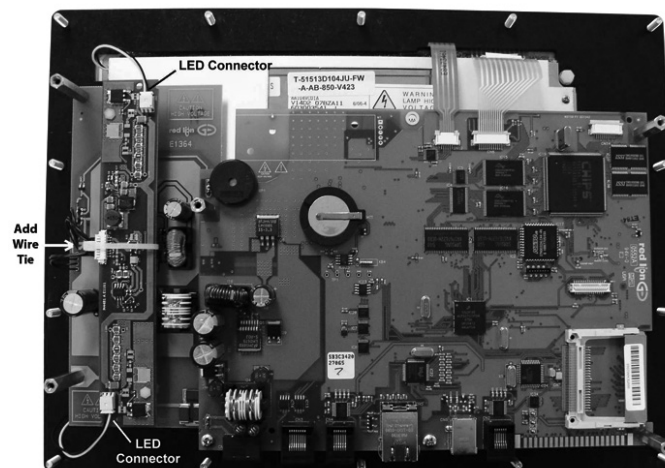
OPTREX CCFL BACKLIGHT (Two Backlights, Three Wires Each)

For customers with an original Optrex display that uses two CCFL backlights, part number G3BR10S1 is used to convert the existing display to use the new LED backlight assemblies. This kit contains two backlight assemblies and a board that drives these new LED assemblies.



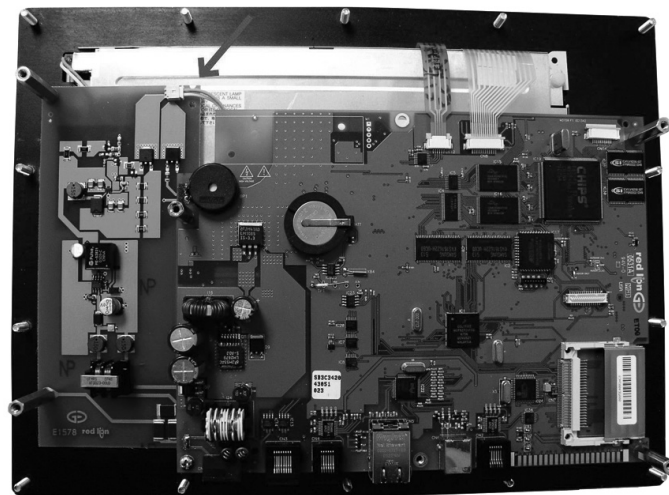
OPTREX LED BACKLIGHT (Two Backlights, Two Wires Each)

For customers with an Optrex display that has already been converted to use LED backlights (two backlights), part number G3BR10S2 is used for replacement backlight assemblies only.



NEC LED BACKLIGHT (One Backlight)

For customers with the newer NEC display, this backlight is not field replaceable. This unit must be returned to Red Lion Controls for repair.



G310S BACKLIGHT REPLACEMENT PROCEDURE - G3BR10S1

This and ALL repairs must be done in an area known to be non-hazardous.

1. Remove the power and PLC Communications connectors from the unit.
2. Remove the five screws from the rear cover.
3. To replace the inverter board with the LED driver board, carefully remove heat shrink tubing (if present) from the backlight connectors on the inverter board (refer to Figure 1).
4. Remove the backlight connectors from their connector housings on the inverter board.
5. Disconnect the 8-position cable from the inverter.
6. Carefully remove the two nylon screws holding the inverter in place.
7. Replace the inverter with the new LED driver board.
8. Reinstall the 8-position cable into the new LED driver board.

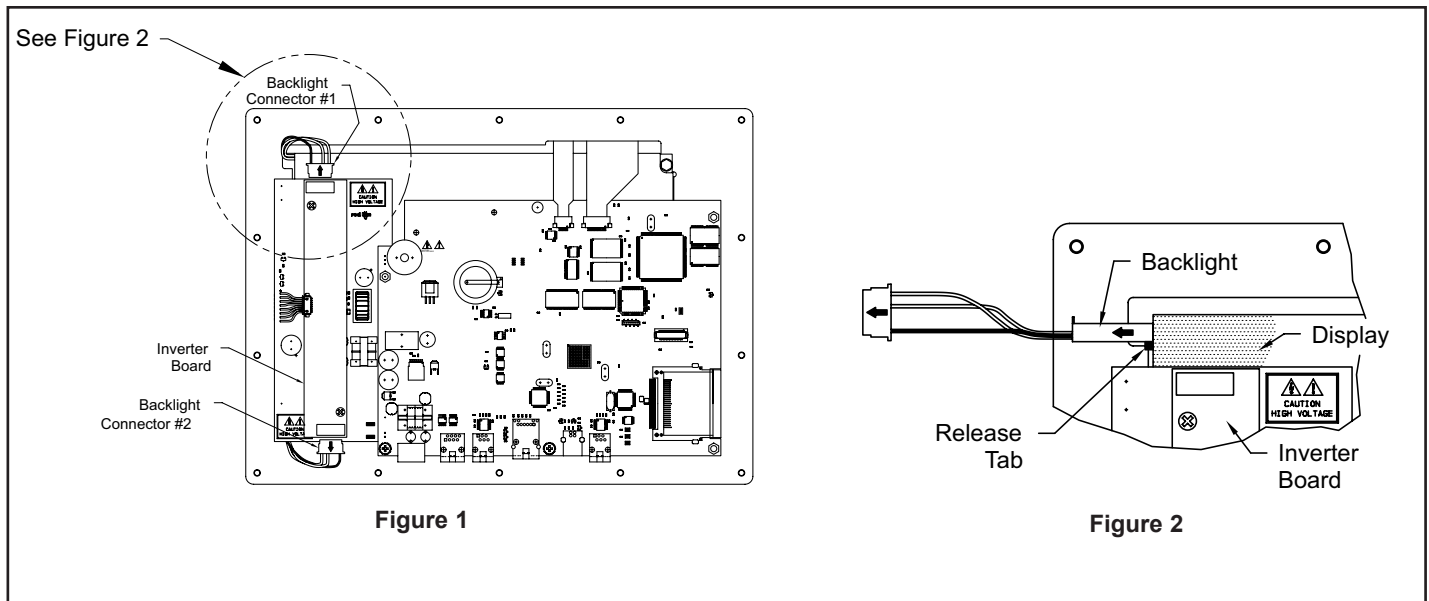
9. Wrap the cable tie (provided) around the driver board and connector to prevent accidental removal of the connector. This is a requirement to maintain the UL Hazardous Locations rating.
10. To replace the backlight assemblies, depress the backlight release tab and carefully remove the backlight as indicated in Figure 2. Repeat for the other backlight.
11. Install the new backlight assembly into the display. Ensure that the LEDs of the backlight assembly face towards the display. Use caution when inserting the new assembly so that it is not twisted or pushed on an angle. The backlight assembly is fragile and may be broken. Repeat for the other backlight.
12. Install the backlight connectors into the LED driver board.
13. Test the unit in a known safe location by applying power to the unit to make sure all connections were made properly.
14. Remove the power connection, reinstall the rear cover and then retest.

G310S BACKLIGHT REPLACEMENT PROCEDURE - G3BR10S2

This and ALL repairs must be done in an area known to be non-hazardous.

1. Remove the power and PLC Communications connectors from the unit.
2. Remove the five screws from the rear cover.
3. Remove the backlight connectors from their connector housings on the inverter board.
4. To replace the backlight assemblies, depress the backlight release tab and carefully remove the backlight as indicated in Figure 2. Repeat for the other backlight.

5. Install the new backlight assembly into the display. Ensure that the LEDs of the backlight assembly face towards the display. Use caution when inserting the new assembly so that it is not twisted or pushed on an angle. The backlight assembly is fragile and may be broken. Repeat for the other backlight.
6. Install the backlight connectors into the LED driver board.
7. Test the unit in a known safe location by applying power to the unit to make sure all connections were made properly.
8. Remove the power connection, reinstall the rear cover and then retest.



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