Horticulture LED Grow Light User Manual

Horticulture LED Grow Light - Model-H (480V)

• SAFETY PRECAUTIONS

Read the installation and operation instructions carefully before installing and operating this device. Proper adherence to these instructions is essential.

• WARNING

- Users are responsible for the connection and safe installation and usage of the devices.

- Before installing, servicing, or performing routine maintenance, follow these general precautions.

- It is highly recommended to have a certified personnel or licensed electrician to install your grow light.

- If you are unsure about the installation or maintenance of the fixture, consult certified personnel, licensed electrician and check your local electrical code.

- Tightly secure the light fixtures using appropriate mounting hardware to ensure the fixtures are safe to work under. Please read and follow the instructions.

- Ensure the building structure, mounting solutions and components being used are rated to support the weight of the light fixtures.

- DO NOT make or alter the enclosure of internal wiring or the electrical components during light fixture installation.

- Turn off the power and unplug the fixture when you perform any maintenance.

- Verify if the electrical system can support the voltage and current requirements correctly by referring to the information on the specification labels.

- Avoid hitting, bending or causing mechanical stress to the fixture.

- DO NOT cover or block any part of the fixture during operation.

- To clean the LED bar, use a mild soap or detergent (e.g. common dishwashing liquid) and lukewarm water by gently using a clean soft damp cloth.

- Always provide a well-ventilated environment where ambient temperatures do not exceed 104 °F (40 °C) regardless of whether the fixtures are in operation or not. Excessive temperatures can inhibit performance and may cause damage or shorten the life of the fixtures and void the warranty.

CAUTION

Read all instructions carefully before installation.

This product is not intended for use by any persons and children with reduced physical, sensory or mental capabilities or lack of experience and product knowledge.
The device is designed to be installed INDOORS IN A SPACE THAT IS PROTECTED FROM RAIN AND FLOODING.

General maintenance is not required. DO NOT clean the interior, with any chemicals that might cause damage. To clean the light fixture, use a damp cloth only.

5 YEARS LIMITED WARRANTY

ThinkGrow warrants its LEDs to be free from defects in materials and workmanship. The product is warranted 5 years from the date of purchase. Misuse, abuse, or failure to follow instructions is not covered under this warranty. The warranty liability extends only to the replacement cost of the product. ThinkGrow 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 limitation or exclusions may not apply to you. ThinkGrow will, at our discretion, repair or replace its products covered under this warranty if it is returned to the original place of purchase.

OVERVIEW

The Model-H(480V) is a 4' wide grow LED designed to cover 4' wide grow racks or tables for high PPFD cultivation practices in multi-tier vertical farming or single-level indoor horticulture. The full spectrum diodes on the Model-H(480V) are designed to cover each phase of plant growth from vegetative to flowering. The supplemental 660 nm Deep Red diodes provide spectral tuning capability and allow growers to selectively boost the amount of Red light for increased flower production.

- Outstanding Efficiency at >2.7 umol/J
- Adjustable Full Spectrum
- On-board Dimming
- Patented Plug and Play LED light bars
- External Controllability with 256 fixtures per channel
- Group Control Capability

PACKAGE CONTENT

Main Body:
1 x Model-H (480V) Driver
8 x Model-H LED Light Bars

Accessories:
1 x 12' 480V Power Cord
1 x 16ft 4-Pin Waterproof Extension Cable
2 x Driver Hanger

• SPECIFICATION

PPF:	>1700 μmol/s
Efficacy:	>2.7 μmol/J
Input Power:	630 W
Input Voltage:	Autosensing 347-480V~, 50/60Hz
Power Factor:	≥90%
Amperage Draw:	1.94A @347V, 1.47@480V
BTU:	2149.65 btw/h
LED LM Rating and Lifetime:	L90: >54,000 hours
Ingress Protection (IP Rating):	IP56
Working Environments:	Temperature: 32-104°F (0-40°C) Humidity ≤90%
Mounting Height:	>6"(15.2cm) Above Canopy
Product Dimensions:	1144mm(L) x 1155.8mm(W) x 133.8mm(H) 45"(L) x 45.5"(W) x 5.27"(H)
Package Dimensions:	1170mm(L) x 263mm(W) x 244mm(H) 46.06"(L) x 10.35"(W) x 9.61"(H)
Product Weight:	41.67lbs / 18.90kg

ETL
C LISTED CM US
Intertek
5008191

CONFORMS TO UL
STD.8800
CERTIFIED TO UL
STD.8800

• PRODUCT DIMENSIONS

45"(114.4cm)

45.5"(115.58cm)
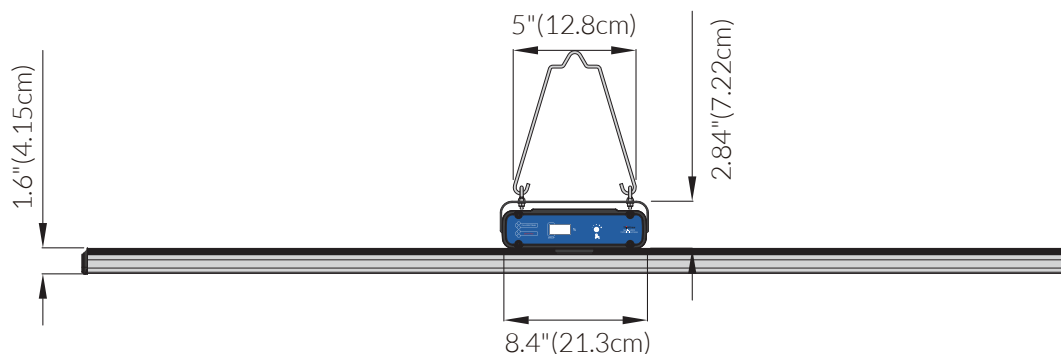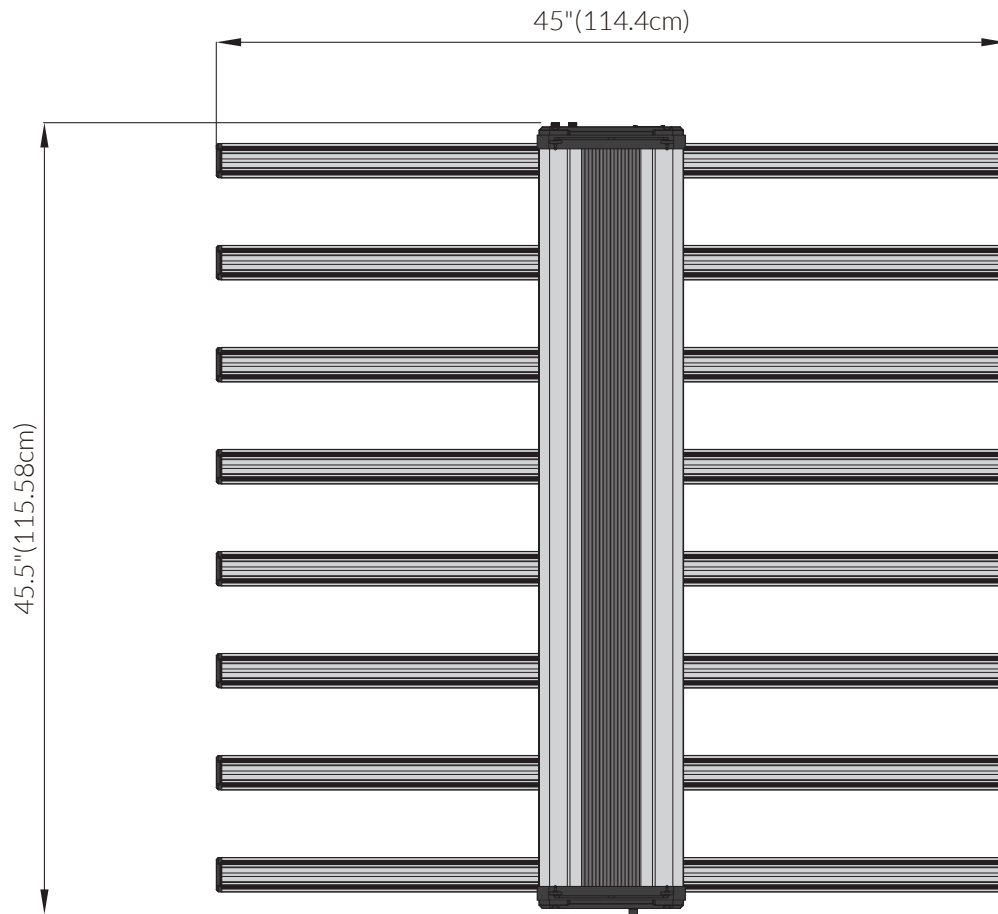
• LIGHT SPECTRUM

Full Spectrum   **100%**

Deep Red 660   **0 %**

VEG

100%
80%
60%
40%
20%
0

380   430   480   530   580   630   680   730   780   830
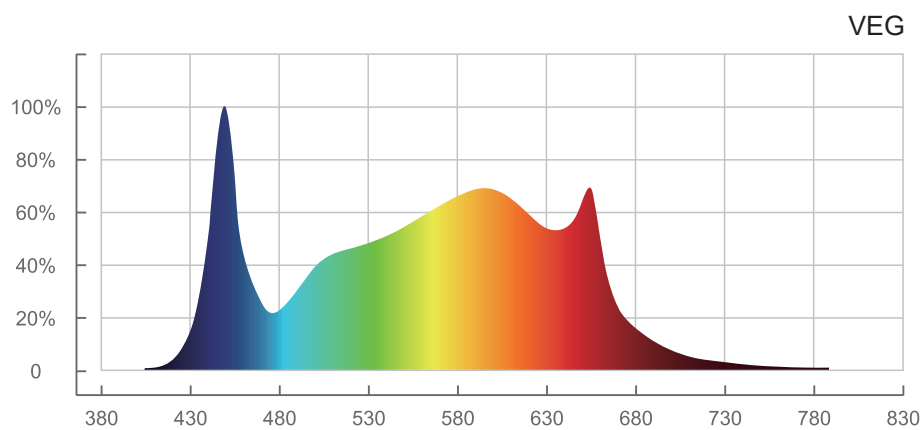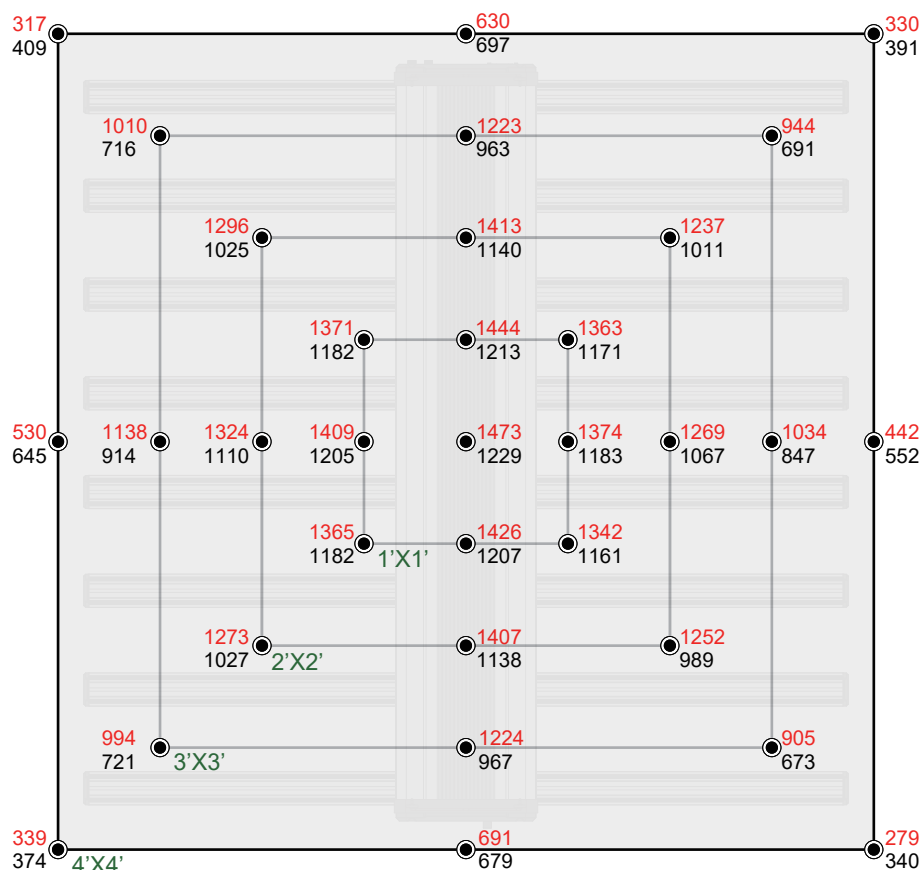
Full Spectrum   90%
Deep Red 660   100%

BLOOM
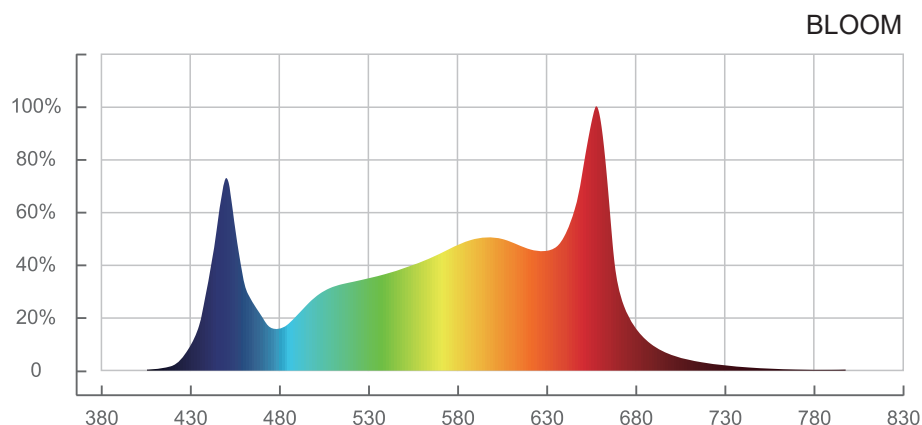
• AVERAGE PPFD

MODEL-H (480V) (**Tested at 6"** / Tested at 12")
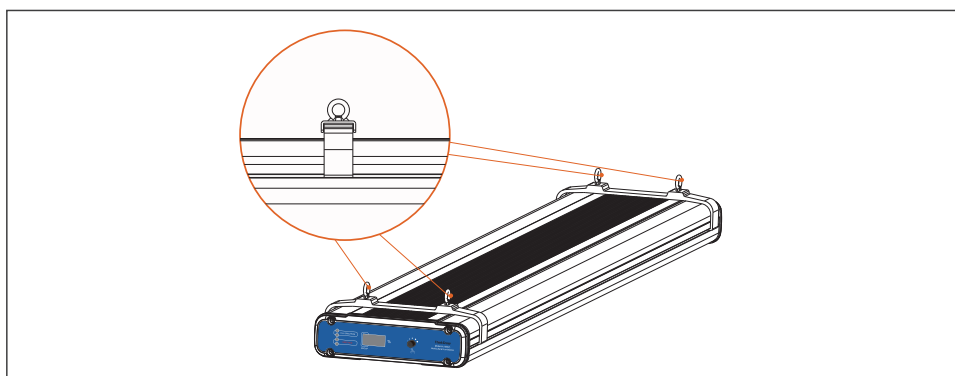Average PPFD **1079** / 904

• INSTALLATION

The Model-H (480V) LED grow light can be hung to a support system (e.g. unistrut). The included mounting hanger allows users to hang the Model-H (480V) Driver to unistrut or on a suspended mounting bar.
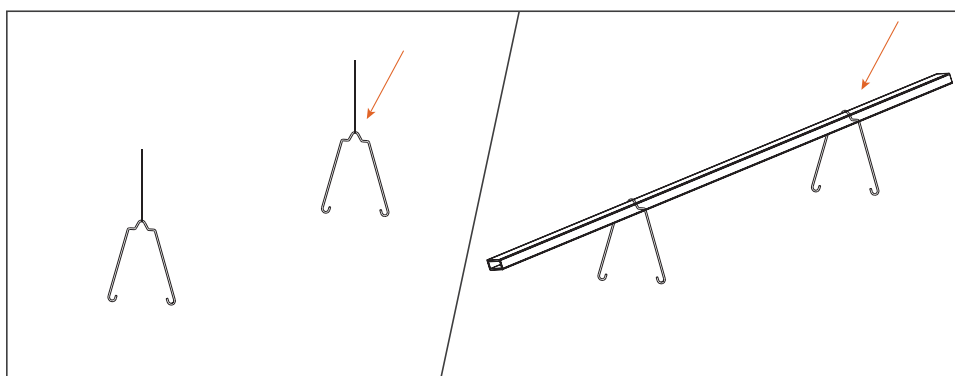
STEP 1

Twist the quick-release locking eyebolts to be oriented as shown below:
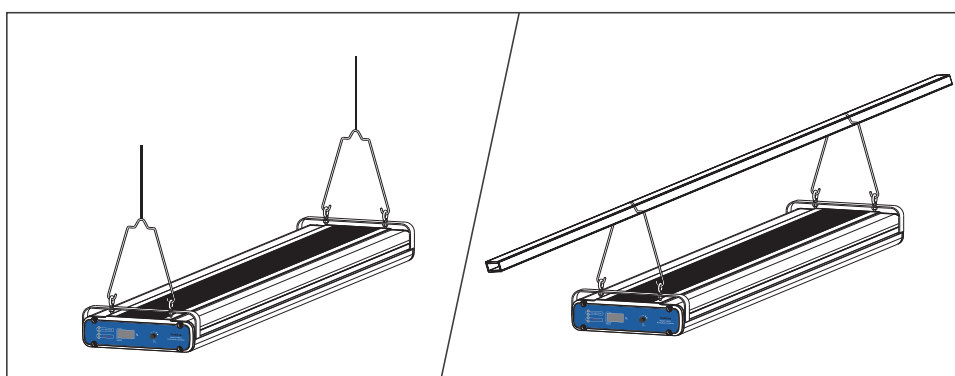

STEP 2

Hang the Strut Mounting hangers onto the unistrut or suspended mounting bar.
Ensure the distance of the hangers and quick release eye bolts are aligned.

STEP 3

Hang the Model-H (480V) driver onto the mounting hanger by hooking mounting hanger hooks into the quick release eye bolts.

*Note: The ThinkGrow UH-1 Unistrut Hanger (sold separately) can also be used with the Model-H(480V), utilizing its quick release design to achieve a fast and easy installation and maintenance.

Graphic example of Model-H(480V) mounting on a unistrut via UH-1 hanger.
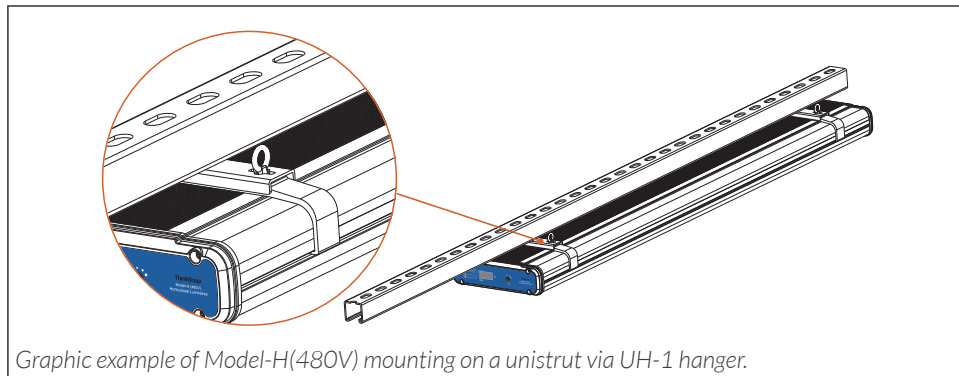
• LIGHT BAR INSTALLATION

STEP 1

Ensure the orientation of the light bar's release clamp and the driver's mounting plate are facing the same direction. Each bar alternates the orientation.
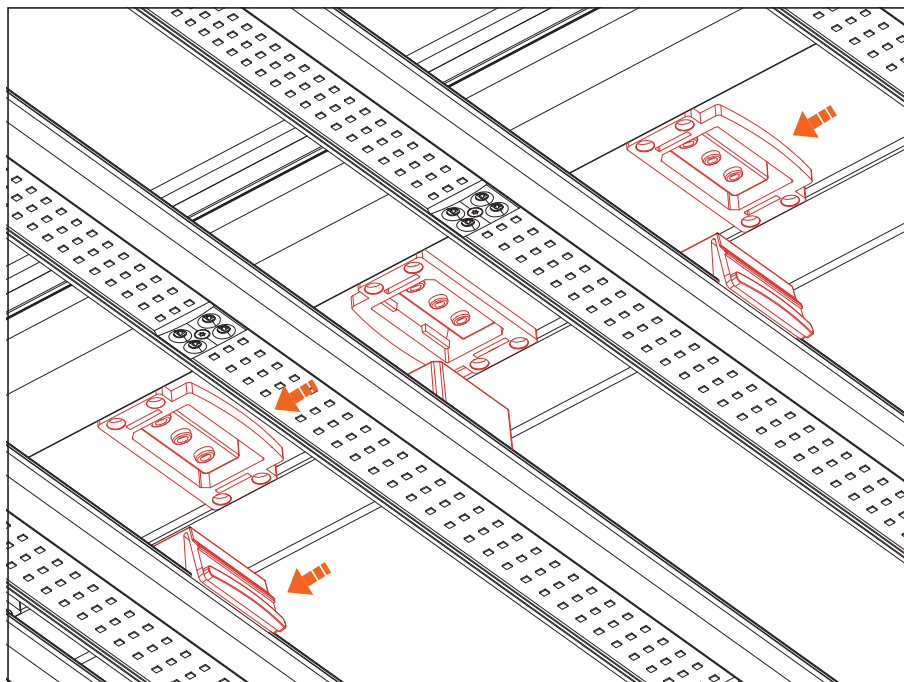
STEP 2

Plug in the light bar to the driver in a straight motion, push until you hear a "click" sound to ensure the light bar is plugged-in and "locked" with the driver.

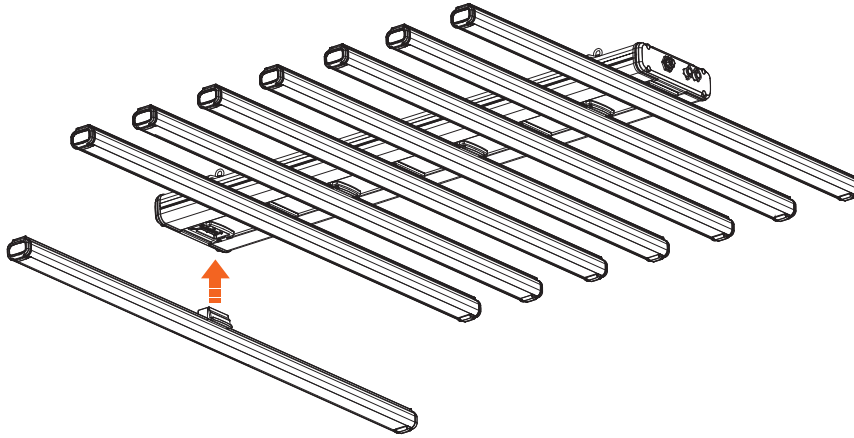***Note:** ThinkGrow patented Plug and Play LED light bar design allows users to detach the light bar from the driver while powering on. To detach the light bar, press the release clamp and pull down on the LED bar to unplug the LED light bars.

• POWER

Connect the 480V Push-Lock power cord to the Model-H(480V) grow light power input. Ensure the push-lock is completely inserted to achieve IP56 water protection standard.

INPUT

IN   OUT

Controller

347-480V~
50/60Hz 1.9A

ETL
Intertek
5008191
CONFORMS TO UL STD.8800
CERTIFIED TO UL STD.8800
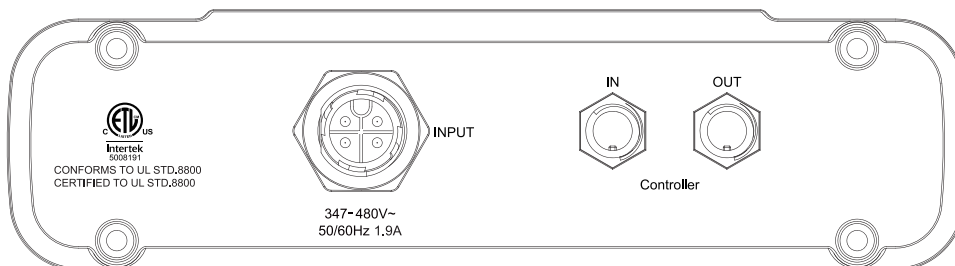
*Caution: Remember to close the water-proof cap on the input, output jacks that are not utilized.

• DATA WIRING

The Model-H(480V) LED is compatible with all of TrolMaster's Hydro-X control systems which includes the HCS-1, HCS-2 and HCS-3. Up to 256 light fixtures can be controlled by using a single LMA-T adaptor connected to your Hydro-X controller.

In order to use the Hydro-X main controller to control the Model-H (480V) Grow Lights, connect the first Model-H(480V) LEDs input jack to the LMA-T using the included control cable. Then to connect more of the Model-H(480V) to the first Model-H(480V) LED, use the control cable to interconnect LED output jack to the next LED fixture input jack.

When connected to the original HCS-1 controller, the Far Red channel can be controlled independently on Line #2 settings. Allowing the Far Red channel to be turned on for 10-15 minutes after Full Spectrum light is off, will help to speed up plants' flowering cycle.

When connected to HCS-2 or HCS-3 controllers, the same function can be achieved, while advanced features will also be available for creating special light recipes.

• OPERATION INSTRUCTIONS

On-board Light Control:

Model-H(480V) Grow Light enables adjustable spectrum on UV, White, Deep Red and Far Red spectrums via the control knob. To use the onboard light control features:

1. Press the controller knob to illuminate the small LED circle next to the selected light spectrum you want to adjust.
2. Rotate the controller knob to increase/ decrease the light intensity.
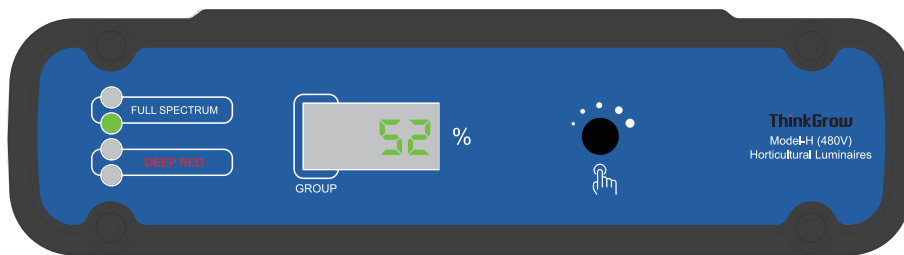
On-board Light Group, Spectrum Group assignment:

Model-H(480V) Grow Light can be assigned to up to 10 different light groups or 10 different spectrum groups. The user can only select Group control OR Spectrum Group control on the HCS-2 or HCS-3 controller. When Group or Spectrum Group mode is selected, the user can specify settings for up to 10 separate groups of LEDs and control those LEDs groups with individual spectrum settings, or standard power settings.

To use the on-board grouping features:

Press and hold the adjustment knob on the end of the LED for 5 seconds. The LED number on the panel will indicate the LED driver's current assigned group. (Default is group 0)

Rotate the controller wheel to the desired light group "0" to "9".

Press the controller knob to select the group and return to light control.

*Note: On-board grouping on the Model-H(480V) is used for group assignment only. Users must use the Hydro-X Pro (HCS-2) or Hydro-X Plus (HCS-3) main controller to enable group control features.
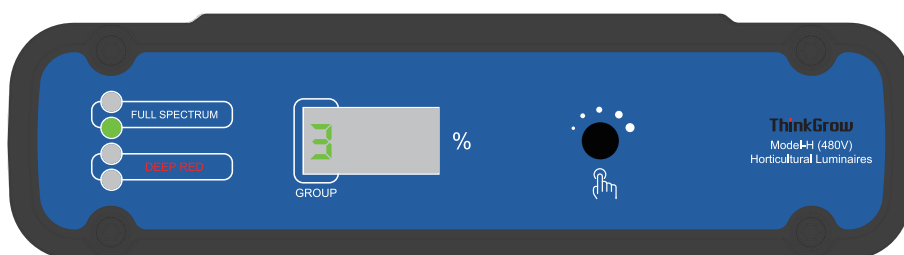
Example of user selecting light group "3".

⚠️ **WARNING :** **DO NOT** allow the grow light to be exposed to water or excessive heat. DO NOT open or attempt to repair or disassemble the LED, as there are no user-serviceable parts inside. Opening the controller will void the warranty.

If the surface of the grow light is dirty, wipe it with a dry or slightly damp towel. The grow light operates under natural ventilation conditions.

⚠️ **AVERTISSEMENT :** **NE laissez PAS la** lampe de croissance être exposée à de l'eau ou à une chaleur excessive. NE PAS ouvrir ni tenter de réparer ou de démonter le LED, car il ne contient aucune pièce réparable par l'utilisateur. L'ouverture du contrôleur annulera la garantie.

Si la surface de la lampe de culture est sale, essuyez-la avec une serviette sèche. La lampe de culture fonctionne dans des conditions de ventilation naturelle.

For any issues or concerns with our products, DO NOT return them to the store. Please contact our tech support department at **support@thinkgrow.com** or call **877-420-9876**.