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USER MANUAL

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# PHOTO BIO<sup>®</sup>

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PHOTOBIO•MX2

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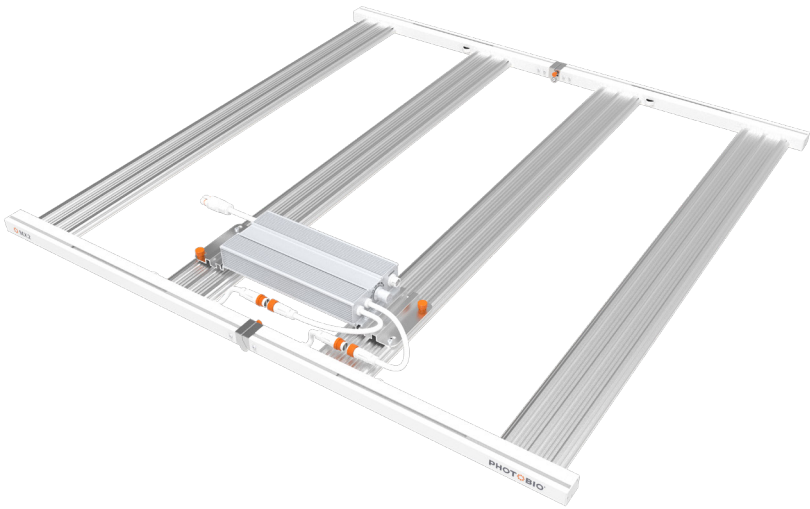


PHOTO  BIO

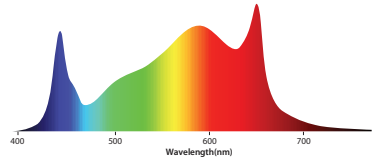
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## OVERVIEW

- 1906  $\mu\text{mol/s}$  PBAR
- 1870  $\mu\text{mol/s}$  PPF
- 2.75  $\mu\text{mol/J}$
- iLOC Integrated Light Output control allows manual adjustment of light output
- Settings are 40%-55%-70%-85%-100%-PX Control
- Driver can be mounted remotely
- 5-year warranty
- 120–277V Driver range
- Slim design maximizes vertical growing space with remote capable driver
- IP65 wet location rated protection against water and dust

## SPECTRA S4 SPECTRUM

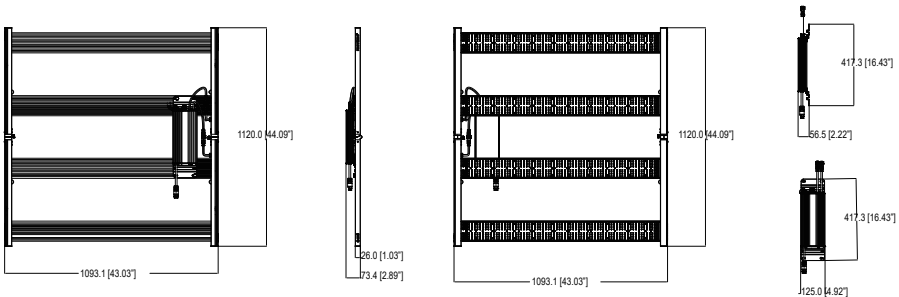
Normalized Photon Output



## ELECTRICAL SPECIFICATIONS

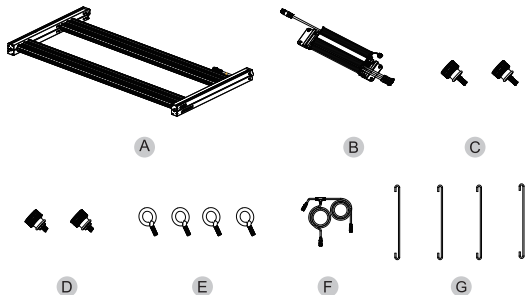
Item Code	PTBZ1000768S4X	Efficacy ( $\mu\text{mol/J}$ )	2.75
Model	PHOTOBIO•MX2	Dimming	0–10V
Spectrum	S4	IP	IP65
Application	Vegetative & Flowering	Weight	25.13 lbs/11.40 kg
Photon Flux ( $\mu\text{mol/s}$ )	1870	Voltage	120–277V
Fixture Power (W)	680	Lifetime to Q90	50,000 hrs

## PRODUCT DIMENSIONS



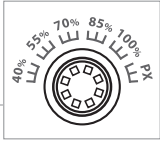
## PARTS LIST

- A: PHOTOBIO•MX2 fixture
- B: Driver
- C: Hinge fastener 10mm (x2)
- D: Driver fastener 6mm (x2)
- E: Eyebolt (x4)
- F: T dimming cable (x1)
- G: Hanger (x4)



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## ILOC INTEGRATED LIGHT OUTPUT CONTROL



### Important:

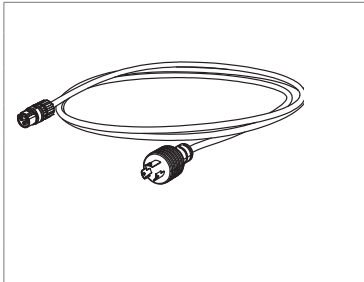
There are 2 types of thumb screws. Part C is longer, for use with the hinge fastener. Part D is shorter, for use with the driver fastener.

## ILOCK INPUT AMPERAGE REFERENCE

Voltage		40%	55%	70%	85%	100%
120V	Power (W)	266.8	369.4	472.9	583.4	699.2
	Amperage (A)	2.239	3.118	4.001	4.937	5.914
208V	Power (W)	264.6	364.1	464.9	571	681.2
	Amperage (A)	1.343	1.801	2.293	2.792	3.318
230V	Power (W)	264.3	364.1	464.1	569.9	678.9
	Amperage (A)	1.236	1.649	2.067	2.525	3.007
240V	Power (W)	264.5	363.4	463.4	569.1	678.7
	Amperage (A)	1.193	1.581	1.987	2.427	2.878
277V	Power (W)	264.5	363.6	463.2	568.4	676.2
	Amperage (A)	1.099	1.423	1.764	2.130	2.511

## CABLE HARNESSES & ACCESSORIES (Sold separately)

**POWER CABLE HARNESSES** are sold separately based upon your specific requirements.



Type of Male	Item Code	Description
	CHE1063000W	10' F 16AWG WT w/leads, Harness
	CHE1063010W	10' F 16AWG WT 110-120V Plug, 5-15P, Harness
	CHE1063015W	10' F 16AWG WT 208-240V Plug, 6-15P, Harness
	CHE1083020W	10' F 18AWG WT locking 277V, L7-15P, Harness
	CHE1083021W	10' F 18AWG WT locking 277V, L7-20P, Harness
	CHE1083025W	10' F 18AWG WT locking 347V, L24-20P, Harness
	CHE1083030W	10' F 18AWG WT locking 480V, L8-20P, Harness

### REMOTE DRIVER KIT

Allows driver to be mounted remotely

### PHOTO•LOC 0-10V CABLE KIT

Allows linking of fixtures together to control light output and photo-period when used with controller.

### AUTOPILOT PX2 ADVANCED LIGHTING CONTROLLER

Centralized control of up to 80 PHOTOBIO fixtures. Provides dual zone photoperiod timing, photosynthetic photon flux scheduling, temperature based auto-dimming, high temp shutdown, sunrise/sunset simulation, with built in battery backup.

Product image	Item Code	Description
	PTBRDMX16W	16' PTB-MX <b>Remote driver kit</b> , 2 WT IP65 DC cables, 1 hanger
	PTBCC8820W	8' PHOTO-LOC 0-10V <b>Cable Control Kit</b> , 2 cables and TEE (MX- X-M-T-T Duo)
	APDPX2	<b>Autopilot PX2 Advanced Lighting Controller</b>

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## **WARNING – POSSIBLE RISK OF INJURY TO EYES AND SKIN**

**Hazardous optical UV, HEV, and IR radiation may be emitted from the light source. Always wear personal protective equipment ensuring complete shielding of skin and eyes. Avoid prolonged exposure and looking directly at light source.**

## **WARNINGS**

**Please read these installation instruction carefully and keep it on hand. Before installing, servicing, or performing routine maintenance, follow these general precautions:**

- For the installation: if you are unsure about the installation or maintenance of this fixture, consult a qualified licensed electrician and check your local electrical code.
- Do not make or alter any open holes in an enclosure of wiring or electrical components during kit installation.
- Turn off the power and unplug fixture when you perform any maintenance or cleaning activity.
- Verify that supply voltage is correct by comparing it with the information on spec label.
- Avoid hitting, bending or causing mechanical stress to the fixture.
- DO NOT cover or block any part of the fixture during operation.
- To ensure optimal performance, the back of the lighting panels may require periodic cleaning. Clean with compressed air or damp lint free cloth.
- 12" Clearance must be maintained from any combustible surface.
- Always provide a well-ventilated environment where ambient temperatures do not exceed 40°C (104°F) regardless of whether the fixtures are in operation or off. Excessive temperatures can inhibit performance and may cause damage or shorten the life of the fixtures and void the warranty.
- Do not run or store fixtures in the facility unless proper environmental cooling systems are in operation. Facilities that are “shut down” can record excessively high temperatures resulting in premature equipment failure.
- When calculating cooling needs for your facility, take into consideration BTU load generated by LED fixtures.
- This IP 65 LED fixture is intended for indoor use only. Avoid high pressure jets of water.
- Do not expose the fixture to the sulfur dioxide compound. If sulfur application is part of your practice, please make sure to remove the fixtures prior to this process.

### **Additional safety warnings:**

- Cables shall not be concealed or extended through a wall, floor, ceiling, or other parts of the building structure.
- Cables shall not be located above a suspended ceiling or dropped ceiling; permanently affixed to the building structure.
- Cables shall be routed so that they are not subject to strain and are protected from physical damage; and visible over their entire length.
- Cables shall be used within their rated ampacity as determined for the maximum temperature of the installed environment specified in the instructions.
- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- CAN ICES-3(B)/NMB-3(B)

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## INSTALLATION

Before you start the installation, make sure to address the following: This fixture installation requires 2 people, a flat, clean and soft surface of at least 4'x4' (e.g.: blanket, foam...etc).

Be sure that the fixture is unplugged from the power source before installation.

### Step 1.

- Take out the lighting fixture (Part A) and driver (Part B) out of box separately with care.
- Place the light fixture on a flat platform. Unfold panels of the light fixture so that LEDs are downward (Fig. 1). Ensure hinge is fully extended and light panels are completely flat.
- Use Hinge fastener (Part C) to fasten hinge hole on both side hinges (Fig. 2).

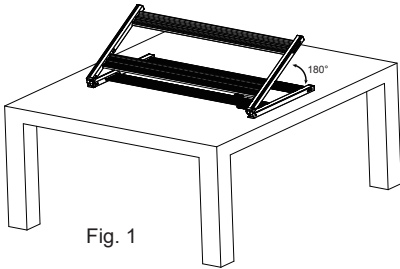


Fig. 1

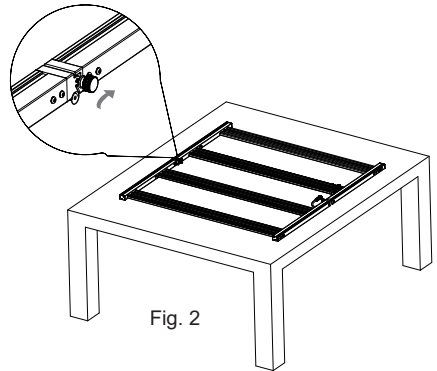


Fig. 2

### Step 2.

- Adjust the eyebolt (Part E) to desired position (Fig. 3).
- Once the eyebolts are in position, screw them in as shown in Fig. 4.

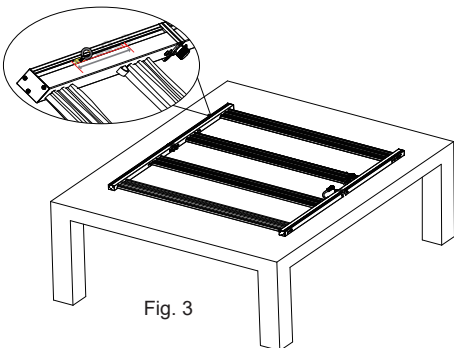


Fig. 3

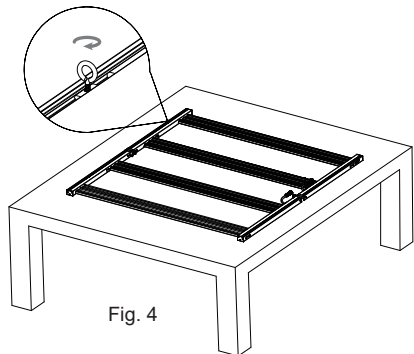


Fig. 4

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## Step 3.

Identify driver connection carefully (Fig. 5).

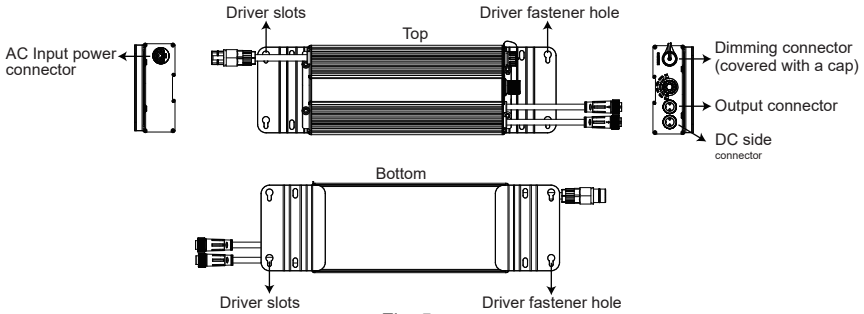


Fig. 5

## Step 4.

- Place the driver on the track in the side of fixture (Fig. 6).
- Position the driver slots into position screws on the lighting fixture.

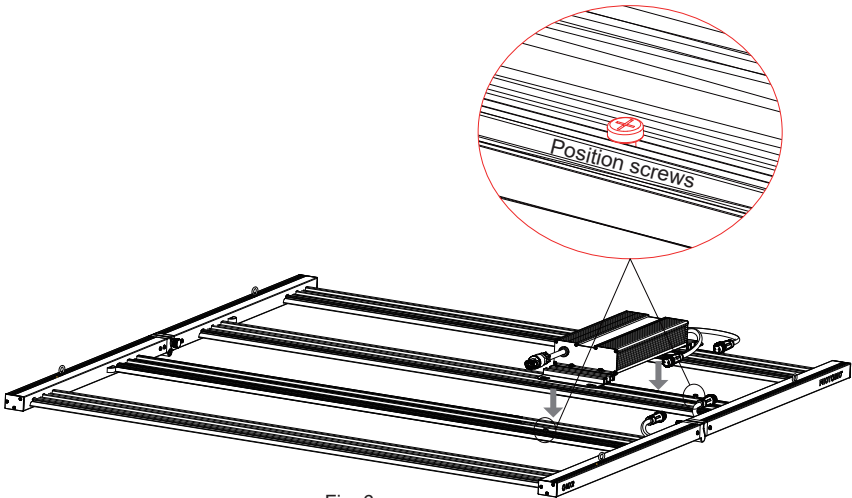
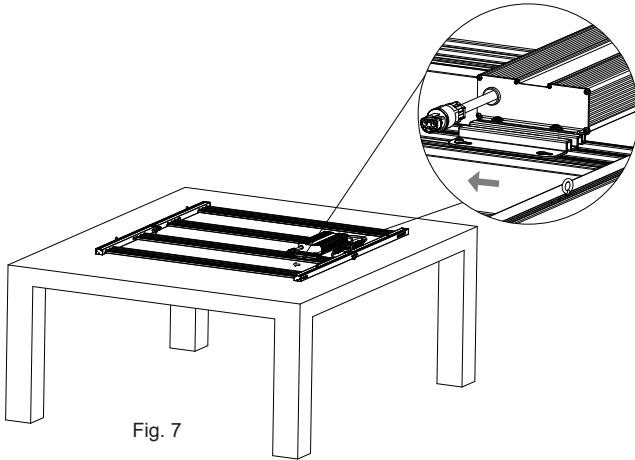


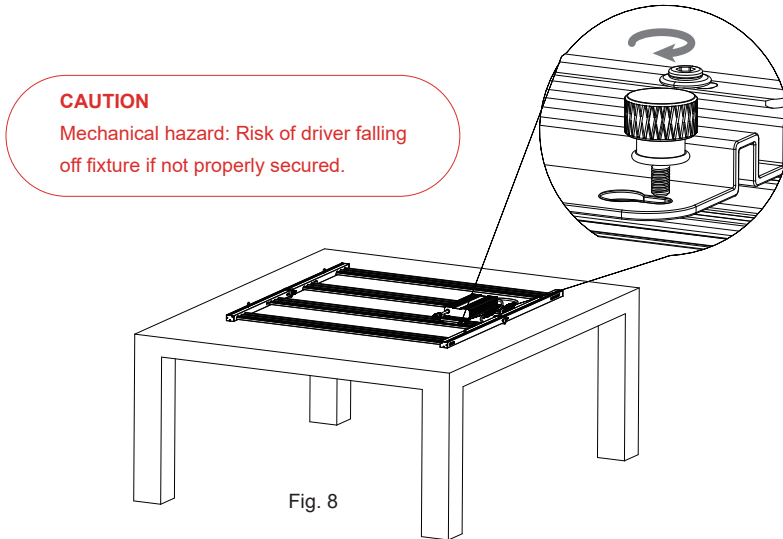
Fig. 6

## Step 4, continued

c. Slide the driver in the direction of the arrow marking (Fig. 7).



d. Once the driver is in position, make sure to screw in both orange driver fasteners (Part D). This step is important to secure the driver in place (Fig. 8).



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## Step 5.

Connecting driver to light fixture.

Plug in both DC cables of LED light panels to driver's DC side (Fig. 9). Spin the orange cap til tight. Make sure each cable plugs into its adjacent connector.

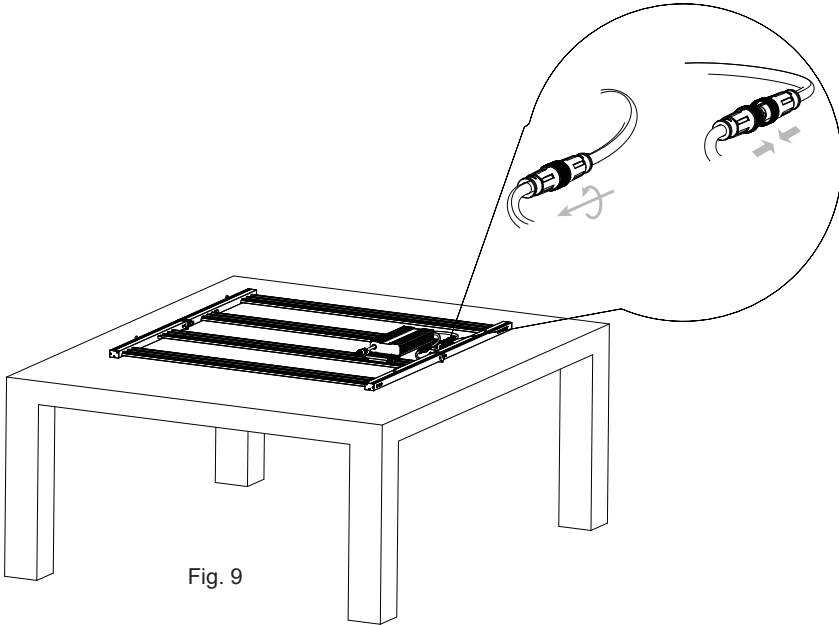


Fig. 9

### **CAUTION: Risk of Product Damage and Void of Warranty:**

Both of the ballast DC output plugs must be securely connected to the panels before applying power to the fixture. DO NOT turn the fixture on with either DC cable disconnected. Failure to comply will void the warranty.



## Step 6. Mounting the fixtures.

**IMPORTANT:** To ensure best results, always orient the fixture with the logo on the end caps facing the aisle. This will ensure greater uniformity.

Suspended mounting, see Fig. 10.

Use 4 rope ratchets to connect to all 4 lancet openings as shown in Figure 10.

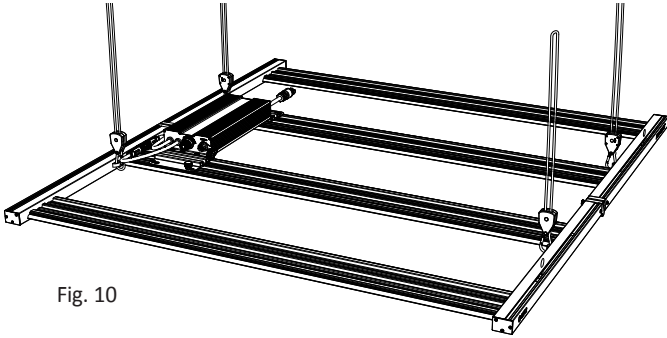


Fig. 10

Suspended mounting on racks, see Fig. 11.

Place the hanger (Part G) into the eyebolt and suspend from rack.

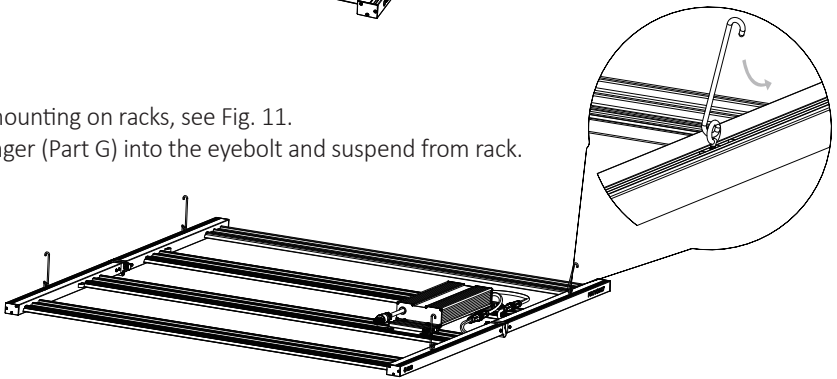
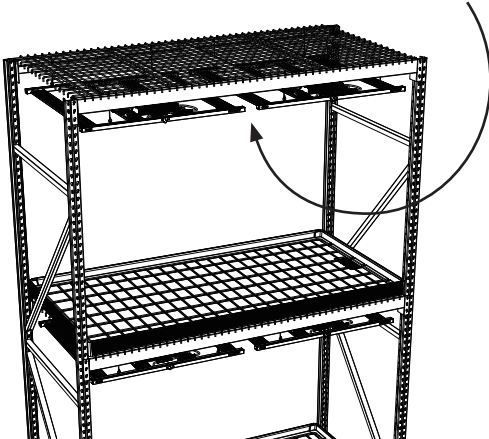


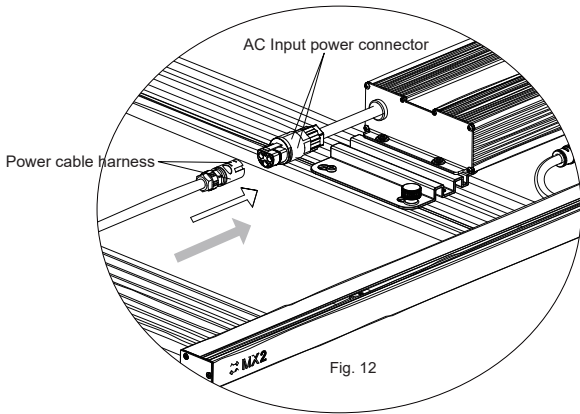
Fig. 11



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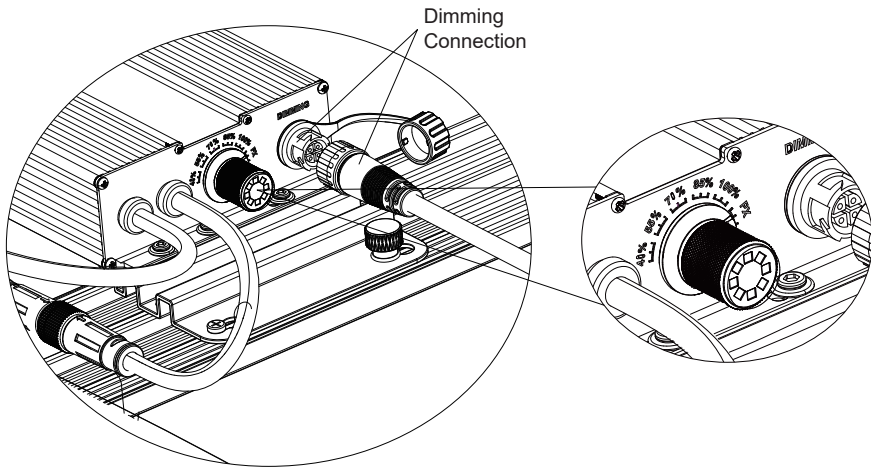
## Step 7. Power Connection

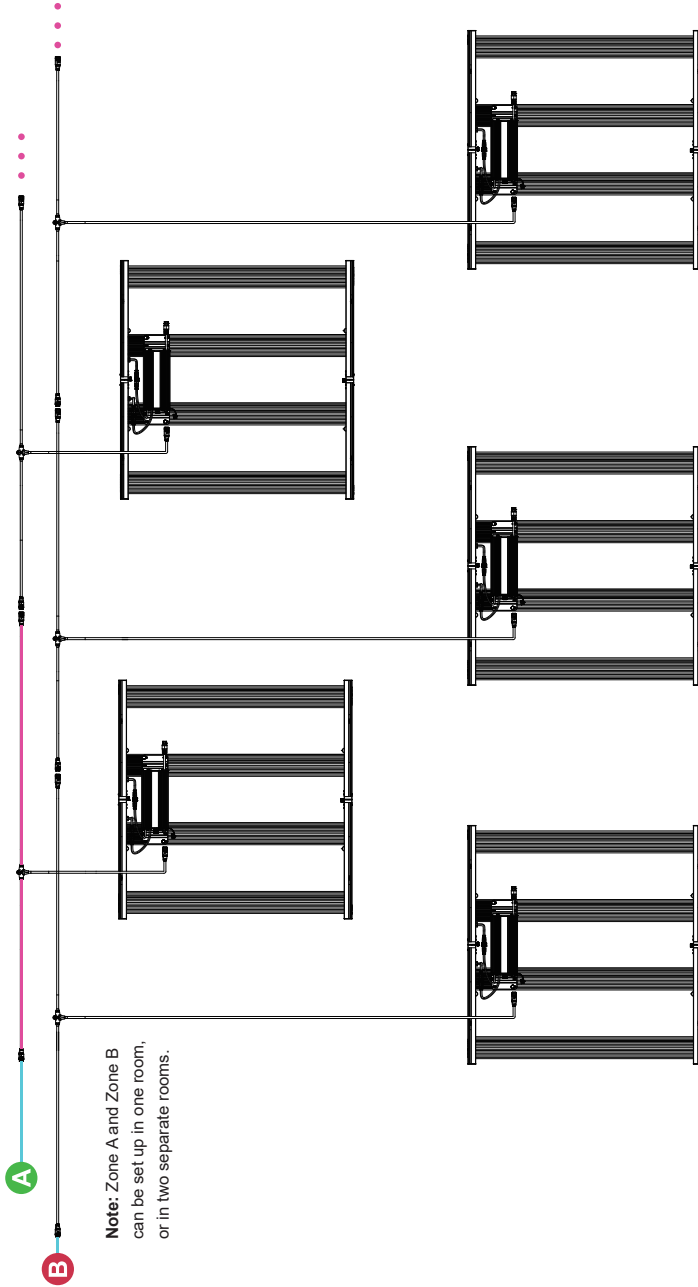
Connect the power cable harness with the driver AC connector as shown in Fig. 12.



## Dimming Connection (Optional)

The Product is equipped with dimming connection supporting 0–10V dimming signal. Turn ILOC knob to PX mode. Use the provided T dimming cable (Part F) included interface with Autopilot PX2 Advanced Digital & Analog Lighting Controller (APDPX2) to centralize control of up to 80 fixtures.





**Note:** Zone A and Zone B can be set up in one room, or in two separate rooms.

**IMPORTANT:** Do not attach data link cables to AC power cable. Always keep low voltage data cables and high voltage AC power harness as far as possible from each other for stable signal transmission. Avoid coiling data cables as well as AC harnesses in tight coils. Excess cable should be managed by creating long loops as opposed to tight coils.



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## LIMITED WARRANTY

Hydrofarm warrants **PHOTOBIO•MX2** to be free from defects in materials and workmanship. The warranty term is for 5 years beginning on the date of purchase. Misuse, abuse, or failure to follow instructions is not covered under this warranty. Hydrofarm warranty liability extends only to the replacement cost of the product. Hydrofarm will not be liable for any consequential, indirect, or incidental damages of any kind, including lost revenues, lost profits, or other losses in connection with the product. Some states do not allow limitation on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you. Hydrofarm will, at our discretion, repair or replace **PHOTOBIO•MX2** covered under this warranty if it is returned to the original place of purchase. To request warranty service, please return **PHOTOBIO•MX2**, with original sales receipt and original packaging to your place of purchase. The purchase date is based on your original sales receipt.



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