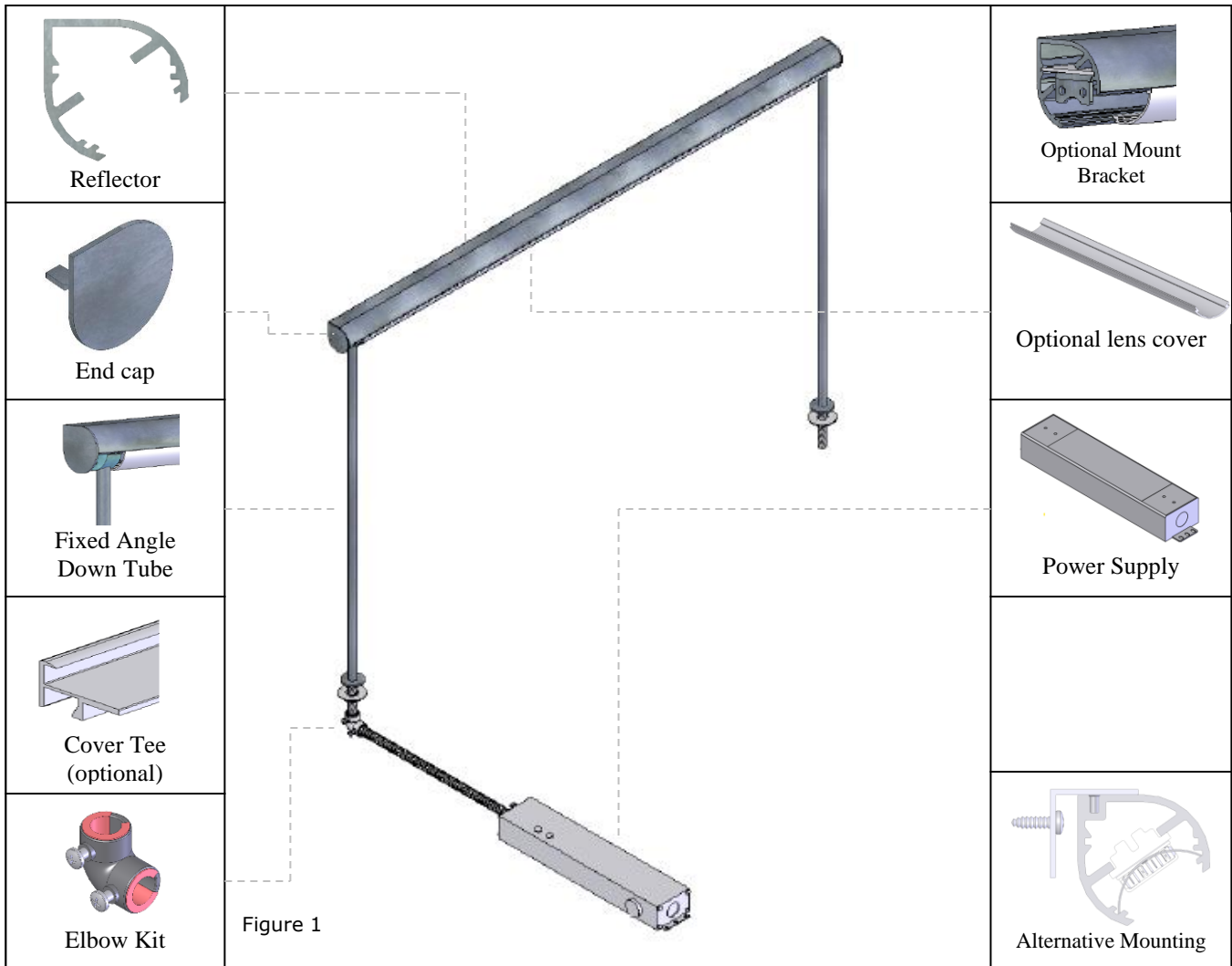




Installation Instructions

683900 LED Cabinet Lighting



INSTALLATION INSTRUCTIONS

Before you begin

These instructions illustrate the Stylmark® 683900 LED Lighting for showcases and cabinets. If you have questions during assembly, call Stylmark's technical help line. This package does not include specialty fasteners or adhesives which may be necessary for complete assembly.

Tools you'll need

- 3/16" hex key
- 5/64" hex key
- 11/16" open-ended wrench
- #2 Phillips screwdriver
- #1 Phillips screwdriver
- #2 flathead screwdriver
- Electric drill and standard bits

Please read these instructions carefully before beginning installation.

Stylmark Installation Instructions: 683900 LED Cabinet Lighting

Step-by-Step Instructions Fixed Down Tube Mounting

1. Connect the low voltage cable to the connectors on the LED wiring harness. Be sure to observe polarity. (See **Figure 18**)
2. Assemble the fixed down tube assembly by inserting the down tube connector into the reflector. (See **Figure 2, Step 1**) Ensure that the connector is inserted such that the light will be aimed towards the center of the showcase.
3. Cut the down tube to the desired length. Make sure to only cut from the top or the unthreaded end.
4. Route the low voltage cable through the down tube connector, then through the down tube.
5. Insert the down tube into the down tube connector and tighten the setscrew. (See **Figure 2, Step 2 & 3**)
6. Insert the end cap into the reflector. (See **Figure 2, Step 4**)
7. Tighten the threaded washer onto the bottom threaded end of the down tube such that no threads show above the washer. (See **Figure 4**)
8. Use the reflector assembly with down tubes installed to determine the location of the mounting holes in the cabinet deck. Mark and drill $\varnothing 1/2"$ (13mm) holes for the reflector down tubes. (See **Figure 3**) Ensure that there are no below deck interferences. (See **Figure 4**)
9. Insert the low voltage cable and the down tubes into the mounting holes in the cabinet deck.
10. Place the large fender washer onto the down tube below the cabinet deck and tighten the fastening nut in place. (See **Figure 4**)
11. Mount the power supply to the underside of the cabinet and attach the conduit connector.
12. Route the low voltage cable from the bottom of the down tube through the 90° elbow kit and the flexible conduit. Attach the elbow kit and conduit and fasten the retaining screws. (See **Figure 5**)
13. Make the wiring connections as shown in the wiring diagram. (See **Figure 18, 19**)

Notes:

The installer determines the power supply mounting location. Be sure to provide for adequate free air movement around the power supply.

The low voltage cable is 156" (3.96 m) and should not be lengthened.

Figure 2

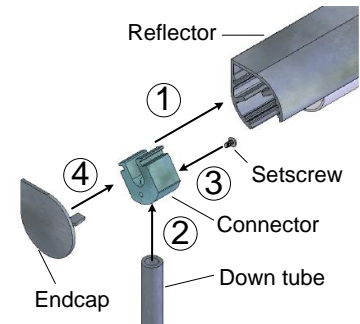


Figure 3

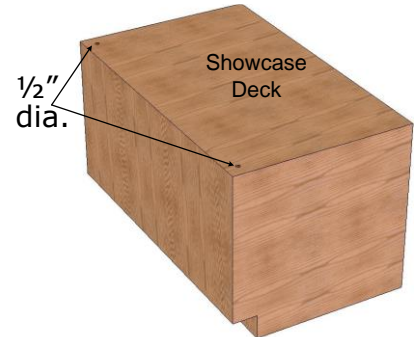


Figure 4

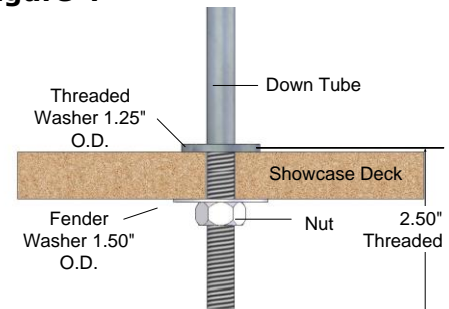
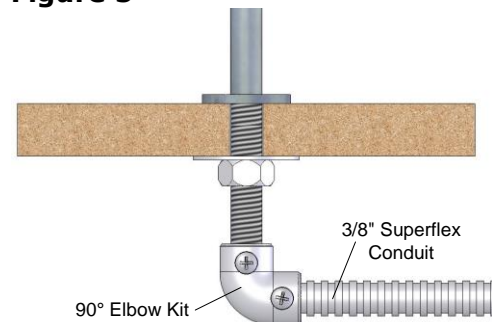


Figure 5



Stylmark Installation Instructions: 683900 LED Cabinet Lighting

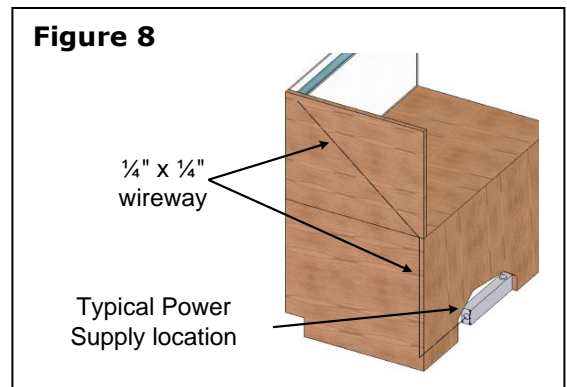
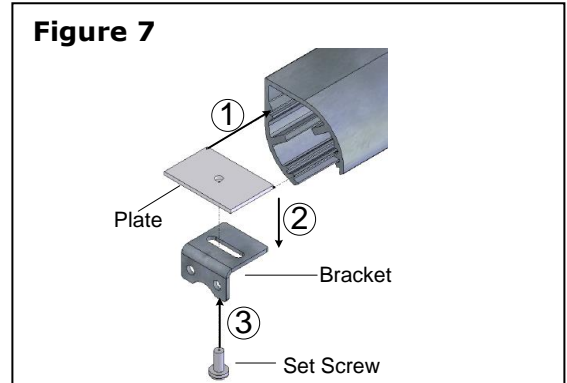
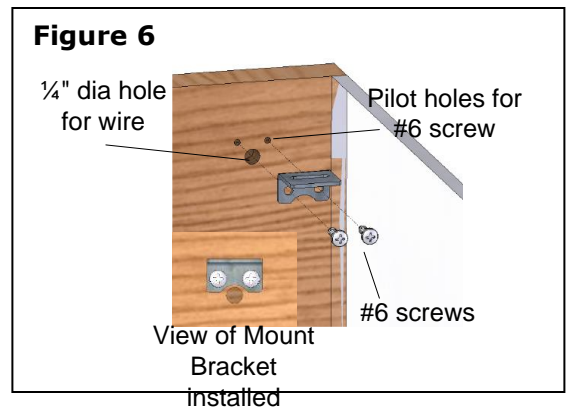
Step-by-Step Instructions Fixed Mount Bracket

1. Use the reflector assembly to determine the location of the mount bracket on the cabinet end. Mark and drill pilot holes for the #6 screws (obtain locally). **(See Figure 6)**
2. Mark and drill a minimum $\varnothing 0.25"$ (6mm) hole in the cabinet end, just below the fixed mount bracket location. **(See Figure 6)**
3. Route a minimum $1/4" \times 1/4"$ (6mm x 6mm) grooved channel on the inside of the cabinet end. The channel should provide a wire way from the reflector to the power supply. **(See Figure 8)**
4. Fasten the fixed mount brackets using #6 screws. (obtain locally) **(See Figure 6)**
5. Connect the low voltage cable to the connectors on the LED wiring harness. Be sure to observe polarity. Route the low voltage cable through the hole and in the wire way. **(See Figure 18)**
6. Slide the mount plate into the top groove of the reflector. **(See Figure 7, Step 1)**
7. Position the reflector and mount bracket clips over the mount brackets. Manually hold in place. Tighten set screw through mount bracket and into the mount plate. **(See Figure 7, Step 3)**
8. Mount the power supply to the underside of the cabinet.
9. Make the wiring connections as shown in the wiring diagram. **(See Figure 18, 19)**

Notes:

The installer determines the power supply mounting location. Be sure to provide for adequate free air movement around the power supply.

The low voltage cable is 156" (3.96 m) and should not be lengthened.



Stylmark Installation Instructions: 683900 LED Cabinet Lighting

Step-by-Step Instructions Cover Tee Mounting

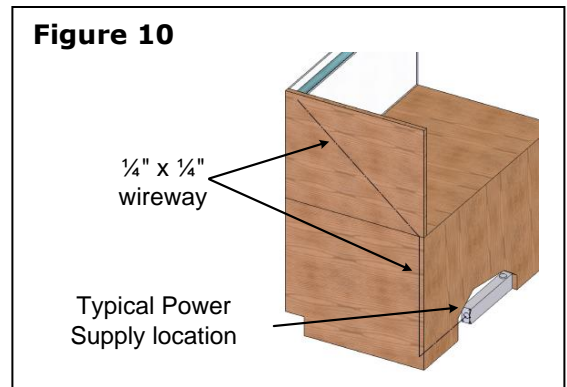
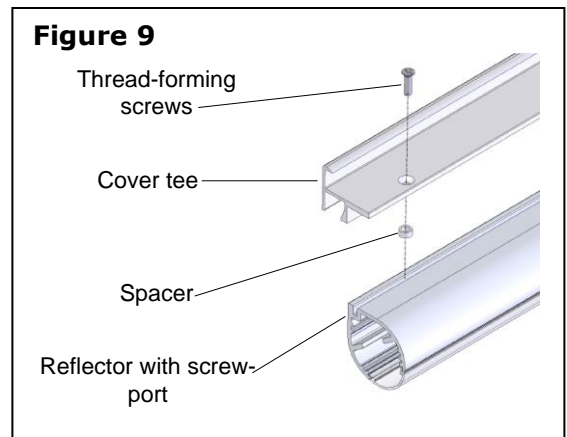
(for pre-fabricated cover tees, skip to step 4)

1. Cut cover tee extrusion to desired length.
2. Using the pre-fabricated reflector for reference, mark the cover tee with locations for mounting holes. (See **Figure 9**)
3. Drill $\varnothing 0.150''$ (3.8mm) through-holes with $\varnothing 0.287''$ (7.3mm) countersink in the cover tee extrusion. (See **Figure 9**)
4. Using #6 thread-forming screws, fasten the cover tee to the reflector. Be sure to place the spacers between the cover tee and the reflector at each screw.
5. Route a minimum $1/4'' \times 1/4''$ (6mm x 6mm) grooved channel on the inside of the cabinet end. The channel should provide a wire way from the reflector to the power supply. (See **Figure 10**)
Alternatively, for glass end showcases, use wire way of showcase top frame.
6. Using appropriate glazing materials, install the cover tee over the front glass of showcase.
7. Connect the low voltage cable to the connectors on the LED wiring harness. Be sure to observe polarity. (See **Figure 18**)
8. Route the low voltage cable through the wire way.
9. Mount the power supply to the underside of the cabinet.
10. Make the wiring connections as shown in the wiring diagram. (See **Figure 18, 19**)

Notes:

The installer determines the power supply mounting location. Be sure to provide for adequate free air movement around the power supply.

The low voltage cable is 156" (3.96 m) and should not be lengthened.



Stylmark Installation Instructions: 683900 LED Cabinet Lighting

Step-by-Step Instructions Mounting to a Rear Vertical in a Showcase

1. Using the mounting angle as a template, mark the locations of each screw. Note: the angle should be positioned such that the top of the angle is touching the underside of the showcase top glass. **(See Fig 11)**
2. The center of the screw should be aligned with the center of the larger diameter opening of the keyhole.
3. Drill holes suitable for #6 pan head screws.
4. Partially fasten a #6 pan head screw (obtain locally) into each hole. Be sure not to tighten fully. Leave a gap for the thickness of the mounting angle.
5. It is recommended to perform a trial fit of the mounting angle. The keyholes should fit over the screw heads and drop down into place. **(See Fig 12)**
6. Remove the mounting angle from the case and fasten to the reflector shell.
7. Securely attach mounting angle to the reflector shell using the #6 x 5/16" flat head screws provided. **(See Fig 13)**
8. Install reflector with mounting angle into showcase by positioning keyholes over mounting screws and ensuring that the mounting angle is dropped down into place.
9. OPTIONAL: Apply felt to the filler strip (if included) and insert into the gap between the mounting angle and the top glass **(See Fig 14)**
10. Route a minimum 1/4" x 1/4" (6mm x 6mm) grooved channel on the inside of the cabinet end. The channel should provide a wire way from the reflector to the power supply. **(See Figure 10)**
Alternatively, for glass end showcases, use wire way of showcase top frame.
11. Connect the low voltage cable to the connectors on the LED wiring harness. Be sure to observe polarity. **(See Figure 18)**
12. Route the low voltage cable through the wire way.
13. Mount the power supply to the underside of the cabinet.
14. Make the wiring connections as shown in the wiring diagram. **(See Figure 18, 19)**

Notes:

The installer determines the power supply mounting location. Be sure to provide for adequate free air movement around the power supply. The low voltage cable is 156" (3.96 m) and should not be lengthened.

Figure 11

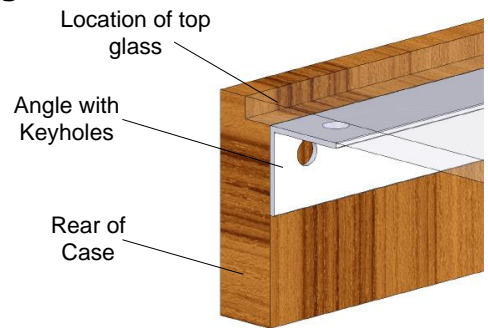


Figure 12

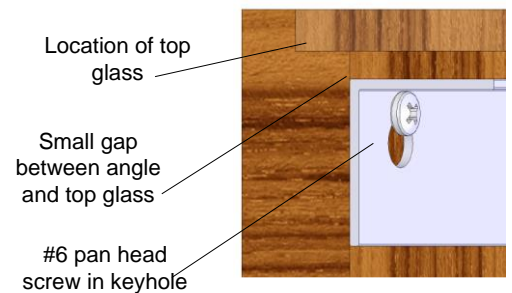
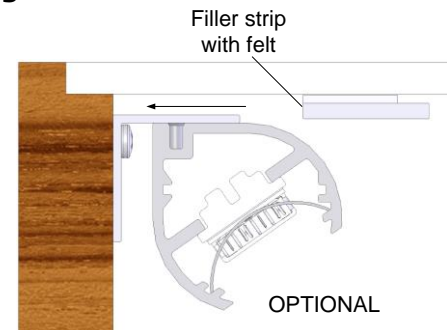


Figure 13



Figure 14



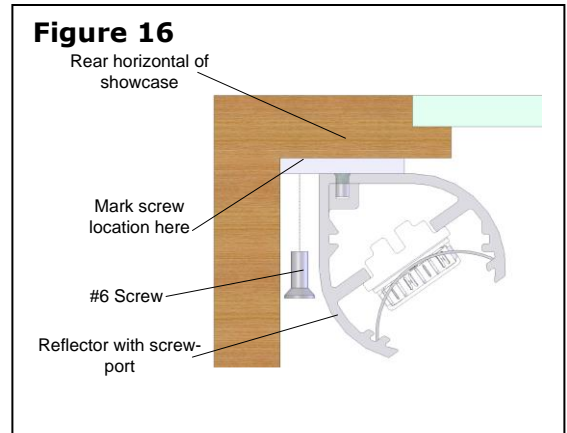
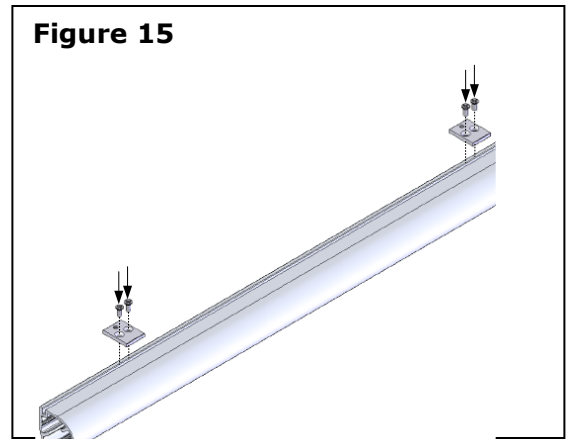
Stylmark Installation Instructions: 683900 LED Cabinet Lighting

Step-by-Step Instructions Mounting to a Rear Horizontal in a Showcase

1. Attach mounting clips to reflector shell using the #6 x 5/16" flat head screws provided. It is recommended that clips be installed within 6" of the end of the reflector with the remainder spaced evenly. **(See Fig 15)**
2. Using the assembly as template mark locations for mounting screws on rear horizontal.
3. Drill holes suitable for #6 flat head screws.
4. Position reflector in place and secure with #6 flat head screws (obtain locally). **(See Fig 16)**
5. Route a minimum 1/4" x 1/4" (6mm x 6mm) grooved channel on the inside of the cabinet end. The channel should provide a wire way from the reflector to the power supply. **(See Figure 10)**
Alternatively, for glass end showcases, use wire way of showcase top frame.
6. Connect the low voltage cable to the connectors on the LED wiring harness. Be sure to observe polarity. **(See Figure 18)**
7. Route the low voltage cable through the wire way.
8. Mount the power supply to the underside of the cabinet.
9. Make the wiring connections as shown in the wiring diagram. **(See Figure 18, 19)**

Notes:

The installer determines the power supply mounting location. Be sure to provide for adequate free air movement around the power supply. The low voltage cable is 156" (3.96 m) and should not be lengthened.

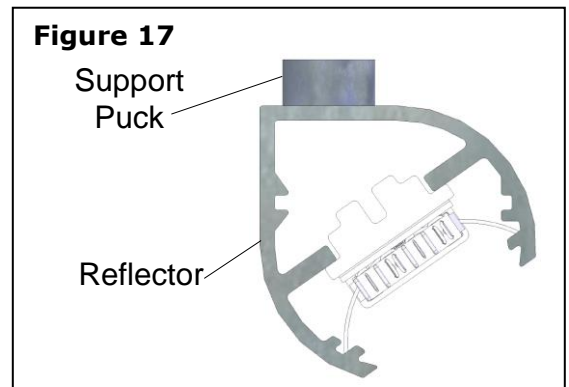


Step-by-Step Instructions Support Puck

Reflectors over a certain length (typically 60") will be provided with a support puck.

(Stylmark recommends using 3M™ Scotch Weld™ Epoxy Adhesive DP-105 Clear, available from suppliers such as Grainger® or Fastenal®)

1. Identify and mark the desired position for the support puck on the light reflector.
2. Clean and prepare surface to adhesive manufacturer's instructions.
3. Apply adhesive to the concave surface of the support puck and position on to the top side of the light reflector, ensuring that all gaps are filled. Take care to position the support puck such that the top of the puck will be parallel to the glass mounting surface. **(See Figure 17)**
4. Allow adhesive to fully cure according to the adhesive manufacturer's instructions. Keep parts from moving during cure.
5. Install all mechanical mounting hardware and prepare for final positioning of light reflector.
6. Apply adhesive to the flat surface of the support puck and position to the underside of the showcase top glass. **(See Figure 17)**
7. Allow adhesive to fully cure according to the adhesive manufacturer's instructions. Keep parts from moving during cure.



Stylmark Installation Instructions: 683900 LED Cabinet Lighting

Power Supply Information

Number of LED Light Modules per Power Supply

Light Engine Type	100W (P/N 230982)
24V Systems	Maximum Number of Modules ²
MIG 24V Deluxe ¹	13 + 0
MIG 24V Premium ¹	6 + 1

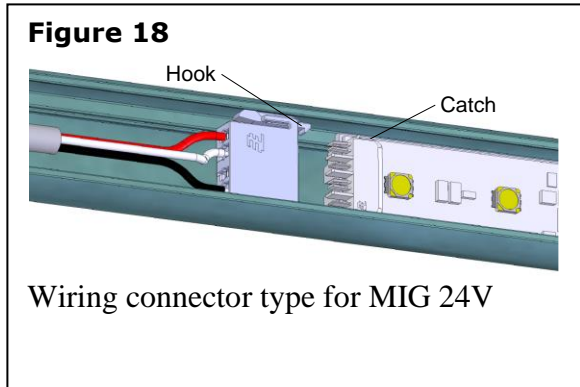
¹ – Modules are designed to be powered from Constant Voltage power supplies only.

² – Number of 12" modules + number of 6" modules which can be powered either from a single wire feed or in multiple parallel branches.

Wiring Instructions

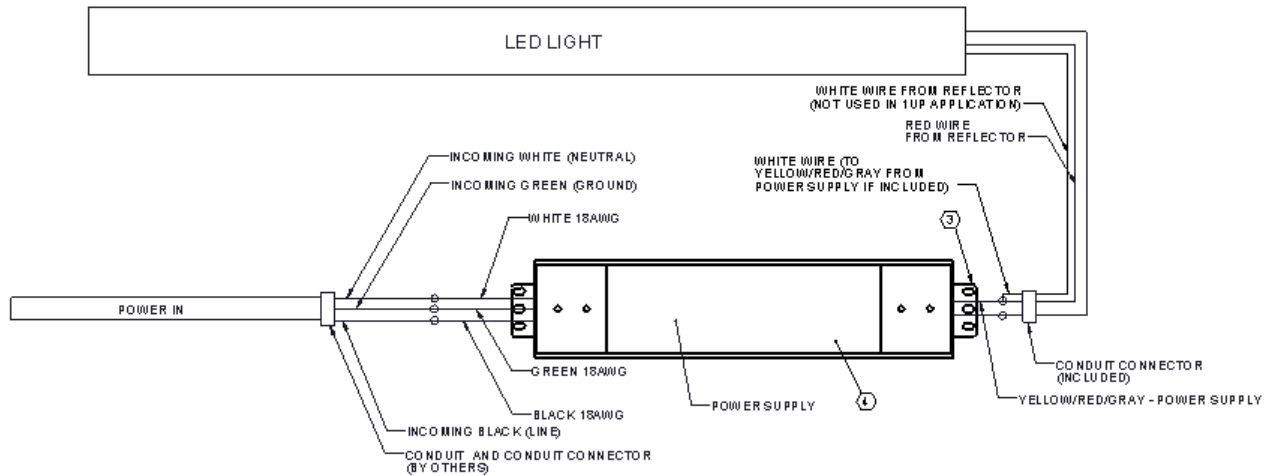
Notes:

- 1) The installer determines the power supply mounting location.
- 2) A minimum volume of 22" (56cm) x 17" (43cm) x 3-1/2" (9cm) is required for power supply mounting.
- 3) The low voltage cable is 156" (3.96 m).



Stylmark Installation Instructions: 683900 LED Cabinet Lighting

Figure 19



NOTES:

1. CONDUIT CONNECTORS TO BE SECURED TO END MOUNT PLATES INCLUDED WITH THE POWER SUPPLY OR TO KNOCK OUTS ON JUNCTION BOX.
2. SECURE CONDUIT AND HARNESS ASSEMBLY WITH CONDUIT CONNECTORS.
- ③ MOUNT POWER SUPPLY USING HOLES ON INCLUDED END PLATES (SCREWS NOT PROVIDED).
- ④ NO BALLAST BOX REQUIRED, POWER SUPPLY UNIT IS SELF CONTAINED
5. LOW VOLTAGE CABLE FROM LED LIGHT WILL BE NON-JACKETED WHEN SUPPLIED AS A DOWNTUBE MOUNT OR WILL BE JACKETED FOR ALL OTHER APPLICATIONS.
6. WHITE WIRE FROM REFLECTOR WILL NOT BE INCLUDED FOR APPLICATIONS WITH 1UP LED MODULES.