

Replacement LED Light Array Segment Procedure

Purpose: How to remove and replace the LED light array segment on the Plant Producer Hydroponics unit

This document gives instructions on changing a light array is not working.

Prerequisites

- Phillips screwdriver with a good tip
- Small straight-slot screwdriver
- Curved needle nose pliers or 3 mm wrench or crescent wrench
- Step stool or step ladder may be needed for top shelf
- Sponge or cotton cloth

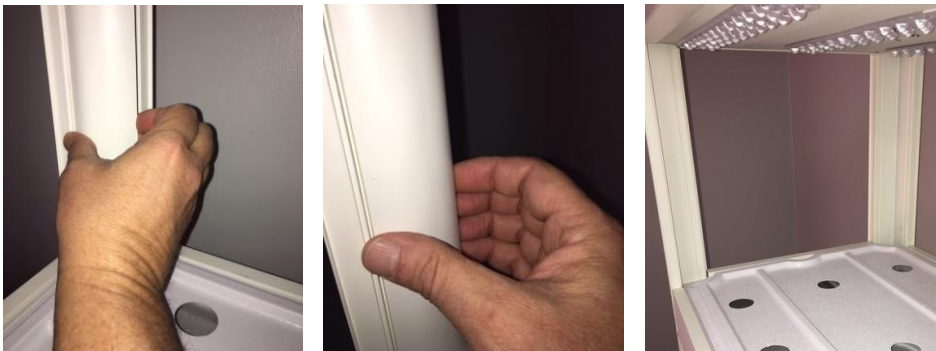
Step to perform:

1. Turn the power off by pressing the switch down to the “O” position (the switch is located at the top-left rear of the unit). Give the system a minute to drain the excess water out of the lines.



Removing the LED light array for the middle shelf:

1. Remove the corner piece on all four corners above the top grow shelf by pressing into one side of the corner piece (using your fingers or a straight-slot screwdriver) and squeezing the corner piece, then pulling it out.



2. Remove the grow cup tray from the top grow shelf by removing all grow cups from the tray, lifting the grow cup tray and angling it approximately 45-degrees, then sliding it out from one end.



3. Remove water from the lower tray assembly of the top shelf. Use a sponge or a cotton cloth towel, starting from the fill tube and push the water down the tray to the drain spout hole. Wring out the sponge or cloth after each pass. Repeat until the tray is dry.



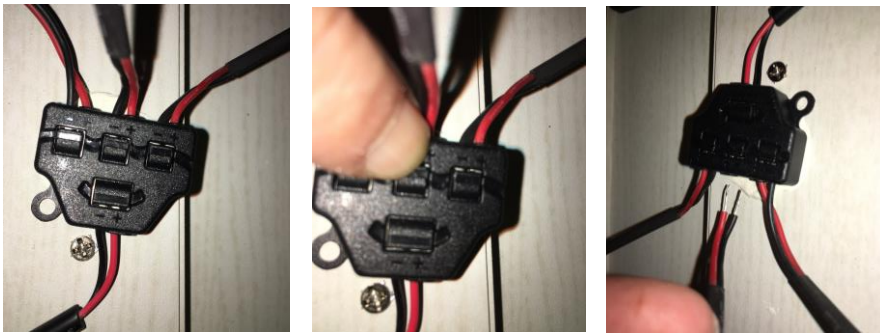
4. Move the fill tube out of the way by grabbing it and moving it outside of the top shelf. Remove the drain tube by removing the drain corner cover from below the shelf, grasping the drain tube and pulling it down (the drain is in the opposite corner from fill tube and has a hole in the bottom of it).



5. Remove the lower tray assembly of the top grow shelf. Grasp the edges or raised portion of the tray, lift and rotate the tray to approximately 45-degrees, then slide the tray out from the shelf to expose the lighting wires and fans.



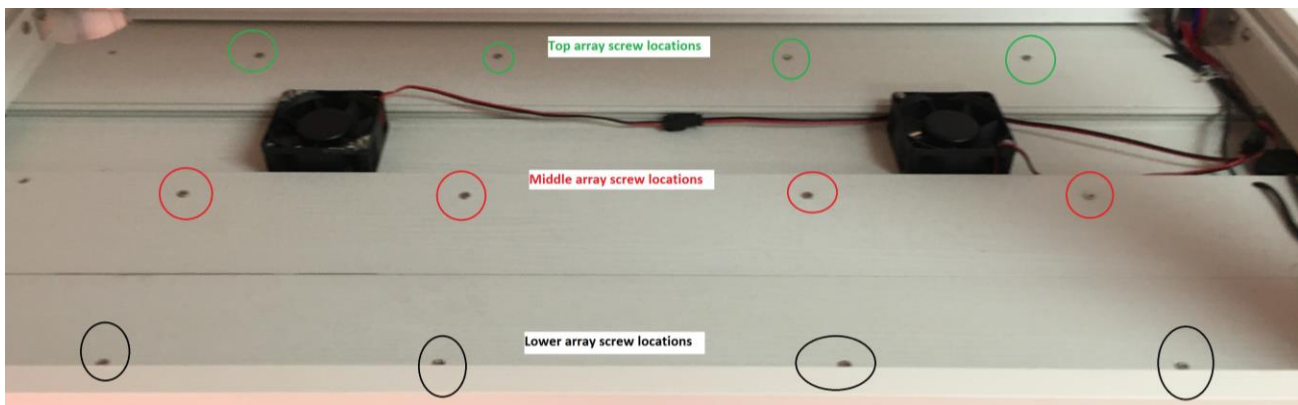
6. Identify the non-working LED light segment. Follow the wires and disconnect them from the terminal block by pushing down on the button and pulling the wires straight out at the same time. Middle array is being shown below.



7. Use a straight slot (or Phillips if room) screwdriver to pry the cosmetic cover from the end of the light array down, then grasp it with a needle nose plier and pull it down a bit more so the wire hole to the shelf can be seen.

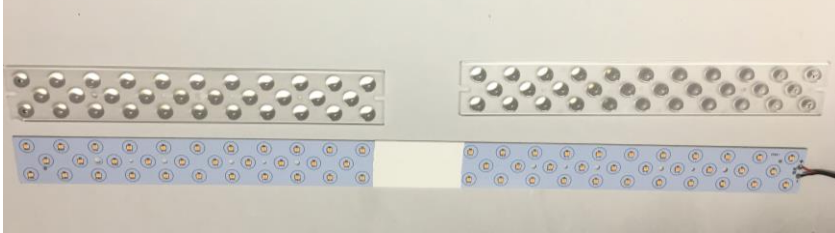


8. Remove the 4 bolts/nuts starting from the wire end, using a 3 mm wrench or curved needle nose pliers on the nut, turn the Phillips head counterclockwise to unscrew. When unscrewing the last bolt/nut, hold the LED light array assembly or it will drop from that end, the wire will hold up the other end. Once all 4 bolts/nuts are removed, pull the wire from the hole and remove the LED light array assembly.



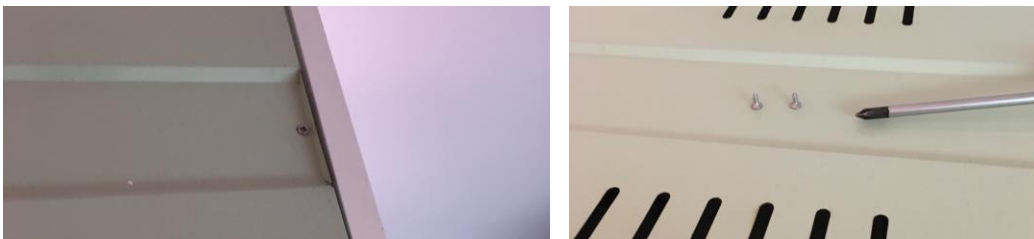
9. Remove the plastic lens cover from LED light array assembly by pulling them up and off the light. Save for reuse with the new light array.

NOTE: Go to step 1 of **Install LED light array segment** to complete the installation process

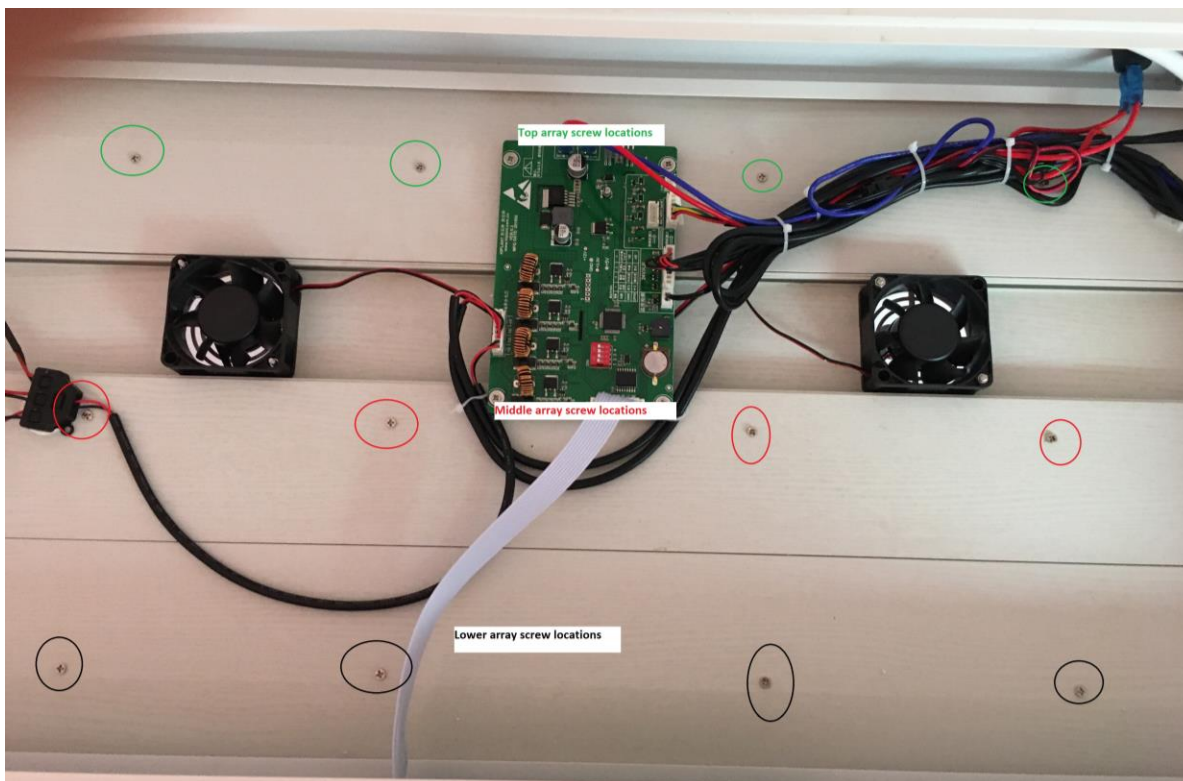


Removing the LED light array for the top shelf:

1. Remove the top cover to expose the electronics of the unit by removing the two Philips screws, one on each end. Use a step stool or step ladder to see the top of the unit.



2. **Perform steps 6-9.** The screw locations for the top shelf is similar to the lower shelves.



Removing the LED light array for the bottom shelf:

1. Remove the middle shelf corner covers, grow cup tray and water following **steps 1-3 of middle shelf instructions**.
2. Remove the fill tube by grasping it and pulling down. Remove the drain tube from below the shelf by grasping it and pulling down (the drain is in the opposite corner from fill tube and has a hole in the bottom of it).



Fill tube removal



Drain tube



Drain tube disconnected

3. Remove the LED light array, following **steps 6-9 of the middle shelf instructions**.

Install the LED light array segment:

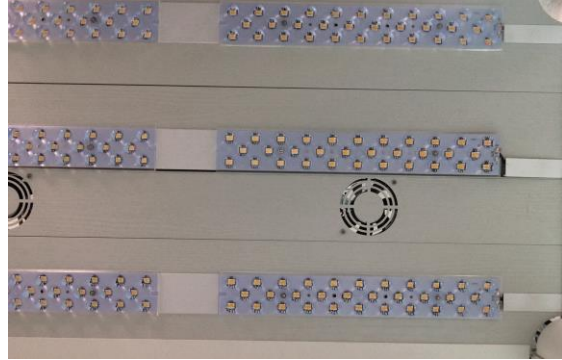
1. Unpackage the replacement light array.
2. Place the lens cover over the led array, align the screw holes to the lens cover.



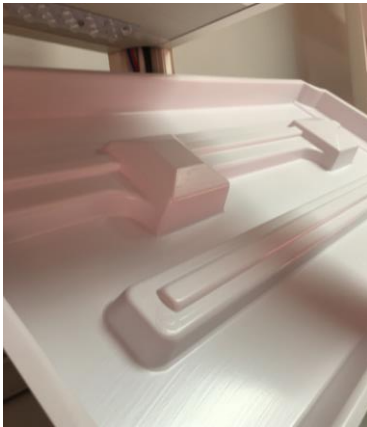
3. Push the wire end through the hole from the bottom, then pull through on top and connect to the push button terminal block, red on + and black on – pushing on the button and inserting wires into the holes until all exposed wire is in terminal block. Release the button and pull on the wire to ensure a good connection.



4. Secure the light array with the four screws previously removed. Start at the end away from the wire that comes out of the light array. Push the bolt through the top, align the light array to the bolt, push the array up flush to the bottom of the shelf, put the nut on and tighten a bit, turning the bolt clockwise. Pull the wire through the hole so it is not dangling underneath the shelf or light array. Once all four bolts are started, tighten them all securely. Push the cosmetic cover back on after pulling the wire through.



5. If the light array is on the **top shelf**, go to **step 10**. If the light array is on the **middle or bottom shelf** it is time to reinstall the tray. Insert the bottom of the tray assembling (the part that holds the water) by holding it at approximately a 45-degree angle and sliding it in from the side, then press it flat into place.



6. Reattach the fill tube to the shelf above by pushing the tube into place. Reattach the drain tube below the shelf by pushing the tube into place. The shelf may need to be held down when pressing the tubes into place.



7. Reinstall the grow cup tray by holding the tray at approximately a 45-degree angle and inserting it from the side. Place the grow cup tray on top of the bottom tray that holds water and press it into place.



8. Reinstall the corner covers by placing one edge into the groove of the corner and snapping the other end into place.



9. Power the unit on. Inspect the fans to make sure they are working. Inspect for leaks from the drain and fill tubes. Open the reservoir doors and inspect in the corners for leaks. If the lights are working and there are no leaks the replacement is finished.
10. Top shelf: turn on power and ensure the fans are working, then replace the top cover and tighten the two Phillips screws.



Troubleshooting tips:

If the light is not working after reinstalling, disassemble again to get at the terminal block. Ensure the wires are tight by pulling on them and ensure they do not pull out. It is possible the polarity is reversed on the light array, try to put the black wire onto + and red wire onto -. If that corrects the light, the light array is fine to run this way. If that does not work contact Product Support.

This completes the LED Light Array Segment replacement. Additional care tips:

1. Ensure the reservoir is filled with water/nutrients, check level daily if possible.
2. Add water regularly to prevent water levels from dropping too low, allow water to sit 24 hours before being added to allow chlorine to leach out.
3. Unit will beep once every 50 minutes when the water level drops too low.
4. Unit will consume more water as the plants get larger.
5. Check the nutrient levels periodically and the plants themselves systematically by keeping records or journaling to obtain optimal growth (suggest 2-4 times a week).

For additional assistance and video tutorials visit our website: <http://www.realityworks.com/knowledge-base/>