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# USER MANUAL

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# PHANTOM PHOTOBIO®

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## PHOTOBIO•VP

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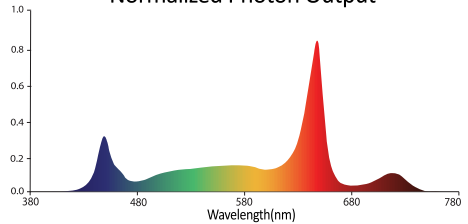
## PRODUCT OVERVIEW

**PHOTOBIO•VP** is a modular, high-efficiency LED designed for vertical farming and propagation applications. **PHOTOBIO•VP** has a tailored spectrum proven worldwide in everything from heavily automated massive vertical farms down to single rack installations. **PHOTOBIO•VP**'s slim vertical profile maximizes vertical real estate allowing greater production space, and its modular design lets you link and power multiple 100–277V fixtures from a single power input. The fixture features a true IP65 ingress protection rating from dust and liquids. IP65 power connection allows quick attachment at the fixture for easy installation and maintenance.

- **PHOTOBIO•VP 32W 2 Pack 100-277V VE (NO CORD).**
- **PHOTOBIO•VP** is intended as a Vertical farming and Propagation LED solution.
- Offers high-capacity production capabilities and slim vertical design to maximize vertical grow space.
- Modular design provides the ability to link and power multiple 100–277V fixtures from a single power input.
- Powerful VE Spectrum is ideal for vertical farms, vegetative stages, and cuttings that benefit from strong red and blue wavelengths.
- IP65 rated with 5-year warranty.

### VE SPECTRUM

Normalized Photon Output



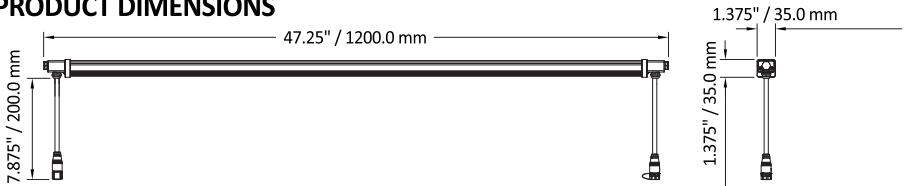
## ELECTRICAL SPECIFICATIONS

Item code	PTB1130VEPX
Model	PHOTOBIO•VP
Spectrum	VE
Application	Vegetative & Leafy Greens
Photon Flux ( $\mu\text{mol/s}$ )	73.6
Power (W)	32W

Efficacy ( $\mu\text{mol/J}$ )	2.1 @ 120V
IP	IP65
Net Weight	3.09 lbs/1.4 kgs
Voltage	100–277V
Lifetime to L90	$\geq 50,000$ hr

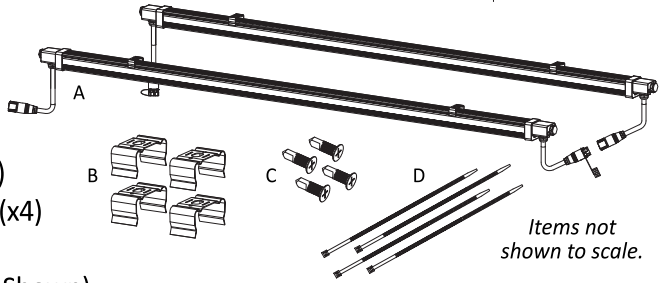
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## PRODUCT DIMENSIONS



## PARTS LIST






- A. PHOTOBIO•VP 32W Fixture (x2)
- B. Mounting Clip (x4)
- C. Mounting Screws (x4)
- D. Zip Tie (x4)
- E. User Manual (Not Shown)



- Avoid direct eye exposure to the light source while it is on.
- Account for small parts and recycle or dispose of packing material properly.

## POWER CABLE HARNESES (sold separately)

Sold separately based upon your specific requirements.

 *Male End	Type of Male*	Item Code	Description
		CHM028200W	24" Leads PHOTOBIO VP Harness, 18AWG
		CHM108210W	10' 110-120V PHOTOBIO VP Harness, 5-15P, 18AWG
		CHM108215W	10' 208-240V PHOTOBIO VP Harness, 6-15P, 18AWG
		CHM108220W	10' 277V PHOTOBIO VP Harness, L7-15P, 18AWG

## PHOTOBIO VP Power Link Cable (sold separately)

Allows linking of fixtures between aisles or levels.

	Item Code	Description
	PTBVJP18W	18" PHOTOBIO VP Power Link cable, 18AWG

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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 instructions carefully and keep them 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 before you perform any maintenance or cleaning.
- 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 a 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 excessive high temperatures resulting in premature equipment failure.



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- When calculating cooling needs for your facility, consider BTU load generated by LED fixtures and latent load generated by plant transpiration, human respiration, etc.
- This IP65 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, always remove 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.

 **IMPORTANT:** Improper use of daisy chains can cause severe load issues and will void warranty. Never exceed the maximum number of fixtures that can be daisy-chained:

<b>Voltage</b>	<b>Max. Fixtures</b>	<b>Voltage</b>	<b>Max. Fixtures</b>
120V . . . . .	10	240V . . . . .	21
208V . . . . .	18	277V . . . . .	23
230V . . . . .	20		

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## INSTALLATION – SURFACE MOUNTING

1. After determining fixture placement, fix mounting clips (Part B) to the mounting surface with screws (Part C) as shown in Fig. 1, or utilize zip ties (part D) as shown in Fig. 2.

Fig. 1

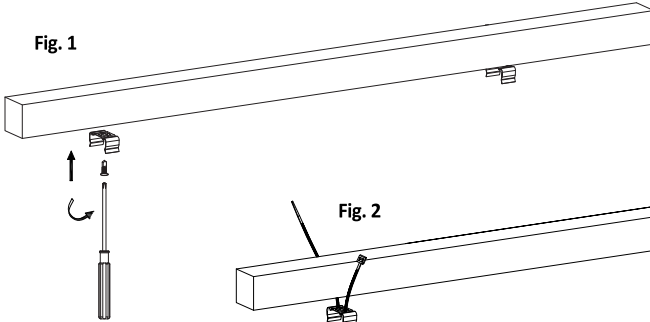
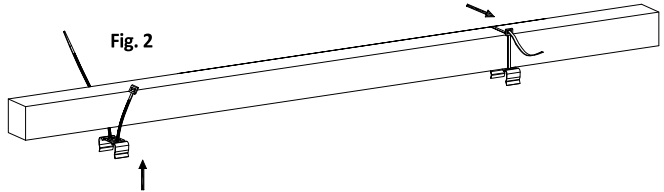
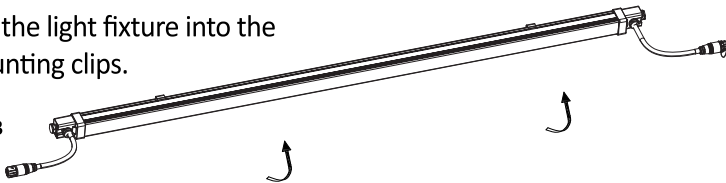


Fig. 2



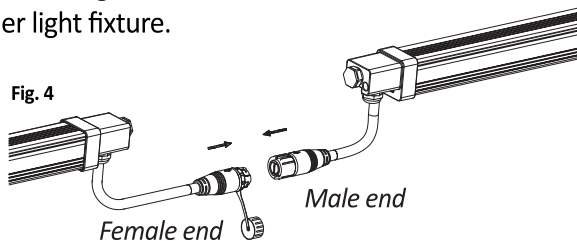
2. Clip the light fixture into the mounting clips.

Fig. 3



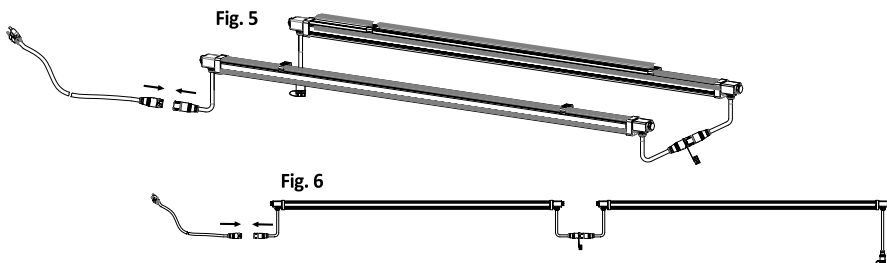
3. Remove the connector cap off the female connector. Connect female end of one light fixture end to the male connector of the other light fixture.

Fig. 4



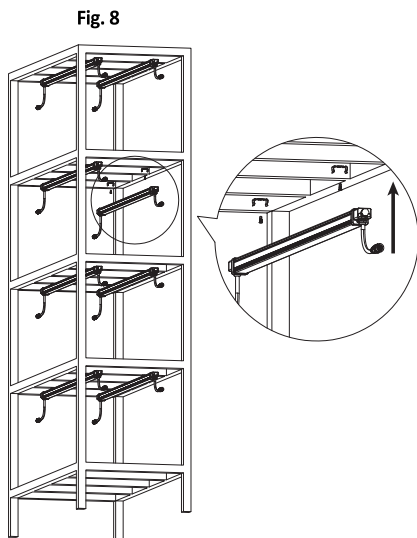
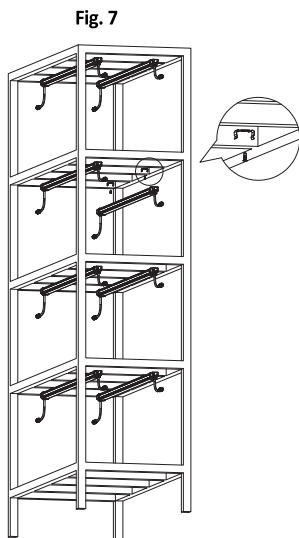
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4. Connect AC power cable harness to the male end of the light fixture, as shown in Fig. 5 and Fig. 6.



## INSTALLATION – VERTICAL FARM & WAREHOUSE RACK MOUNTING

Be sure that the fixture is unplugged from the power source before installation. Determine position of mounting clips (Part B) on rack and fix clips into place using the provided screws (Part C), as shown in Fig. 7, then clip light fixture into clips, as shown in Fig. 8.



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Surface mount clips (Part B) are designed to accept zip ties for mounting on wire shelves as well.



Fit zip ties through the surface mount clips (Part B) and determine mounting position on wire shelf, as shown in Fig. 10. Close zip ties (Part D) just enough until they lock so they can support weight. Clip light fixture into surface mount clips (Part C) and make any necessary adjustments. Tighten zip ties (Part D) until the light fixture is firmly in place against wire shelf, as shown in Fig. 11.

Fig. 10

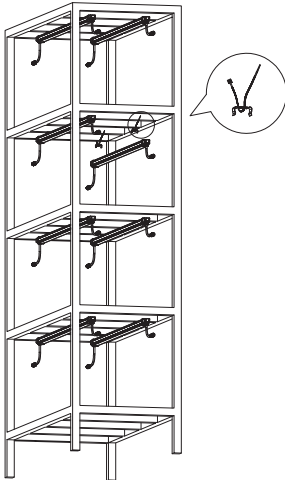
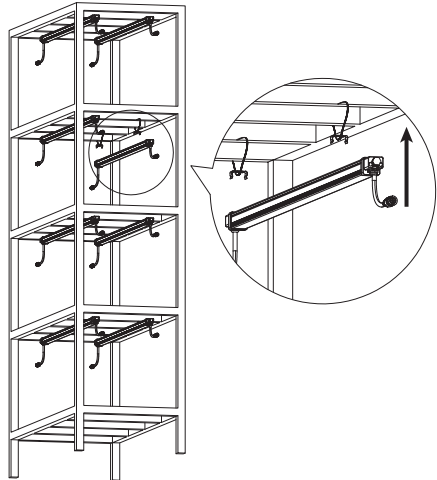


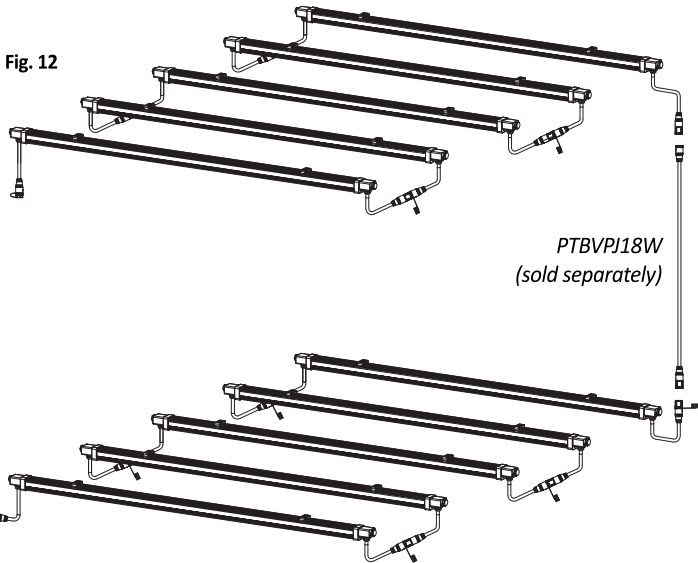
Fig. 11



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## DAISY-CHAIN CONNECTION (OPTIONAL)

The product allows multiple fixtures to be interconnected via daisy-chain from a single power cord. The number of fixtures varies depending on input voltage. This can be beneficial in many growing applications. If you find you need extra length to cross levels or aisles, we have 18" power link cables available that are sold separately (PTBVPJ18W).



**!** **IMPORTANT:** Improper use of daisy chains can cause severe load issues and will void warranty. Never exceed the maximum number of fixtures that can be daisy-chained:

Voltage	Max. Fixtures	Voltage	Max. Fixtures
120V	10	240V	21
208V	18	277V	23
230V	20		

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## LIMITED WARRANTY

Hydrofarm warrants **PHOTOBIO•VP** 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•VP** covered under this warranty if it is returned to the original place of purchase. To request warranty service, please return **PHOTOBIO•VP**, 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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