

Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

manuals.plus /

- › [MARS HYDRO](#) /
- › [MARS HYDRO TSL2000 300W LED Grow Light Instruction Manual](#)

MARS HYDRO TSL 2000W

MARS HYDRO TSL2000 300W LED Grow Light Instruction Manual

Model: TSL 2000W

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your MARS HYDRO TSL2000 300W LED Grow Light. This full-spectrum, dimmable grow light is designed for indoor plant cultivation, supporting all stages from seed starting to flowering. Please read this manual thoroughly before use to ensure optimal performance and safety.



Image 1: MARS HYDRO TSL2000 300W LED Grow Light and accessories.

2. PRODUCT FEATURES

- **Optimized Diode Layout:** Features a dense center and sparse side diode arrangement for uniform light distribution and maximum plant yield.
- **Wider Coverage & Stronger Light:** Patented 120° angle white reflector design increases light utilization by 25%, providing broader coverage and enhanced light intensity.
- **Dimmable Functionality:** An independent dimming button on the external driver allows brightness adjustment from 0% to 100% to suit different plant growth stages.
- **Daisy Chain Capability:** Supports connecting up to 50 LED lights in a seamless chain for large-scale setups.
- **Energy Efficiency:** Consumes 300W with 704 LEDs, offering up to 50% energy savings compared to other grow lights and an additional 60% return over traditional HPS/MH lights.
- **Sunlike Full Spectrum:** Provides 730-740nm Red IR, 3200-4200Knm, and 5200-6800Knm spectra, suitable for all plant stages from seed to flower, promoting rapid response and increased yield.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

DISCREET PACKAGE

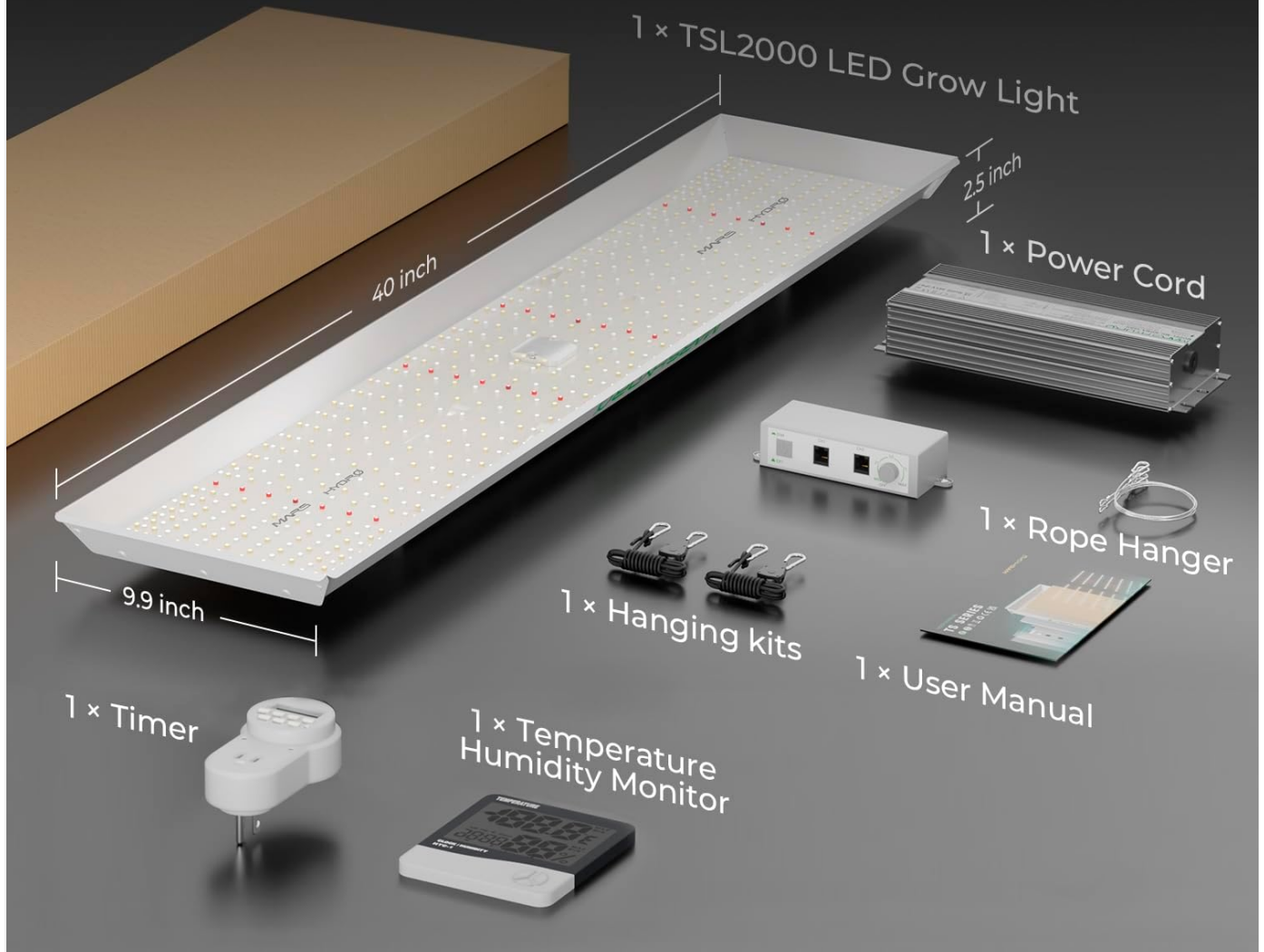


Image 2: Included components in the TSL2000 package.

- 1 x TSL2000 LED Grow Light
- 1 x Power Cord
- 1 x Rope Hanger
- 1 x Hanging Kits
- 1 x Timer
- 1 x Temperature Humidity Monitor
- 1 x User Manual (this document)

4. SETUP AND INSTALLATION

4.1 Unpacking

Carefully remove all components from the packaging. Inspect the light and accessories for any signs of damage. If any damage is found, contact customer support immediately.

4.2 Hanging the Grow Light

1. Attach the provided hanging kits to the designated points on the top of the TSL2000 LED Grow Light.
2. Use the rope hangers to suspend the light from a sturdy support structure within your grow tent or cultivation area. Ensure the light is level and securely fastened.
3. Adjust the height of the light according to the plant growth stage (refer to Section 5.3 for recommended hanging heights).

4.3 Connecting the Detachable Driver

The TSL2000 features a detachable driver, which can be mounted outside the grow space to reduce heat. Connect the driver to the light fixture using the provided cable. Ensure a secure connection.



Image 3: Detachable driver and power cord setup.

4.4 Power Connection

Connect the power cord to the driver and then plug it into a compatible electrical outlet. The auto-sensing power supply is

compatible with 120VAC, 240VAC, and 277VAC.

5. OPERATING INSTRUCTIONS

5.1 Dimming Operation

The TSL2000 is equipped with an independent dimming knob on the external driver, allowing you to adjust light intensity from 0% (OFF) to 100% (MAX). This feature enables precise control over light output for different plant growth stages.



Image 4: Dimming control on the external driver.

5.2 Daisy Chain Functionality

For larger cultivation areas, multiple TSL2000 units can be connected in a daisy chain. Up to 50 LED lights can be seamlessly linked and controlled by a single dimming knob.

2024 NEW VERSION MARS HYDRO TS SERIES

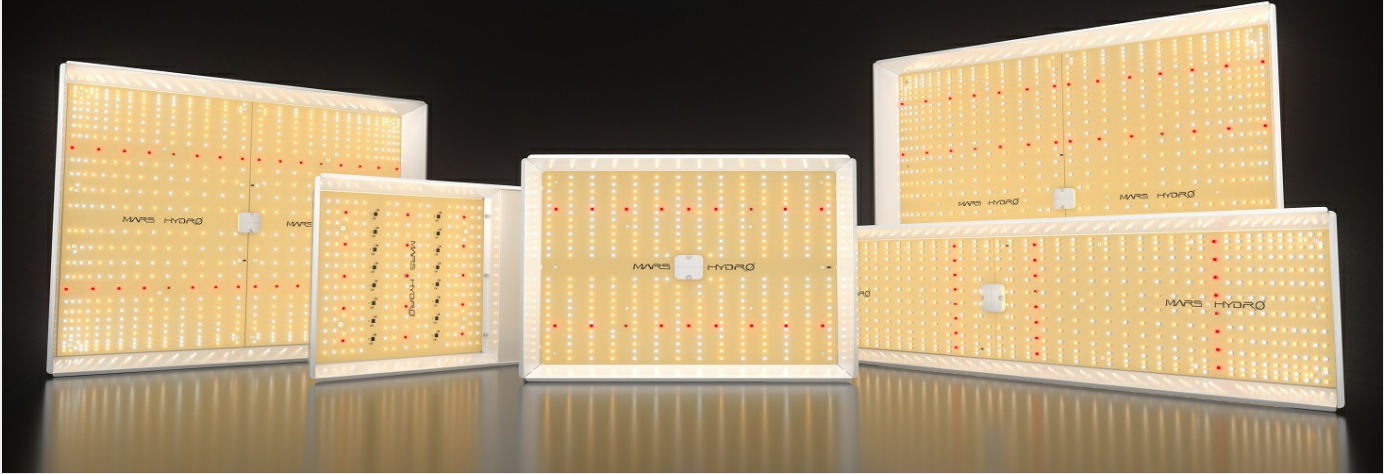


Image 5: Daisy chain connection diagram.

5.3 Recommended Hanging Height and Dimmer Settings

Adjust the hanging height and dimmer setting based on the plant's growth stage to provide optimal light intensity (PPFD).

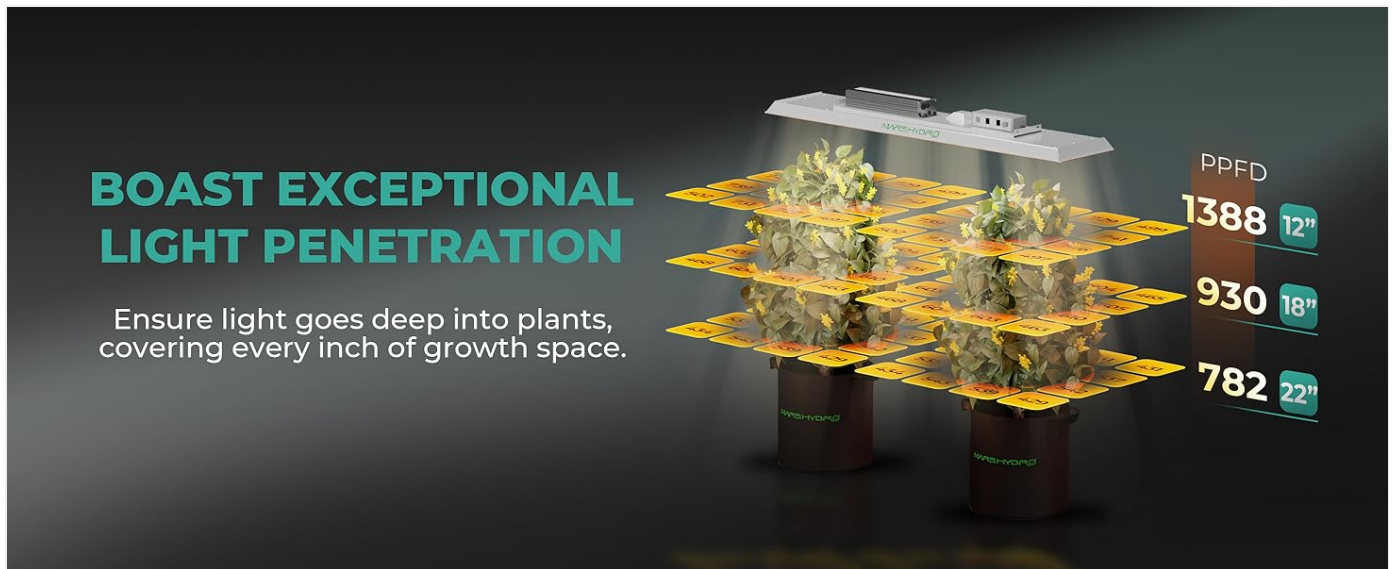


Image 6: TSL2000 Hanging Height and Dimming Guide.

For a 2'x4' footprint:

- **Seedling/Clone:** Hang Height 12" (30cm), Dimmer Setting 25%, Intensity (PPFD) 200-350 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
- **Vegetative:** Hang Height 12" (30cm), Dimmer Setting 75%, Intensity (PPFD) 500-1000 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
- **Flowering:** Hang Height 12" (30cm), Dimmer Setting 100%, Intensity (PPFD) 600-1300 $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$

6. LIGHT SPECTRUM AND COVERAGE

6.1 Optimized Full Spectrum

The TSL2000 provides a full spectrum of light, including specific wavelengths crucial for plant development:

- **Blue Light:** Promotes plant germination.
- **IR Light (730-740nm):** Promotes flowering and boosts yields.
- **Red Light (660nm):** Encourages budding and flowering.

6.2 Uniform Light Coverage and Penetration

The unique diode layout and patented reflector design ensure even light distribution and deep penetration into the plant canopy, maximizing light absorption without burning plants.

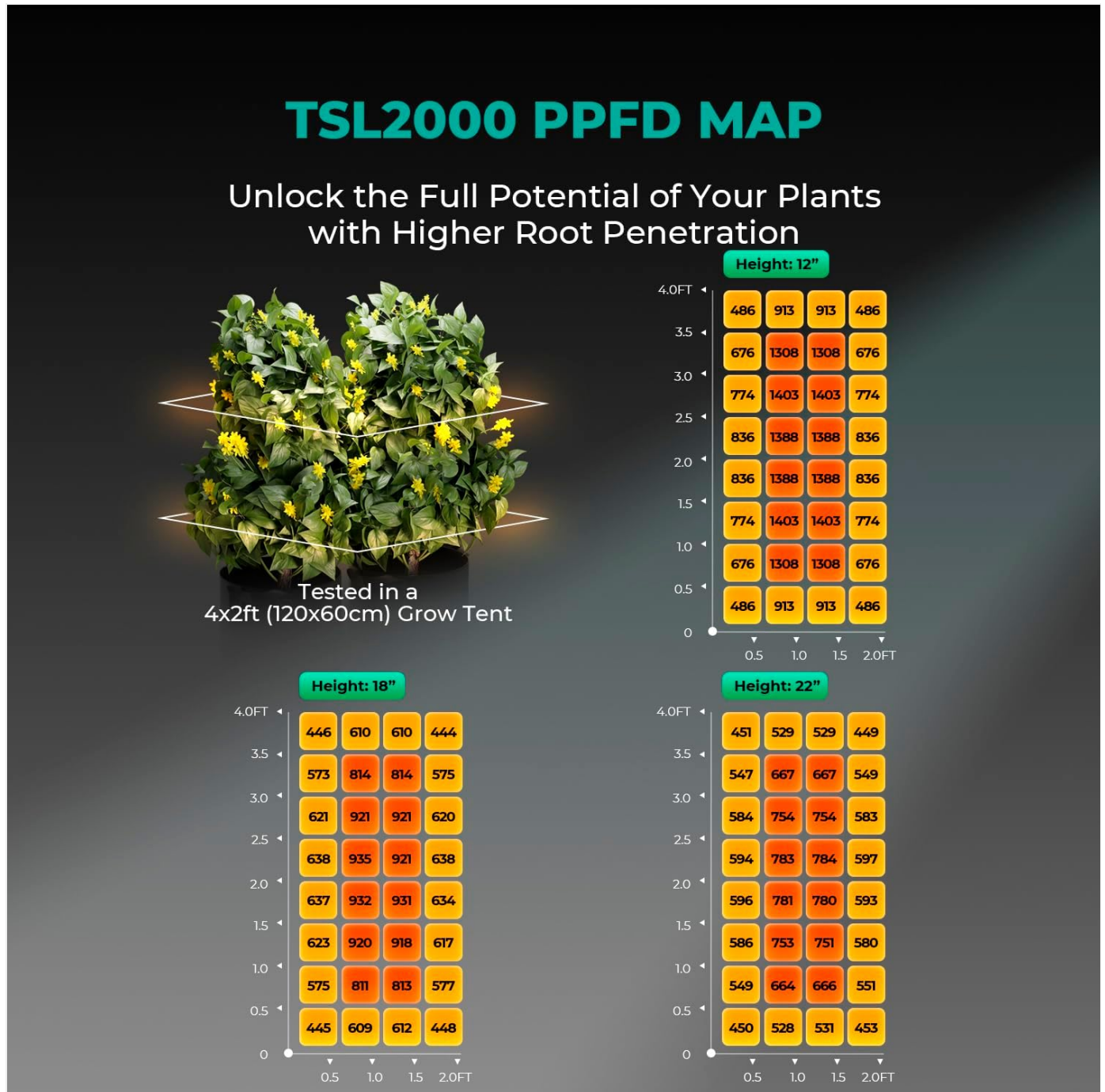


Image 8: TSL2000 PPFD Map for light intensity distribution.



Image 9: Uniform light coverage at different luminosity settings.

	LED COST (\$)	POWER DRAW (W)	PPF VALUE (UMOL/S)	BENCHMARK HARVEST (G)	ELECTRICITY COST PER CYCLE (\$)	COST EFFICIENCY (\$/G)
MH-TSL-2000	239.99	300	778	389.00	84.56	0.83
V***00	199.99	200	580	356.50	90.20	1.09
A***S24	245	200	530	435.00	84.56	1.2266
P***0	199.99	250	Null	Null	70.47	Null

Image 10: Light penetration into plant canopy.

7. MAINTENANCE

- **Cleaning:** Regularly clean the light fixture with a soft, dry cloth to remove dust and debris. Ensure the light is unplugged before cleaning. Do not use liquid cleaners directly on the LEDs or electrical components.
- **Inspection:** Periodically inspect the power cord, hanging cables, and connections for any signs of wear or damage. Replace any damaged components immediately.
- **Ventilation:** Ensure adequate airflow around the light fixture and driver to prevent overheating.

8. TROUBLESHOOTING

8.1 Light Not Turning On

- Check if the power cord is securely plugged into both the driver and the electrical outlet.
- Verify that the electrical outlet is functioning correctly.
- Ensure the dimmer knob is not set to 'OFF' or 0%.
- Confirm the connection between the light fixture and the detachable driver is secure.

8.2 Dimming Function Not Working

- Check if the dimmer button is set to 'DIM' (Dimmer ON).
- Ensure the dimmer knob is rotated correctly to adjust brightness.
- If using daisy chain, verify all connections are secure.

8.3 Overheating

- Ensure the detachable driver is placed in a well-ventilated area, ideally outside the grow tent.
- Check for any obstructions blocking airflow to the light fixture or driver.
- Verify ambient room temperature is within acceptable limits for electronic devices.

9. SPECIFICATIONS

Attribute	Value
Brand	MARS HYDRO
Model Name	TSL 2000W
Size	2x4 300w
Wattage	300 watts
Number of Light Sources	704
Light Source Type	LED
Light Color	Full Spectrum
Brightness	49806 Lumen
Efficiency	High Efficiency
Voltage	220 Volts (Compatible with 120VAC, 240VAC, and 277VAC)
Product Dimensions	39.21"L x 9.97"W x 3.54"H
Item Weight	7.83 pounds (3.56 Kilograms)
Material	Aluminum
Special Feature	Dimmable
Control Method	Remote (via dimmer knob)
Connectivity Protocol	Wired (Daisy Chain)
Indoor/Outdoor Usage	Indoor
Water Resistance Level	Not Water Resistant

10. SAFETY INFORMATION

- Always unplug the light fixture from the power source before performing any installation, cleaning, or maintenance.

- Do not operate the light in wet or damp conditions. This product is not water resistant.
- Avoid looking directly at the illuminated LEDs. Wear appropriate eye protection when working near the operating light.
- Ensure proper ventilation to prevent heat buildup, which can affect performance and lifespan.
- Keep the light out of reach of children and pets.
- Do not attempt to modify or disassemble the light fixture or driver. This will void the warranty and may pose a safety risk.

11. WARRANTY AND SUPPORT

For warranty information, technical support, or any questions regarding your MARS HYDRO TSL2000 LED Grow Light, please contact MARS HYDRO customer service. Refer to the official MARS HYDRO website or your purchase documentation for contact details.

