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› [VIPARSPECTRA](#) /

› VIPARSPECTRA P2500 LED Grow Light Instruction Manual

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Model: P2500

Brand: VIPARSPECTRA

1. INTRODUCTION

Thank you for choosing the VIPARSPECTRA P2500 LED Grow Light. This manual provides essential information for the safe and efficient operation of your grow light. The P2500 is designed to provide a full spectrum light source for indoor plants, supporting all growth stages from vegetative to flowering. It features a dimming function and daisy chain capability for versatile use in various growing environments.



Image 1.1: VIPARSPECTRA P2500 LED Grow Light, showcasing its rectangular design with numerous LED diodes.

2. SAFETY INFORMATION

- Always disconnect the power supply before installation, cleaning, or maintenance.
- Do not look directly at the operating LED lights. Wear protective eyewear if necessary.
- Ensure the light is installed in a well-ventilated area to prevent overheating.
- Keep the light away from water and other liquids. This product is not waterproof.
- Do not attempt to modify or disassemble the unit. This will void the warranty and may cause damage or injury.
- Ensure the hanging system is securely fastened to support the weight of the light.

3. PRODUCT FEATURES

3.1. Optimized Diode Layout & Daisy Chain Function

The P2500 features a scientifically designed diode distribution for uniform PAR (Photosynthetically Active Radiation) output and deep canopy penetration, optimizing plant yields. The daisy chain function allows connection of up to 20 P2500

grow lights, suitable for commercial growing, horizontal and vertical farming, greenhouses, and hydroponic systems.

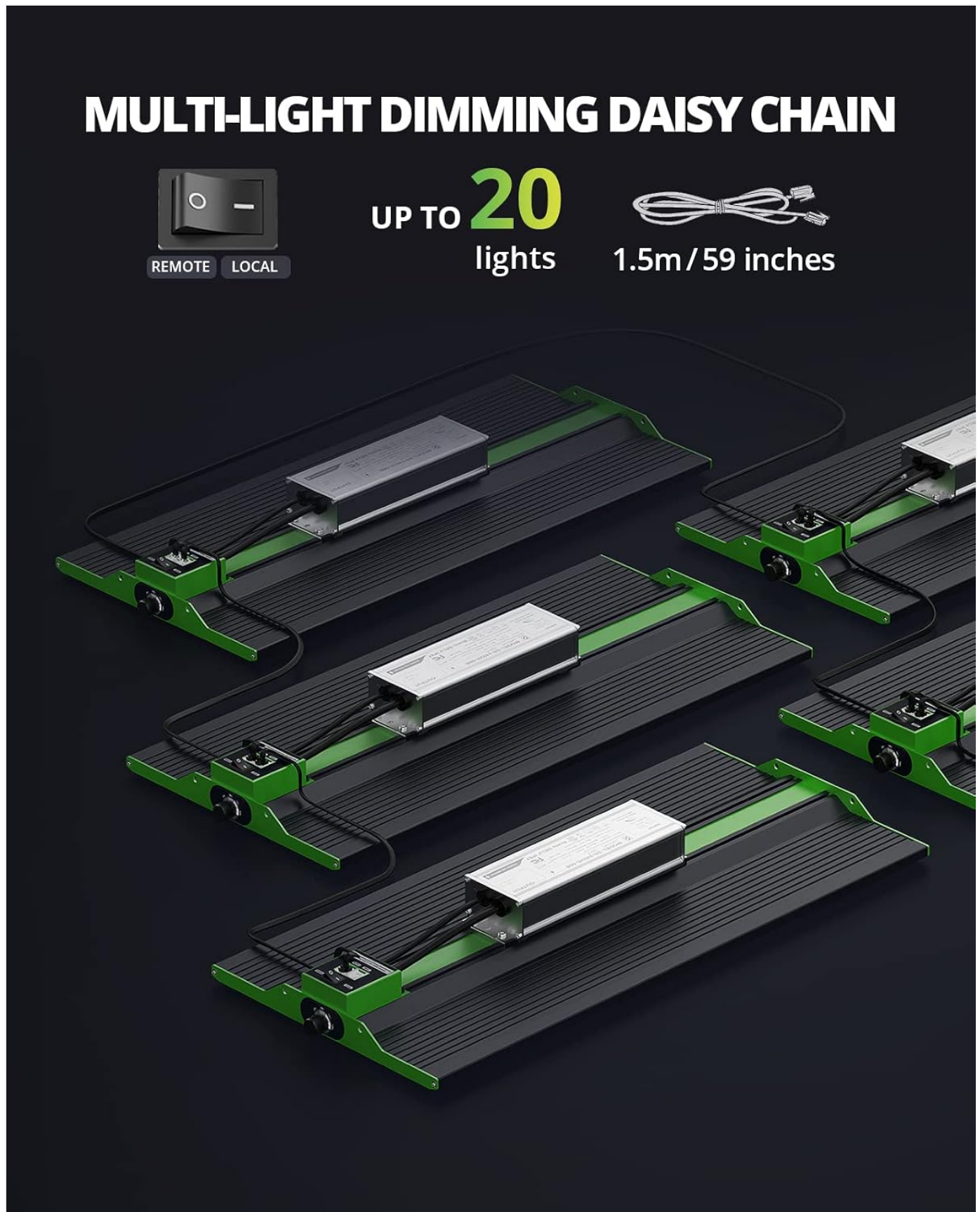


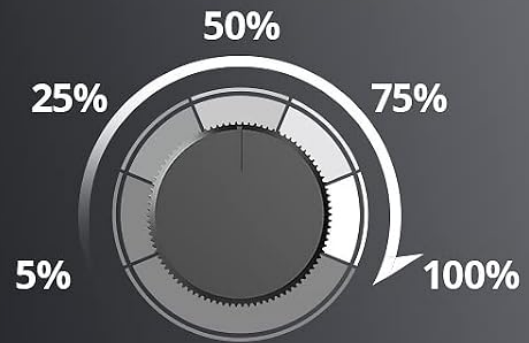
Image 3.1: Illustration of multiple P2500 lights connected in a daisy chain configuration.

3.2. Dimmer Function

An integrated dimmer knob allows precise control over light brightness, enabling adjustment for each plant growth phase. This feature helps optimize energy consumption and provides flexibility for various plant requirements.

DIMMABLE CONTROLLER

Custom Light Intensity For All Grow Stages



BRIGHTNESS | 5 Levels



Image 3.2: Close-up of the dimmer controller, showing percentage settings from 5% to 100% brightness.

3.3. Optimal Full Spectrum Light

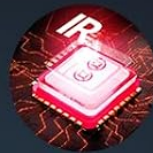
The light spectrum consists of 660nm red light, 3000K and 5000K white light, providing comprehensive light for all plant stages from vegetative growth to flowering. This spectrum mimics natural sunlight, supporting healthy plant development.

OPTIMIZED SPECTRUM

Algorithmically designed ratio of white, red, and IR diodes optimizes plant growth in all stages.



5000K
Promotes plants germination



730nm
Looks dim. Promotes flowering & boost yields



3000K
Boosts plants flowering



660nm
Promotes plants flowering

Photo Parameters:

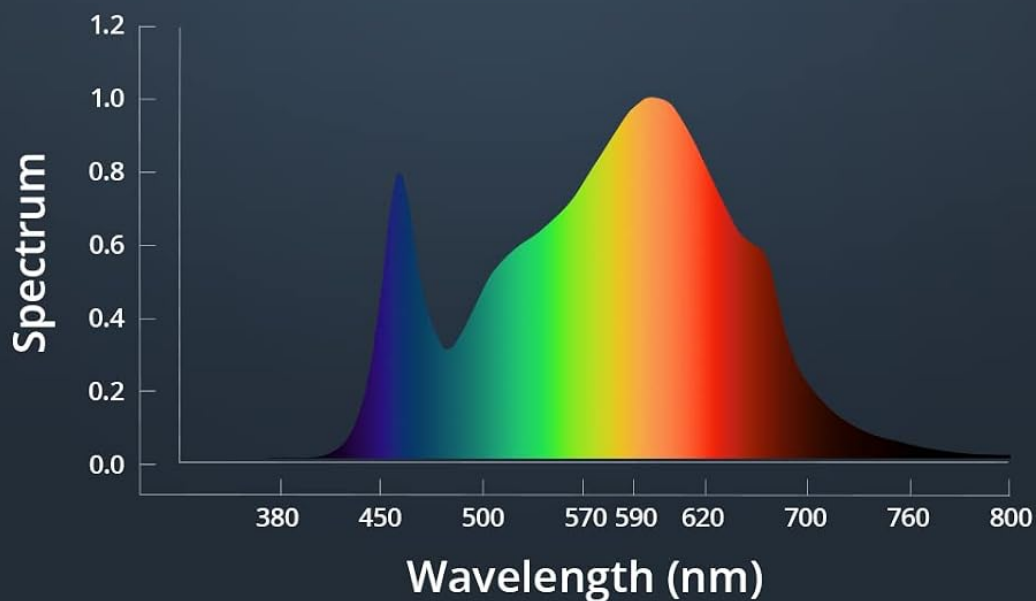


Image 3.3: Diagram illustrating the optimized light spectrum with 5000K, 3000K, 730nm, and 660nm diodes, alongside a spectral distribution graph.

3.4. Superior Heat Dissipation

Designed for durability, the P2500 features a silent fanless design with built-in large areas of solid aluminum heat sinks. This ensures efficient heat dissipation, contributing to the light's long lifespan.

3.5. Energy Efficiency

The P2500 consumes only 250W, comparable to traditional 500W HPS/MH systems, offering significant energy savings while maintaining high PAR output and strong light intensity.

4. SETUP AND INSTALLATION

4.1. Unpacking

Carefully remove the grow light and its accessories from the packaging. Verify that all components listed in the 'Specifications & Packing' section are present.

4.2. Hanging the Grow Light

Attach the provided stainless steel hooks and rope hangers to the designated points on the grow light. Securely hang the light from a sturdy support structure within your grow tent or cultivation area. Ensure the light is level and stable.

GROW LIGHT SYSTEM

A dimmable LED grow light designed to maximize plant yields with an optimized spectrum and aluminum heatsink.



Image 4.1: The P2500 grow light suspended inside a grow tent, illuminating plants below.

4.3. Power Connection

Connect the power cord to the grow light and then plug it into a suitable electrical outlet (120 Volts). Ensure the connection is secure.

4.4. Daisy Chain Connection (Optional)

For connecting multiple P2500 units, use the provided dimming cable to link the lights. Up to 20 units can be connected in a daisy chain. Ensure the 'REMOTE/LOCAL' switch on each light is set appropriately for synchronized control.

5. OPERATING INSTRUCTIONS

5.1. Adjusting Brightness

Use the dimmer knob located on the side of the light to adjust the light intensity. The knob allows for precise control from 5% to 100% brightness. Adjust the brightness according to the plant's growth stage and specific needs.

5.2. Recommended Growth Process Settings

The following table provides recommended hanging distances and dimming levels for different plant growth stages:

Growth Stage	Distance (inches)	Dimming Level	Light Cycle
Germination	24" - 30"	50%	18h ON / 6h OFF
Seedling	24"	50% - 75%	18h ON / 6h OFF
Vegetative	18" - 24"	75% - 100%	18h ON / 6h OFF
Flowering	12" - 18"	100%	12h ON / 12h OFF

Note: These are general recommendations. Observe your plants and adjust settings as needed for optimal growth.



Image 5.1: Visual representation of recommended light settings for different plant growth stages.

6. MAINTENANCE

- **Cleaning:** Regularly clean the surface of the light with a soft, dry cloth to remove dust and debris. Ensure the light is unplugged before cleaning.
- **Inspection:** Periodically check all cables and connections for any signs of wear or damage. Replace any damaged components immediately.
- **Ventilation:** Ensure that the heat sinks are not obstructed to allow for proper airflow and heat dissipation.

7. TROUBLESHOOTING

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- **Light not turning on:** Check the power cord connection to both the light and the electrical outlet. Ensure the outlet is functional.
 - **Some LEDs not illuminating:** While rare, individual LED diodes can fail. If a significant number of LEDs are out, contact customer support for assistance.
 - **Overheating:** Ensure the light is in a well-ventilated area and that the heat sinks are clear of obstructions. Reduce the dimming level if necessary.
 - **Uneven plant growth:** Adjust the hanging height and dimming level according to the plant's stage and the PPFD map (refer to Image 7.1) to ensure uniform light distribution.

DEEPER, UNIFORM PENETRATION

P2500 PPFD MAP

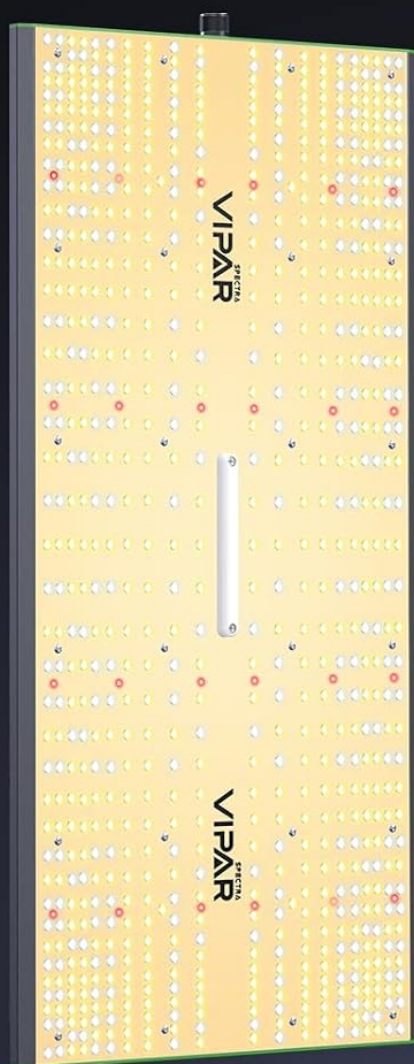
Tested in a 4 x 2 ft Grow Tent

250W

WATTAGE

4 x 2 ft

COVERAGE



Height: 12"

($\mu\text{mol}/\text{m}^2/\text{s}$)

371	535	767	900	889	782	552	373
430	686	1055	1185	1184	1080	695	425
414	685	1038	1184	1186	1040	698	444
372	526	748	877	875	753	537	382

4ft

2ft

Height: 14"

($\mu\text{mol}/\text{m}^2/\text{s}$)

412	567	750	844	842	768	564	400
489	687	940	1057	1048	940	687	457
465	686	920	1040	1036	937	680	460
420	540	716	800	776	710	570	410

Height: 16"

($\mu\text{mol}/\text{m}^2/\text{s}$)

438	564	730	791	793	731	556	421
500	658	835	945	933	834	645	467
479	650	840	938	924	839	640	475
430	559	680	740	740	675	555	420

Image 7.1: P2500 PPFD (Photosynthetic Photon Flux Density) map, indicating light intensity measurements at 12, 14, and 16 inches height within a 4x2 ft grow tent.

8. SPECIFICATIONS

Feature	Detail
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Feature	Detail
Model	P2500
Brand	VIPARSPECTRA
Wattage	250 Watts
Voltage	120 Volts
Brightness	39000 Lumen
Light Source Type	Light Emitting Diode
Color Temperature	4000 Kelvin
Color Rendering Index	87.0
Number of Light Sources	840
Material	Aluminum
Product Dimensions	23.6"L x 11"W x 2.6"H
Item Weight	7.9 Pounds
Coverage (Vegetative)	4'x3' at 24"
Coverage (Flowering)	4'x2' at 20"
Certifications	FCC, UL

SPECIFICATIONS & PACKING



**2 x STAINLESS
STEEL HOOKS**



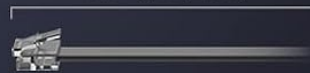
2 x ROPE HANGERS

5.9' (180cm)



1 x POWER CORD

4.9' (150cm)



1 x DIMMING CABLE

MODEL | P2500

COVERAGE | 4x2 ft

WATTAGE | 250W

CONTROLLER | DIMMABLE

DAISY CHAIN | 20 lights

LED COUNT | 840 Diodes

Image 8.1: Detailed specifications and a list of included items in the P2500 packaging, such as stainless steel hooks, rope hangers, power cord, and dimming cable.

9. WARRANTY AND SUPPORT

VIPARSPECTRA provides professional guidance and customer service. For any issues or questions regarding your P2500 LED Grow Light, please contact VIPARSPECTRA customer support. Ensure you purchase authentic

VIPARSPECTRA products to qualify for warranty and support services.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question