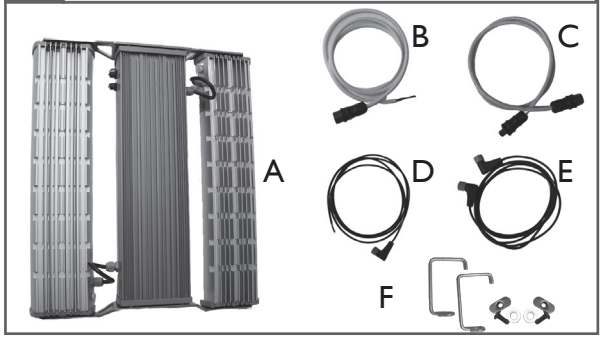
Installation Instructions | TriPlane Linear SQ- Perpendicular Bracket

P.L. LIGHT SYSTEMS

Always turn off and lock out the branch circuit before commencing installation or maintenance work.

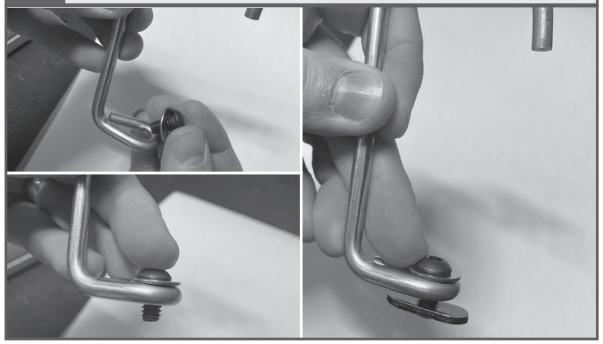
1 Main Components



Unbox luminaire(s) and place on soft surface, along with relevant accessories.

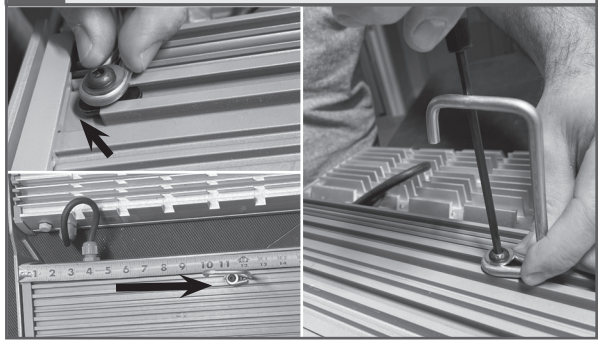
A TriPlane Linear SQ Luminaire
B Power Supply Cord
C Daisy-Chain Power Connector Cord
D 0-10V Control Supply Cord
E Daisy-chain 0-10V Dimming Connector Cord
F Perpendicular Track Bracket w/Hardware (x2)

2 Complete Bracket Assembly



- Place washer onto bolt.
- Install bolt through hole on mounting bracket from above.
- Thread weld nut loosely onto base of bolt.

3 Install Bracket Assemblies

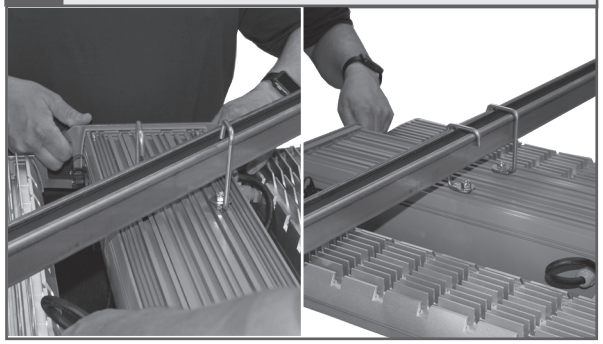


- Slide first bracket assembly into outside channel of driver box and position in center of luminaire.
- Hand tighten nut with a 4mm allen key (do not over-tighten).

4 Mount Luminaire

- Repeat to install second bracket assembly in opposite outside channel.
- Second bracket should be oriented so it faces the opposite direction of the first.

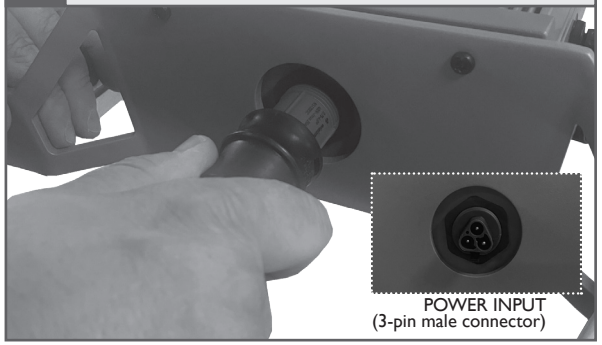
5 Mount Luminaire



- Supporting luminaire by endplate cut-outs, raise luminaire to ceiling at a 45° angle to the mounting structure, then rotate it parallel—so that both brackets are aligned above mounting structure.
- Lower luminaire so that both brackets securely hook over the top of the mounting structure.

NOTE: Never lift luminaire by the LED modules.
Two people may be required for this step.

6 Connect Power Cord



- Connect the whip end of the power cord to the branch circuit. Align 3-pin female connector on power cord and push into luminaire connector (3-pin male) until firmly engaged

NOTE: Always coil and secure excess cable - allowing for drip loops to draw moisture away from connectors

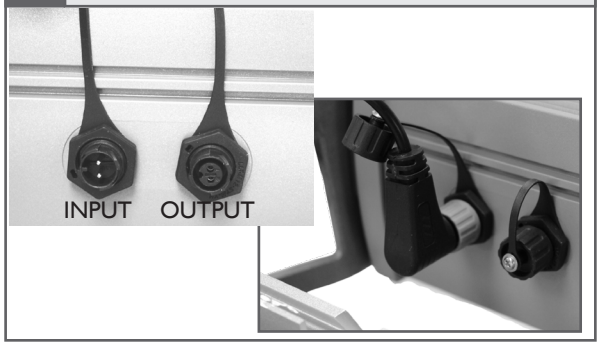
ATTENTION: Luminaires should only be installed by qualified individuals, and in accordance with national and local building and electrical codes.

7 Connector Cap

- Ensure that factory-installed connector cap remains firmly engaged in 3-pin female connector at opposite (power out) end of luminaire to ensure safe operation and IP integrity.
- Cap should ONLY be removed if luminaire is connected to another for daisy chaining.

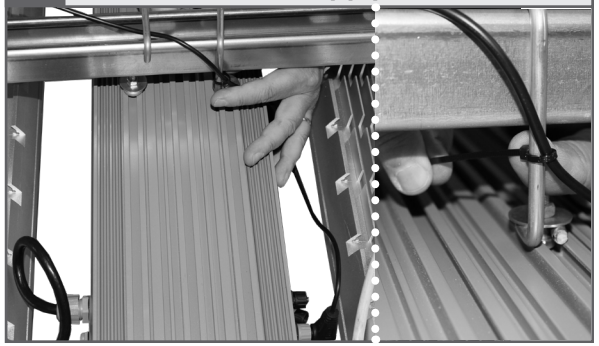
NOTE: Both connectors on the luminaire must be sealed (either with a power cord, daisy-chain connector cord or a cap) once installed. Use of luminaire(s) with exposed connectors will void the product warranty.

8 Connect to Control System



- If connecting luminaire(s) to a control system, remove connector cap from 0-10V input connector on luminaire.
- Push and click open end of right-angle female connector on 0-10V control supply cord into male control input connector on luminaire and twist to lock.

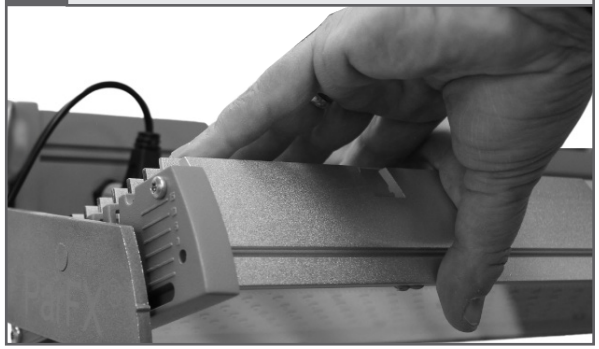
9 Secure Control Supply Cord



- Leaving a drip loop, feed whip end of 10V control supply cord beneath the mounting bracket(s) if possible.
- Secure cord to bracket with zip-tie rated for the greenhouse environment.
- Connect whip end to control system.

NOTE: Both 0-10V connectors on the luminaire must remain capped when not in use to ensure safe operation and IP integrity. Use of luminaire(s) with exposed connectors will void the product warranty.

10 Adjust LED Modules



- LED modules can be individually adjusted in increments of 5° by applying gentle pressure on the side(s).
- The angle of the LED modules should be set in accordance with your light plan.

NOTE: Always wear clean cotton gloves when adjusting LED modules to avoid fingerprints and/or debris on the glass lens.

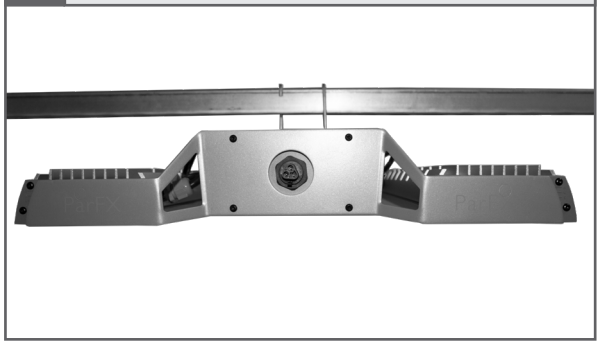
In-line Mounting

- The TriPlane can also be mounted in-line with the track/truss using the "perpendicular" mounting brackets.
- To do this, install both bracket assemblies in the central channel of the driver box and position them in line with the LED module power connections, with the open ends facing towards one another.
- Mount luminaire per step 4 above. Refer to the 2" Track/Truss installation instructions for wiring and/or daisy-chaining instructions if mounting luminaires in this in-line orientation.

2 **ATTENTION: Luminaires should only be installed by qualified individuals, and in accordance with national and local building and electrical codes.** **2**

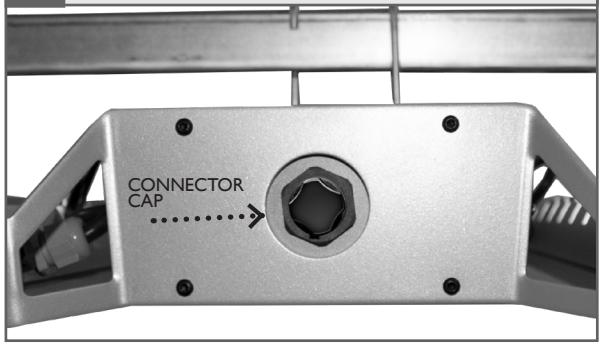
If you are daisy-chaining your luminaires, follow steps 1-10 above, then proceed as follows:

11 Mount Luminaires to be Connected



- Mount remaining luminaire(s) in daisy-chain string in accordance with light plan.

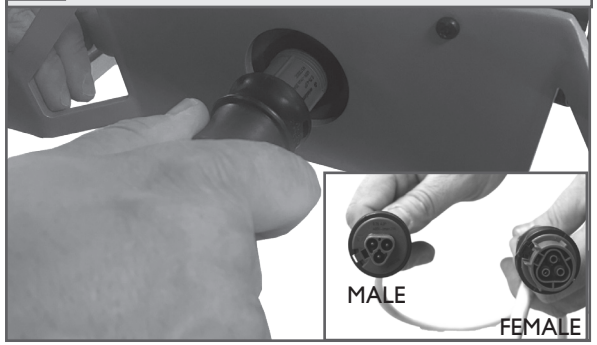
12 Remove Connector Cap



- Remove pre-installed connector cap from 3-pin connectors on "power out" side of luminaire(s) between adjacent modules in daisy-chain string.

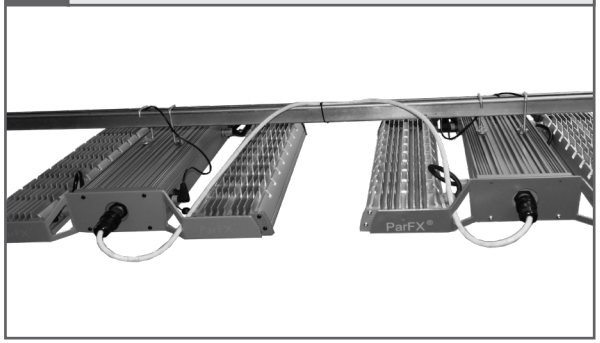
TIP: Store removed connector caps in safe place as they will need to be re-installed if daisy-chain connector is ever removed.

13 Install Power Connector Cable(s)



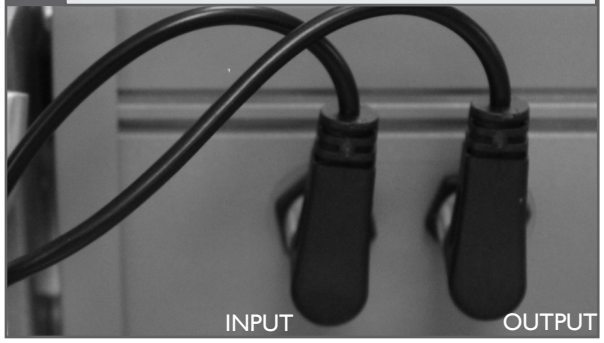
- Securely connect the modules with daisy-chain power connector cables (available in lengths of 3 ft / 6ft / 10 ft / 15ft). Daisy-chain connector cables have a 3-pin female connector on one end, and a 3-pin male connector on the other end.
- The 3-pin male connector on the cord must be installed into the corresponding 3-pin female "power out" connector on the luminaire. The 3-pin female connector must be installed into the corresponding 3-pin male "power in" connector on the next luminaire in the string.

14 Complete Daisy-Chain



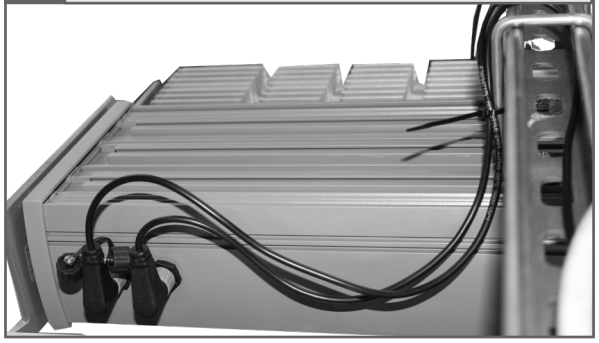
- Continue until daisy-chain is complete, weaving cords through open window of adjacent luminaire end plates to create drip loops.
- Ensure that connector cap remains firmly installed in last luminaire of daisy-chain string to ensure safe operation and IP66 integrity.
- Coil and secure cable to track/truss with zip-ties rated for the greenhouse environment.

15 Connect 0-10V Control



- If daisy-chaining 0-10V control, connect 1st luminaire in string to control system as previously described.
- Remove connector cap on female control output connector on luminaire and insert open end of right-angle male connector on 0-10V daisy-chain dimming cord (click and twist to complete connection).

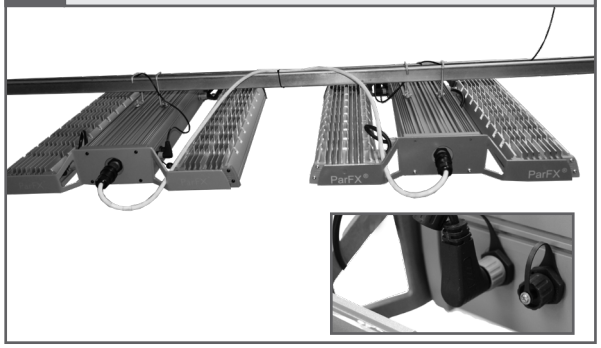
16 Secure Cables



- Coil and secure excess cable - allowing for drip loops to draw moisture away from connectors.

3 **ATTENTION: Luminaires should only be installed by qualified individuals, and in accordance with national and local building and electrical codes.** **3**

17 Finish Daisy-Chaining



- Continue until daisy-chain is complete.
- Ensure that connector cap remains firmly installed on 0-10V output connector of last luminaire in daisy chain string to ensure safe operation and IP66 integrity.

ATTENTION

- The TriPlane Liear dimming is a 0-10V sourcing supply (0.68mA/luminaire) that can be dimmed to off, however, for maximum energy savings P.L. Light Systems recommends using the control system to isolate the mains.

- Always ensure that cords are:
  - Coiled and excess cable secured - allowing for drip loops to draw moisture away from connectors.
  - Not concealed or extended through a wall, floor, ceiling, or other parts of the building structure
  - Not located above a suspended ceiling or dropped ceiling,
  - Not permanently affixed to the building structure
  - Not routed so that they are not subject to strain and are protected from physical damage
  - Visible over their entire length
  - Used within their rated ampacity as determined for the maximum temperature of the installed environment specified in the instructions

Refer to table below for maximum number of luminaires that can be daisy-chained per string, based on your voltage and luminaire output.

DAISY-CHAIN GUIDE		Max. Number of Luminaires / String	
		Luminaire Output	
		HO	LO
POWER	208V	3	6
	240V	4	7
	277V	4	8
	347V	5	10
	400V	6	12
	480V	6	12
DIMMING		25	25

PHOTOBIOLOGICAL RISK GROUP 2
CAUTION Possibly hazardous radiation emitted from this product. Do not stare at operating lamp. May be harmful to the eyes.

Product tested against IEC 62471

Photobiological risk is based on testing of the light output characteristic of a single luminaire. Increased exposure risk to facility personnel may be present, depending on number of luminaires and their placement and/or positioning within the facility. It is the responsibility of the facility management to address these risks at the facility level and to ensure that people entering the plant growth areas while the lights are on, are aware of these risks and that appropriate safeguards are in place.