

4.4 ELECTRICAL CONNECTIONS

This is a **CLASS I** electrical device and must be wired in accordance with all applicable electrical codes and regulations. The power supply cable from the power supply to the Collimator must be sized to handle the full continuous rated load taking into consideration the distance from the collimator to the power supply.

Power Supply Requirement(s) (to comply with light output requirement):

LED Board Version A: 12VDC-24VDC & 24V Isolated AC 50/60Hz @ 1A - 2A. Not Polarized

LED Board Version B: 12VDC-24VDC & 24V AC 50/60Hz @ 1A-2A. Polarized

LED Board Version A Requires an isolated, primary and secondary fused AC transformer or DC power supply.

4.4.1 Confirming Isolated AC Power

1. Connect the supplied 25' extension cable Black and White wires to your AC Source.
DO NOT PLUG INTO THE COLLIMATOR PIGTAIL YET! Attach Green wire to ground.
2. With a voltmeter, measure the Black wire to the Green Wire. It should read approximately 10-50VAC. If it reads zero (0) VAC, the power is not isolated and cannot be used!
3. With a voltmeter, measure the White wire to the Green Wire. It should read approximately 10-50VAC. If it reads zero (0) VAC, the power is not isolated and cannot be used!
4. With a voltmeter, measure the Black wire to the White wire. It should read approximately 24VAC.

If you measure 24VAC, after performing the individual tests as above, you have isolated AC and can use this source to power the collimator.

4.4.2 LED Replacement

The LED is part of the circuit board assembly and must be replaced as a whole.

4.4.3 LED Board Assembly Replacement

1. Remove the collimator knobs (Figure 13, page 37) and the housing (Figure 14, page 38)
2. Remove the current LED board from the chassis by unscrewing the four screws that hold the circuit board assembly to the two aluminum mounting posts (Figure 16, page 40)
3. Remove the 6 pin and 8 pin connectors from the current board. These pull straight up. Do not unscrew the terminals holding the wires in place.
4. Take the new LED board and seat the 6 pin and 8 pin connectors onto the adapter board pins in the exact pin positions they were removed from. Correct position does matter.
5. **Note:** LED Board Version B requires the correct polarity. Check the power wires and swap them if needed. If the unit has a Power Conditioning Board, then Red is +PWR (Pin 2) and Black is 0V Return (Pin 1). If the unit does not have a Power Conditioning Board and instead is directly wired to the power pigtail then Blue is +PWR (Pin 2) and Brown is 0V Return (Pin 1).
6. Mount the new board back on the chassis by reversing steps 1 and 2.

4.4.4 External 25' Power Interface Cable

CAUTION! The 25' Interface Cable May Use Different Wire Color Codes. Refer to Collimator 25' Interface Cable Wiring Diagram on page 34 for more information.

Table Lock Switch Function:

Light Field/Lasers come on and self-timeout after the default on time or they can be turned off immediately by pressing the Front Button.

Remote Switch Function:

Light Field/Lasers come on with a switch press and turn off with a switch press. Remote Switch mimics the collimator Front Button and functions.