



# Optimax Pro 24 Installation Instructions



99-19830-I001

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# Warnings and Important Notes

All work performed must be done by a qualified electrician. Local and national electrical codes must be followed in the refurbishment of the lighting system.

Part numbers referenced in the following instructions can be purchased from the Anthony Parts Department if they are not available at your location.



**WARNING** – Risk of fire or electric shock. Luminaires, wiring, or other electrical parts may be damaged when drilling for installation hardware. Check for enclosed wiring and components.



Only those open holes indicated in the photographs and/or drawings may be made or altered as a result of kit installation. Do not leave any other open holes in an enclosure of wiring or electrical components.



**WARNING** – Risk of fire or electric shock. Install this kit only in luminaires that have the construction features shown in the photographs and/or drawings.



**WARNING** – To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.



**INSTALLATION OF THIS RETROFIT ASSEMBLY REQUIRES A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF ELECTRICAL SYSTEMS AND THE HAZARDS INVOLVED.**



## **BEFORE YOU BEGIN**

Read instructions completely and carefully.



**WARNING: TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK OR INJURY, OBSERVE THE FOLLOWING:**

- 1) Use this unit in the manner intended by the manufacturer.
- 2) Turn power off before removing existing lighting system and follow appropriate lock out/tag out safety procedures.



For use inside a commercial refrigeration case with packaged foods only.

**NOTE:** Remove and dispose of existing ballasts per any local or Federal guidelines.

## Safety

Proper safety equipment includes:



**Safety Glasses**



**Work Gloves**



**Work Shoes**



**TURN OFF ALL ELECTRICAL POWER PRIOR TO BEGINNING WORK ON THE DOOR OR ON ANY ELECTRICAL COMPONENT. USE EXTRA CAUTION WHEN WORKING WITH OR AROUND THE DOOR GLASS PACKAGE.**

## Tools

Tools required for this procedure include:

### TOOLS

#2 Phillips-head screwdriver	Rubber or plastic mallet
Cordless drill w/attachments	Flat-head screwdriver
Needle-nose pliers	Wire stripper and cutter
1/8" Drill Bit	3/8" Drill Bit

## Tips

- Complete replacement of wire assemblies is recommended whenever required. Splice wires only if necessary, using proper materials such as electrical tape, wire nuts, flux core solder and heat shrink.
- Apply liquid soap to rail plastic covers and gaskets upon installation, to facilitate insertion into mounting grooves.
- Keep doors and frames clean for product efficiency. This can also help reduce energy consumption and potential health hazards.
- Whenever binding gasket or plastic parts, use food grade silicone.
- Always use the correct tool for the job to be performed. This ensures proper installation and minimizes safety risks.

# 1. 24V LED Approved Drivers

## 1.1. 24V LED Driver (60-19910-0002)



Specifications:

- Max. Output Power: 100W
- **Input Voltage: 100V – 277VAC**
- Output Current: 4.10A
- Output Voltage: 24VDC
- Min. Power Factor: 0.9
- IP rating: IP64
- Operating Temperature: -40° to 60°C max
- Isolation: Class 2

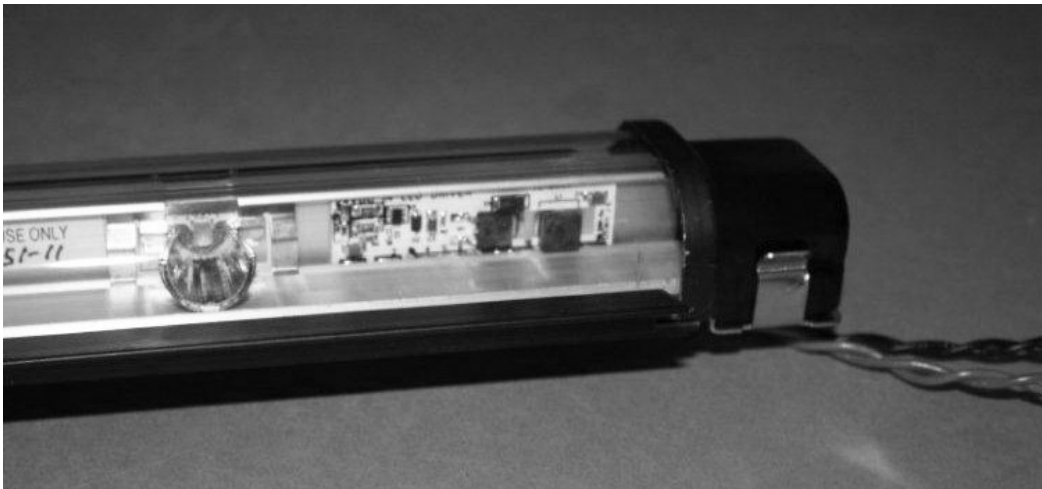
## 1.2. 24V LED Driver (60-20062-0001)



Specifications:

- Max. Output Power: 90W max
- **Input Voltage: 100V - 277VAC**
- Output Current: 3.75A max
- Output Voltage: 24VDC
- Min. Power Factor: 0.9
- IP rating: IP67
- Operating Temperature: -20°to 60°C
- Isolation: Class 2

## 2. Optimax Pro 24V LED Lighting



Center Fixture (60-18898-xxxx) High Power (60-19295-xxxx) Low Power



End Fixture (60-18899-xxxx) High Power (60-19296-xxxx) Low Power

Description	Center Fixture (4000K)	Center Fixture (3500K)
72" Fixture (High Power)	60-18898-0002	60-18898-3002
60" Fixture (High Power)	60-18898-0001	60-18898-3001
54" Fixture (High Power)	60-18898-0008	60-18898-3008
48" Fixture (High Power)	60-18898-0003	60-18898-3003
Description	End Fixture - Left (4000K)	End Fixture - Left (3500K)
72" Fixture (High Power)	60-18899-0002	60-18899-3002
60" Fixture (High Power)	60-18899-0001	60-18899-3001
54" Fixture (High Power)	60-18899-0008	60-18899-3008
48" Fixture (High Power)	60-18899-0003	60-18899-3003
Description	End Fixture - Right (4000K)	End Fixture - Right (3500K)
72" Fixture (High Power)	60-18899-1002	60-18899-4002
60" Fixture (High Power)	60-18899-1001	60-18899-4001
54" Fixture (High Power)	60-18899-1008	60-18899-4008
48" Fixture (High Power)	60-18899-1003	60-18899-4003
Description	Center Fixture (4000K)	Center Fixture (3500K)
72" Fixture (Low Power)	60-19295-0002	60-19295-3002

60" Fixture (Low Power)	60-19295-0001	60-19295-3001
54" Fixture (Low Power)	60-19295-0008	60-19295-3008
48" Fixture (Low Power)	60-19295-0003	60-19295-3003
<b>Description</b>	<b>End Fixture - Left (4000K)</b>	<b>End Fixture - Left (3500K)</b>
72" Fixture (Low Power)	60-19296-0002	60-19296-3002
60" Fixture (Low Power)	60-19296-0001	60-19296-3001
54" Fixture (Low Power)	60-19296-0008	60-19296-3008
48" Fixture (Low Power)	60-19296-0003	60-19296-3003
<b>Description</b>	<b>End Fixture - Right (4000K)</b>	<b>End Fixture - Right (3500K)</b>
72" Fixture (Low Power)	60-19296-1002	60-19296-4002
60" Fixture (Low Power)	60-19296-1001	60-19296-4001
54" Fixture (Low Power)	60-19296-1008	60-19296-4008
48" Fixture (Low Power)	60-19296-1003	60-19296-4003

### 3. Removing Existing Lighting System

1. Remove the following items:
  - a. Lens
  - b. Fluorescent lamps
  - c. Lamp holder
  - d. Mounting clips
  - e. Ballasts from existing lighting system
2. Anthony Door Model 401D, 1KDR and ELS only:
  - a. Remove Mullion cover using a flat screwdriver.
  - b. Remove the raceway cover by inserting a flat screwdriver into the seam between the metal raceway and the plastic cover and prying it open.

**NOTE: Refer to case manufacturer's instructions for any questions on removing the fluorescent system and ballast.**

3. Seal any open holes on Mullion using neutral cure silicone sealant (not provided).
4. Make sure you save the two #8 tapping screws used to hold the ballast in place.

### 4. Mounting the LED Power Supplies

1. Install the LED power supply in the same location where the ballast was fitted or in the general location for ease of wire connection.
2. Mount the LED power supply using two #8 tapping screws saved when the ballast was removed.

**NOTE: Installer may have to drill two holes in raceway to accommodate LED power supply if the door is not an Anthony model.**

**NOTE: The LED power supply case is grounded. Attach the LED power supply to a ground point in the refrigerated directly with a screw.**

3. Reinstall raceway cover(s).



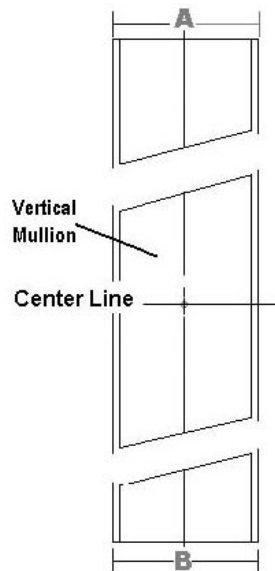
## 5. Locate, Drill and Mount the LED Fixture to the Mullion



Prior to drilling, make sure there are no existing components inside the mullion in the areas marked off for the designated holes.

**NOTE: Drilling is not required for an Anthony model frame. Pre-existing holes are used.**

1. Using a ruler, measure the total width of the mullion at (A) and (B), and mark a vertical line half the total width near the top and bottom of the mullion, as shown in the following illustration.



2. Mark a vertical line from the top of the Mullion to the bottom of the Mullion through the lines measured in step 1.
3. Divide the vertical line distance in half and mark as a Center Line.
4. Position the center punch directly over at the intersection of the horizontal line and the vertical line (top, center and bottom) and establish a dimple.
5. Use a power drill and (1/8") 0.125" dia. drill bit. Drill (1) hole at the intersection of the vertical center line and the horizontal lines.

6. Refer to the "Wiring Diagrams and Orientation" section.
  - a. If the electrical wires are at the top of LED Fixture, go to step 6e. If the electrical wires are at the bottom of the LED fixture go to step 6b.
  - b. Place the extrusion notch toward the bottom of the Mullion. Refer to Figure 1.

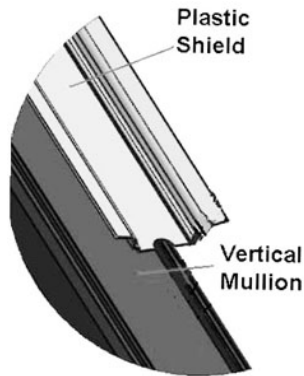


Figure 1.

- c. Using a Phillips screw driver, thread a #8 tapping screw through the plastic extrusion. Refer to Figure 2.

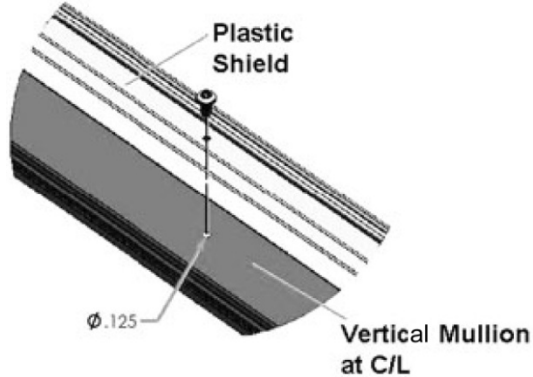


Figure 2.

- d. Continue to step 7.
      - e. Place the plastic extrusion notch toward the top of the Mullion. Refer to Figure 3.

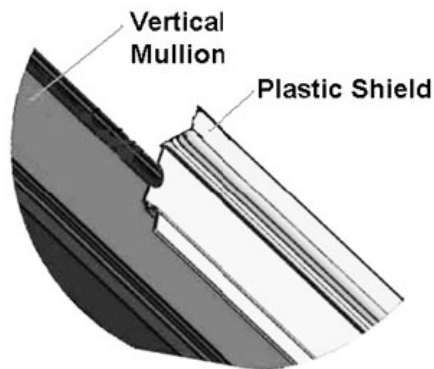


Figure 3.

- f. Using a Phillips screw driver, thread a #8 tapping screw through the plastic extrusion. Refer to Figure 4.

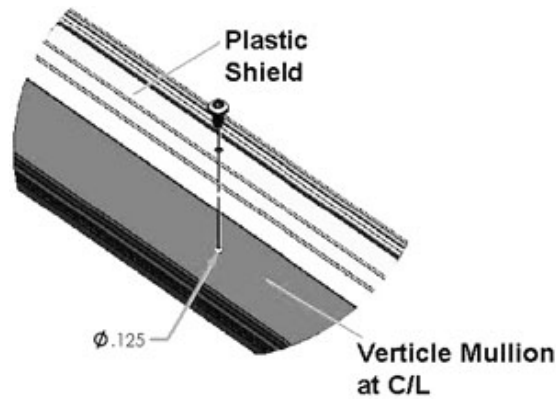


Figure 4.

- g. Continue to step 7.
7. Position the center punch directly over the vertical line and within the plastic extrusion notched cutout, establish a dimple. Refer to Figure 5. Center.

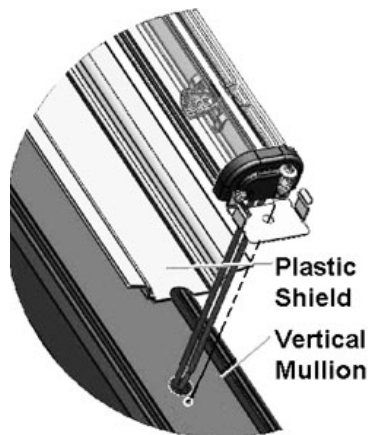


Figure 5. Center

8. Use a power drill and (3/8") 0.375" dia. drill bit, drill (1) hole.
9. Snap the LED fixture into the plastic extrusion. Refer to "Wiring Diagrams and Orientation" and "Parts List".
10. Thread the LED wires through the 3/8" hole.
11. Align the LED fixture with the vertical lines made in step 2 and using a center punch, establish two dimples, one at the top and one at the bottom of the end clips.
12. Use a power drill and (1/8") 0.125" dia. drill bit. Drill (2) holes through the LED top and bottom mounting brackets through the plastic extrusion.

- Using a Phillips screw driver, thread a #8 tapping screw through the plastic extrusion. Refer to Figure 5. Center (Center Mullion) and Refer to Figure 6. End (Left End and Right End).

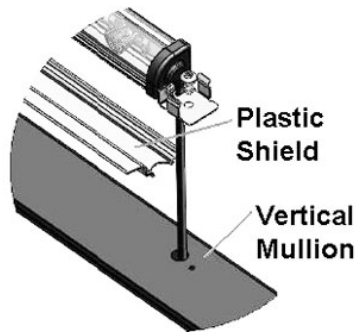


Figure 6. End

- Snap J-Box cover (refer to Figure 7) on the wire-end of the end clip.

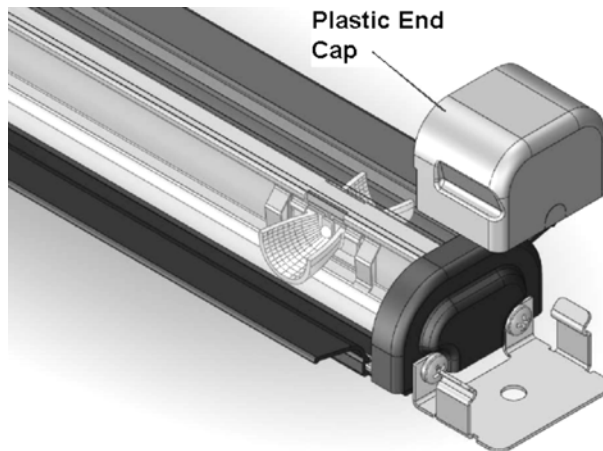


Figure 7.

- Connect the LED Light fixture wire connectors to the LED power supply.

**NOTE:** The OptiMax Pro 24V fixtures are polarity sensitive. Pay close attention when wiring the red (+) wires of the fixture to red wires of the driver, and the blue (-) wires of the driver to the black (-) wires of the fixture.

- Turn the power on and verify LED fixture(s) are working.

## 6. Wiring Diagrams and Orientation

### 6.1. Anthony Door Model 101

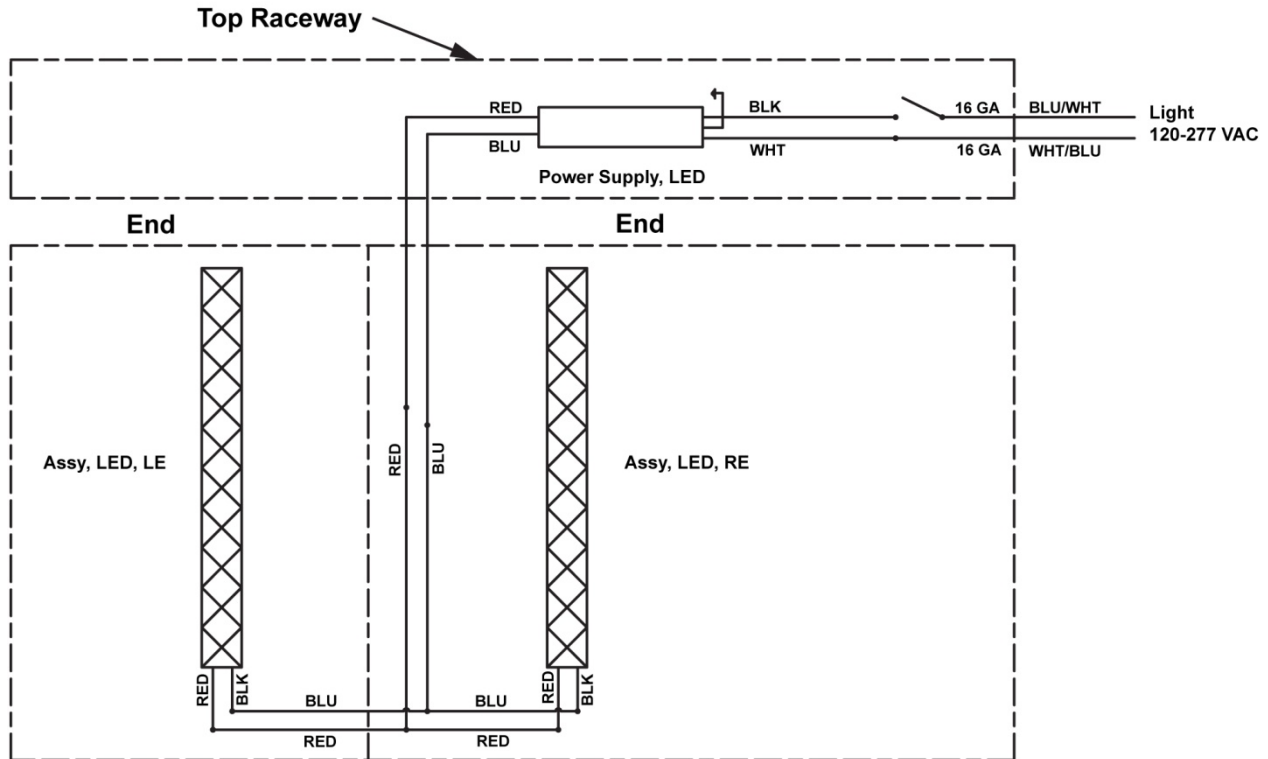


Figure 8. Wiring Diagram (07-19808-0001), 24V, Optimax Pro, (One Door)

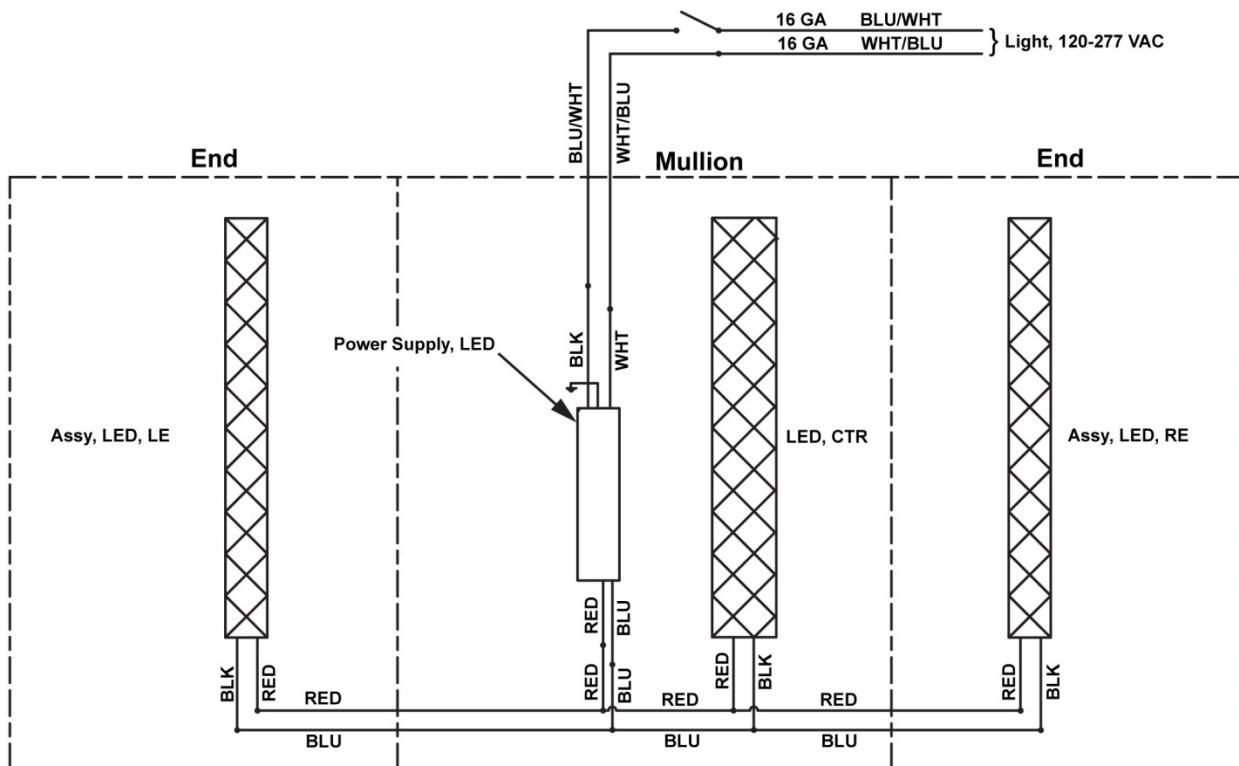


Figure 9. Wiring Diagram (07-19808-0002), 24V, Optimax Pro, (2-Door)

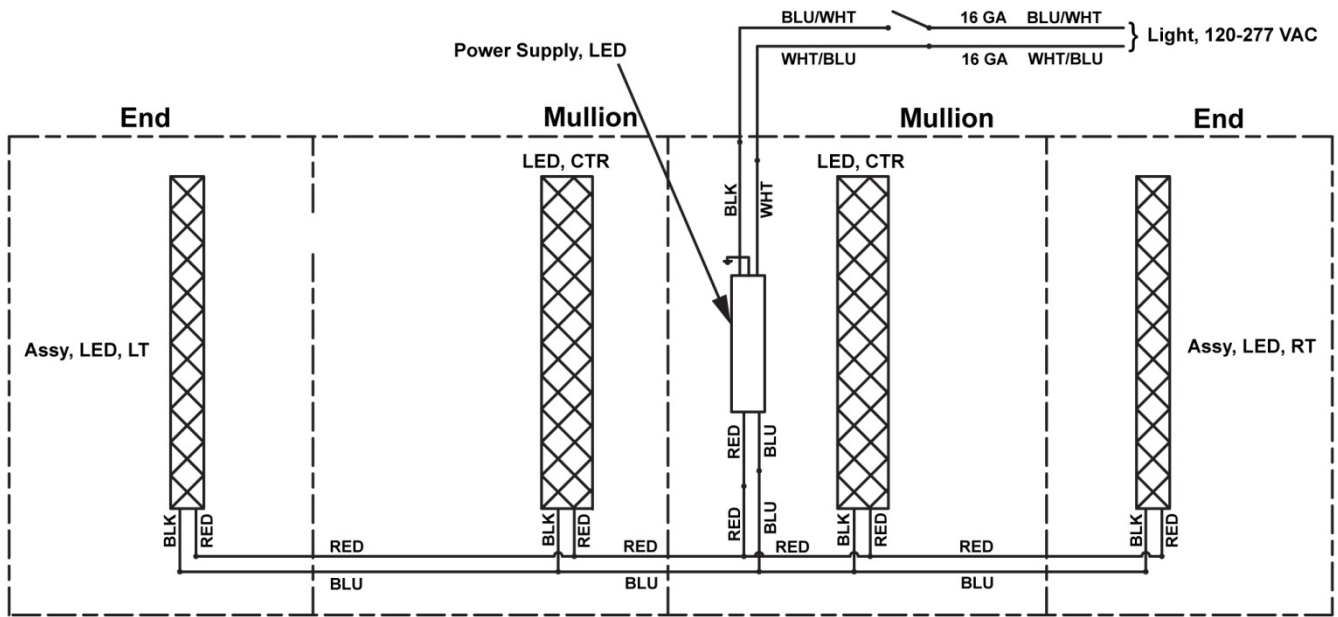


Figure 10. Wiring Diagram (07-19808-0003), 24V, Optimax Pro, (3-Door)

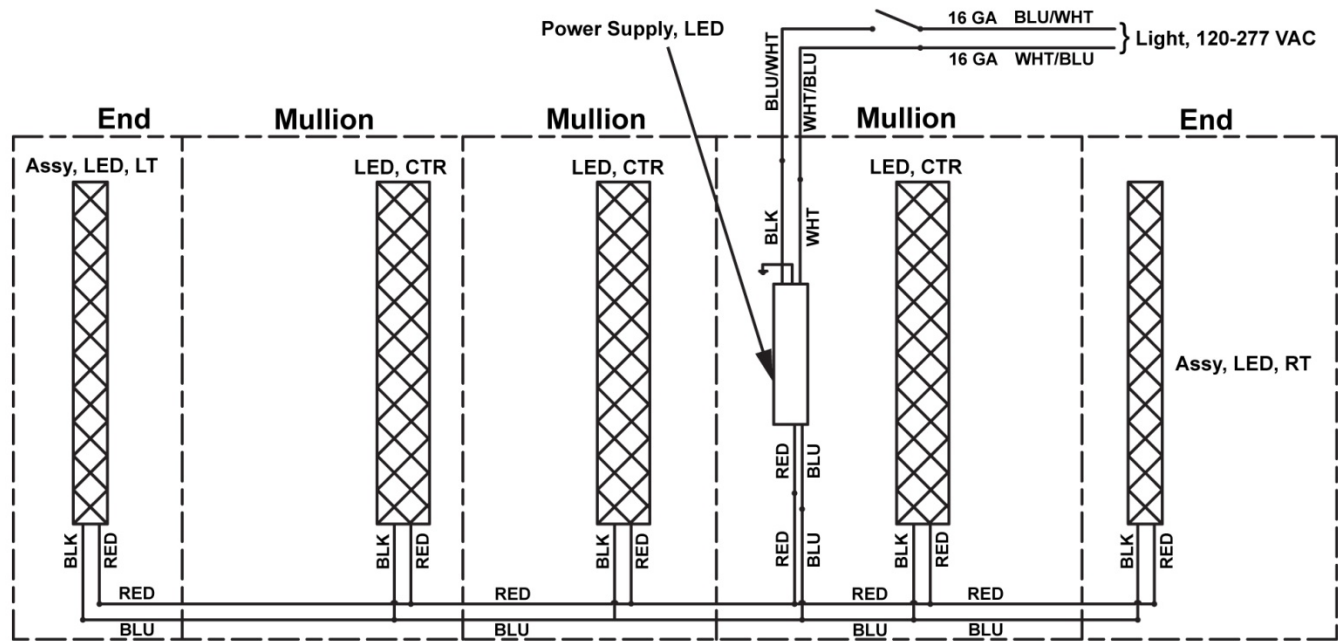


Figure 11. Wiring Diagram (07-19808-0004), 24V, Optimax Pro, (4-Door)

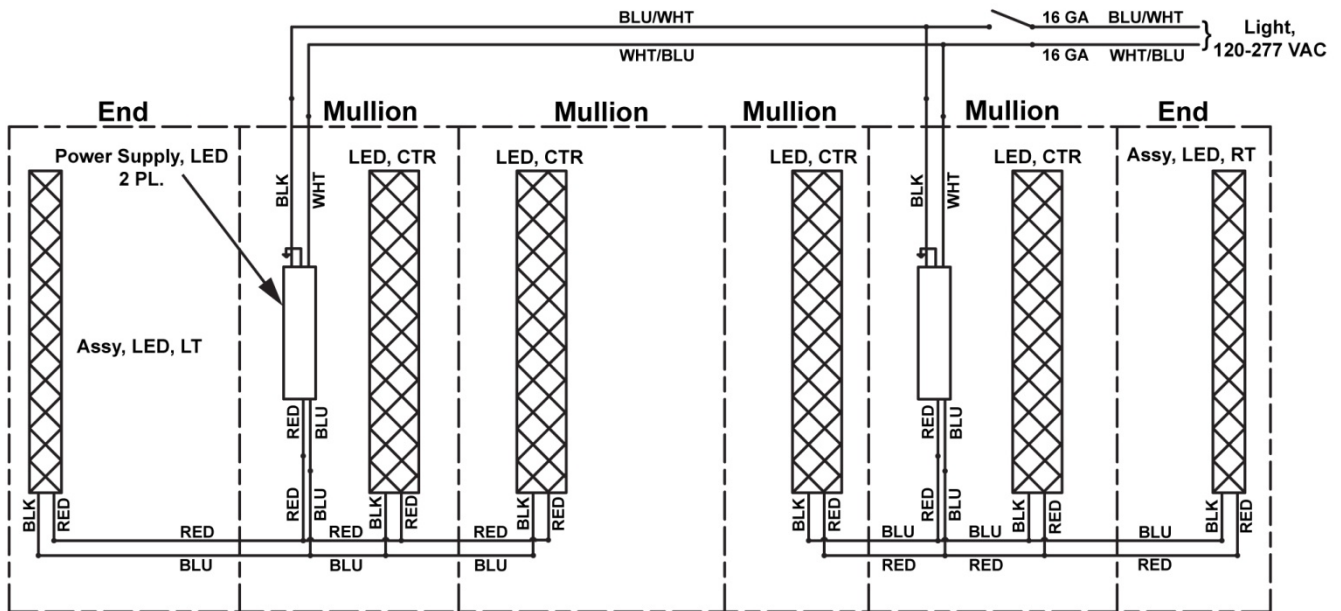


Figure 12. Wiring Diagram (07-19808-0005), 24V, High Power, Optimax Pro, (5-Door)

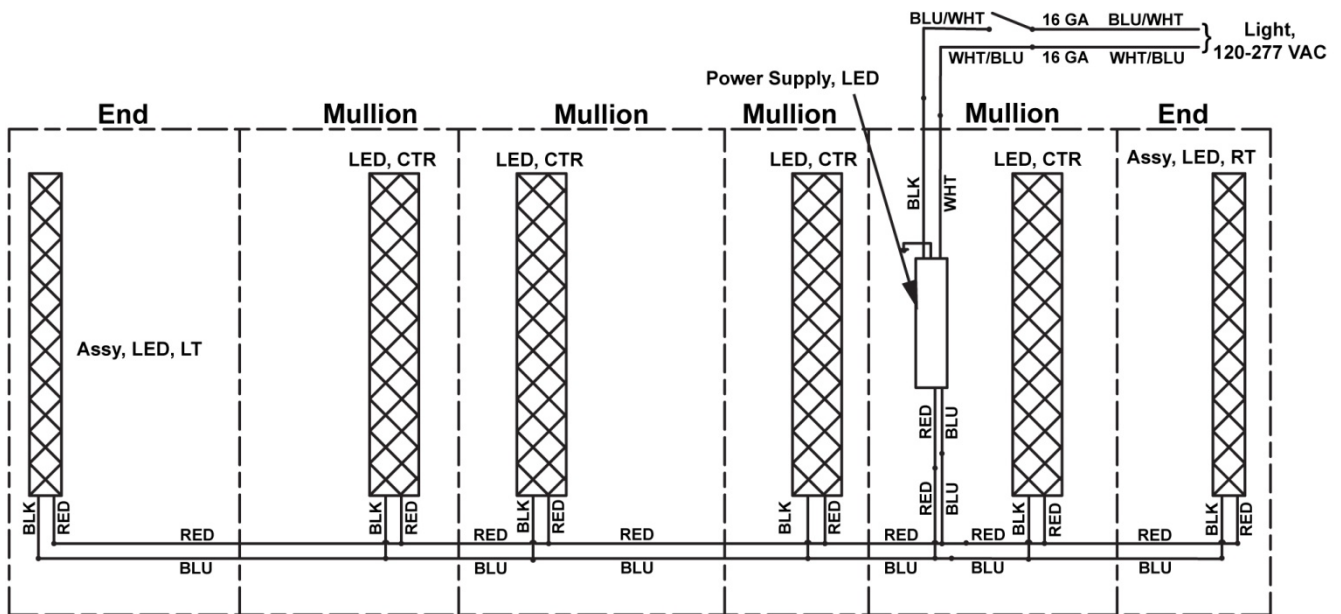


Figure 13. Wiring Diagram (07-19808-0006), 24V, Low Power, Optimax Pro, (5-Door) 36", 30", 24"

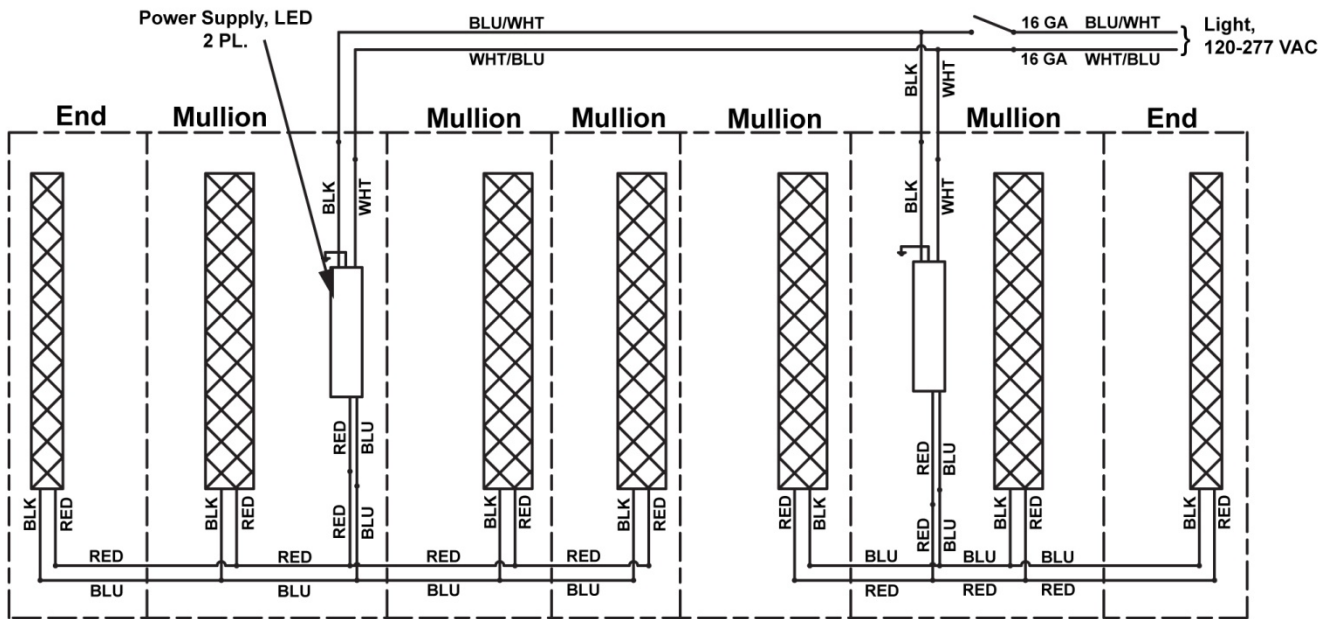


Figure 14. Wiring Diagram (07-19808-0007), 24V, High Power, Optimax Pro, (6-Door)

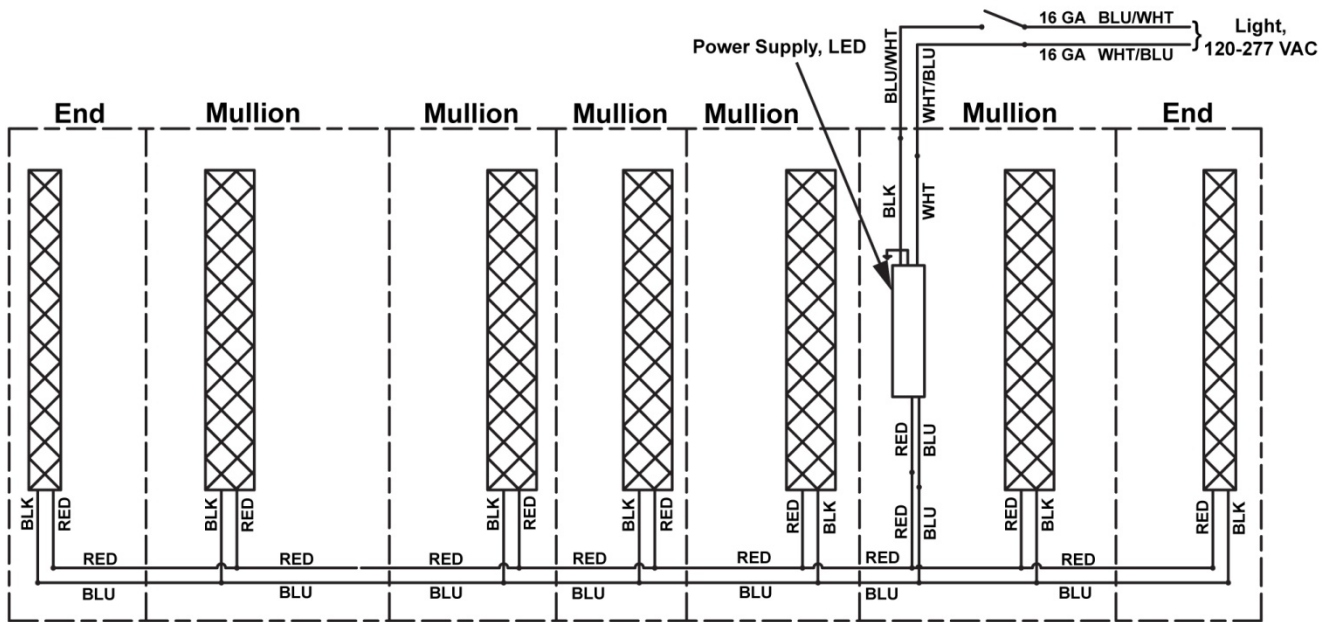


Figure 15. Wiring Diagram (07-19808-0008) 24V, Low Power, Optimax Pro, (6-Door) 36", 30", 24"

6.2. Anthony Door Model 401



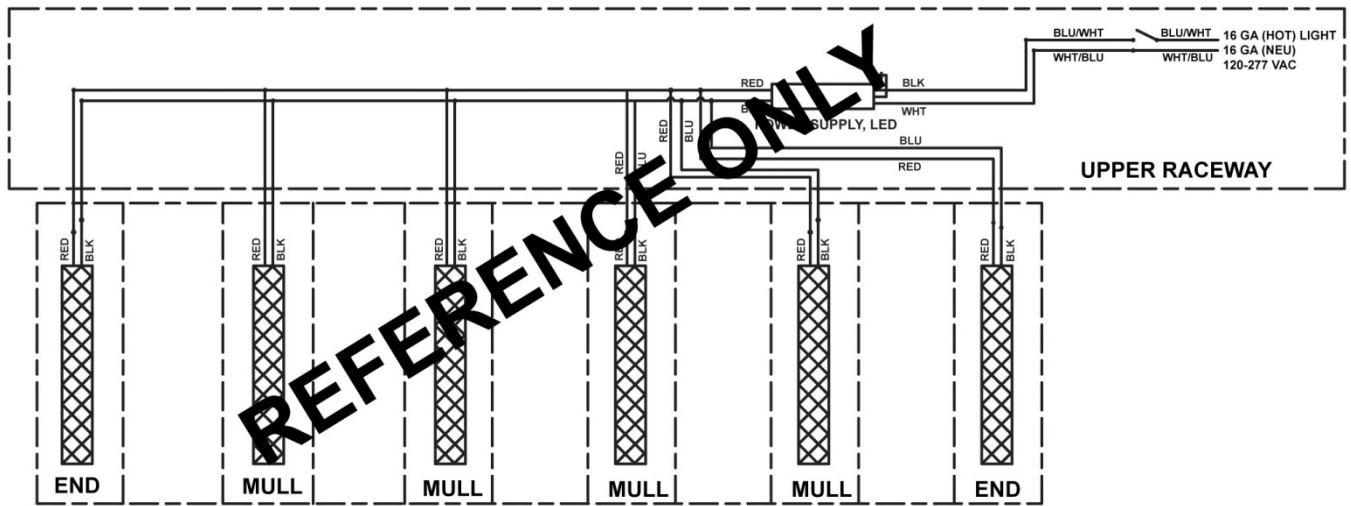


Figure 16. Typical Wiring Diagram (5-Door), Anthony Model 401

## 7. Revision History Page

REV	ORIGINATOR	DESCRIPTION OF CHANGE	EFFECTIVE DATE
A	Jim Buehning	Initial Release	06/11/2012
B	Jim Buehning	Changed preferred Driver	08/20/2012
C	Frank Carbajal	Changed Drivers	06/03/2013