VIPARSPECTRA V450

VIPARSPECTRA Reflector-Series 450W LED Grow Light User Manual

Model: V450

1. Introduction

Welcome to the VIPARSPECTRA V450 LED Grow Light user manual. This guide provides essential information for the safe and effective use of your new grow light. The V450 LED Grow Light features an optimal full spectrum layout, reflector design, and an excellent heat dissipation system, making it ideal for all types of indoor plants during both vegetative and flowering stages.

Figure 1.1: VIPARSPECTRA Reflector-Series 450W LED Grow Light (Model V450)

This image displays the VIPARSPECTRA Reflector-Series 450W LED Grow Light, showcasing its rectangular design with multiple LED bulbs emitting a full spectrum light. Two red switches, labeled "VEG" and "BLOOM," are visible on the top surface, indicating the light's dual-mode functionality. The light is suspended by hanging wires, demonstrating its intended use for overhead plant illumination.

2. Safety Information

Please read and understand all safety instructions before operating the VIPARSPECTRA V450 LED Grow Light. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Extremely Bright Light:** Do not look directly at the LED bulbs when the light is on. Prolonged direct exposure may cause eye damage.
- **Indoor Use Only:** This product is designed for indoor use only and is not water-proof. Do not expose the light to water or high humidity environments.
- **Infrared (IR) LEDs:** This light includes IR (Infrared) LEDs which may appear dim or unlit to the naked eye. This is normal and does not indicate a faulty LED.
- **Operating Temperature:** Ensure the surrounding temperature is less than 40℃ (104℉). Operating outside this range may affect performance and lifespan.
- **No External Ballast Needed:** This LED grow light is a self-contained unit and does not require an external ballast.
- **Ventilation:** Ensure adequate ventilation around the light to prevent overheating.
- **Power Supply:** Use only the provided power cord and ensure it is connected to a grounded outlet with the correct voltage (AC100-240V).
- **Daisy Chain Safety:** When using the daisy chain function, ensure the total true wattage of extra connected lights does not exceed 600W.

3. Package Contents

Upon opening the package, please verify that all items listed below are present and in good condition.

- 1 x VIPARSPECTRA V450 LED Grow Light
- 1 x Hanging Kit
- 1 x User Instructions (this manual)
- 1 x 6ft US Power Cord

Figure 3.1: Contents included in the VIPARSPECTRA V450 package

This image illustrates the complete package contents for the VIPARSPECTRA V450 LED Grow Light. It shows the main V450 LED light unit, a hanging kit with adjustable ropes and carabiners, a 6-foot US power cord, and a user instruction manual. The image also highlights key components of the light itself, such as the power inlet, daisy chain outlet, VEG switch, and BLOOM switch, along with its dimensions (16.1" length, 8.3" width, 2.8" height) and weight (8.4 lbs).

4. Product Features

The VIPARSPECTRA V450 LED Grow Light is engineered with advanced features to optimize plant growth.

- **Optimal Full Spectrum:** Developed through extensive experimentation, the spectrum provides plants with all necessary light wavelengths for all growth stages, mimicking natural sunlight.
- **VEG & BLOOM Switches:** Independent switches allow for customized light spectrums suitable for the vegetative and flowering phases of plant growth.
- **Reflector Design:** Scientifically engineered reflectors balance high PAR (Photosynthetically Active Radiation) with suitable coverage, preventing light concentration that can stunt growth or cause sunburning.
- **Efficient Heat Dissipation:** Features upgraded aluminum cooling heat sinks and advanced high-speed quiet fans, ensuring the light remains cool and quiet, running 70% cooler than traditional HID lights.

- **Daisy Chain Function:** Allows growers to connect multiple lights together using fewer power outlets, simplifying setup for larger grow areas.
- **Durable Construction:** Sturdy, fire-resistant iron housing ensures longevity and safety.
- **Energy Efficiency:** Consumes only 200W (±3%) average power draw, comparable to a 400W HPS/MH system.

Figure 4.1: Overview of VIPARSPECTRA V450 key features

This image highlights the key features of the VIPARSPECTRA V450 LED Grow Light. It visually emphasizes the VEG and BLOOM switches for different growth phases, the optimal full spectrum with 12+ wavelengths, low energy consumption (200W ±3%), fire-resistant reflectors for increased PAR, the convenient daisy chain function, and the worry-free US local warranty. The image shows both the front and back of the light, illustrating its robust design and cooling system.

Figure 4.2: Full spectrum details and switch operation

This image details the full spectrum provided by the VIPARSPECTRA V450 LED Grow Light, listing various wavelengths from IR 730nm to 7500K. It visually demonstrates the effect of the VEG and BLOOM switches: when "VEG ON," the light emits a blue-dominant spectrum, and when "BLOOM ON," it emits a red-dominant spectrum. It also clarifies that four IR (Infrared) LEDs may appear dim, which is normal operation.

5. Setup and Installation

Follow these steps to properly set up and install your VIPARSPECTRA V450 LED Grow Light.

1. **Unpack:** Carefully remove all components from the packaging. Inspect the light and accessories for any signs of damage.
2. **Assemble Hanging Kit:** Attach the provided hanging kit to the four eyelets on the top of the grow light. Ensure the carabiners are securely fastened.
3. **Mounting:** Hang the grow light in your desired location using a sturdy support structure capable of holding the light's weight (approx. 8.4 lbs / 3.81 kg). Ensure the light is level.
4. **Power Connection:** Connect the 6ft US power cord to the power inlet on the side of the grow light. Plug the

other end into a standard AC100-240V grounded electrical outlet.

5. **Daisy Chain (Optional):** If connecting multiple V450 lights, plug the power cord from the first light's daisy chain outlet into the power inlet of the second light. Repeat for additional units. Ensure the total true wattage of all connected lights does not exceed 600W.

Figure 5.1: Daisy Chain Functionality and Setup

This image demonstrates the daisy chain function of the VIPARSPECTRA V450 LED Grow Light. It shows how multiple units can be connected in series using the provided power cords, with one light's daisy chain outlet connecting to the next light's power inlet. A warning is included, emphasizing that the total true wattage of extra connected lights must not exceed 600W. The daisy chain outlet is also highlighted as UL Certified.

6. Operation Guide

Operating your VIPARSPECTRA V450 LED Grow Light is straightforward.

6.1. Powering On/Off

- Once plugged in, the light is ready for operation.
- Use the switches on the top of the unit to control the light modes.

6.2. VEG and BLOOM Switches

The V450 features two independent switches to optimize the light spectrum for different plant growth stages:

- **VEG Switch:** Activates the blue and white LEDs, providing a spectrum ideal for the vegetative growth stage, promoting strong stem and leaf development.
- **BLOOM Switch:** Activates the red and IR LEDs, providing a spectrum suitable for the flowering and fruiting stages, encouraging bud and flower production.
- For full spectrum output during flowering, it is recommended to have both VEG and BLOOM switches ON.

6.3. Recommended Hanging Heights and Light Schedules

Adjusting the light's height and duration is crucial for optimal plant development. The following are general recommendations; always observe your plants' response and adjust accordingly.

Growth Stage	Recommended Height Above Canopy	Light Schedule (On/Off)	Switch Settings
Germination Stage	36-40 inches	10 On / 14 Off	VEG on / BLOOM off
Young Vegetative	32-36 inches	12 On / 12 Off	VEG on / BLOOM off
Vegetative Stage	24-32 inches	18 On / 6 Off	VEG on / BLOOM on
Flowering Stage	18-24 inches	12 On / 12 Off	VEG on / BLOOM on

The light can be controlled by an external timer for automated light schedules.

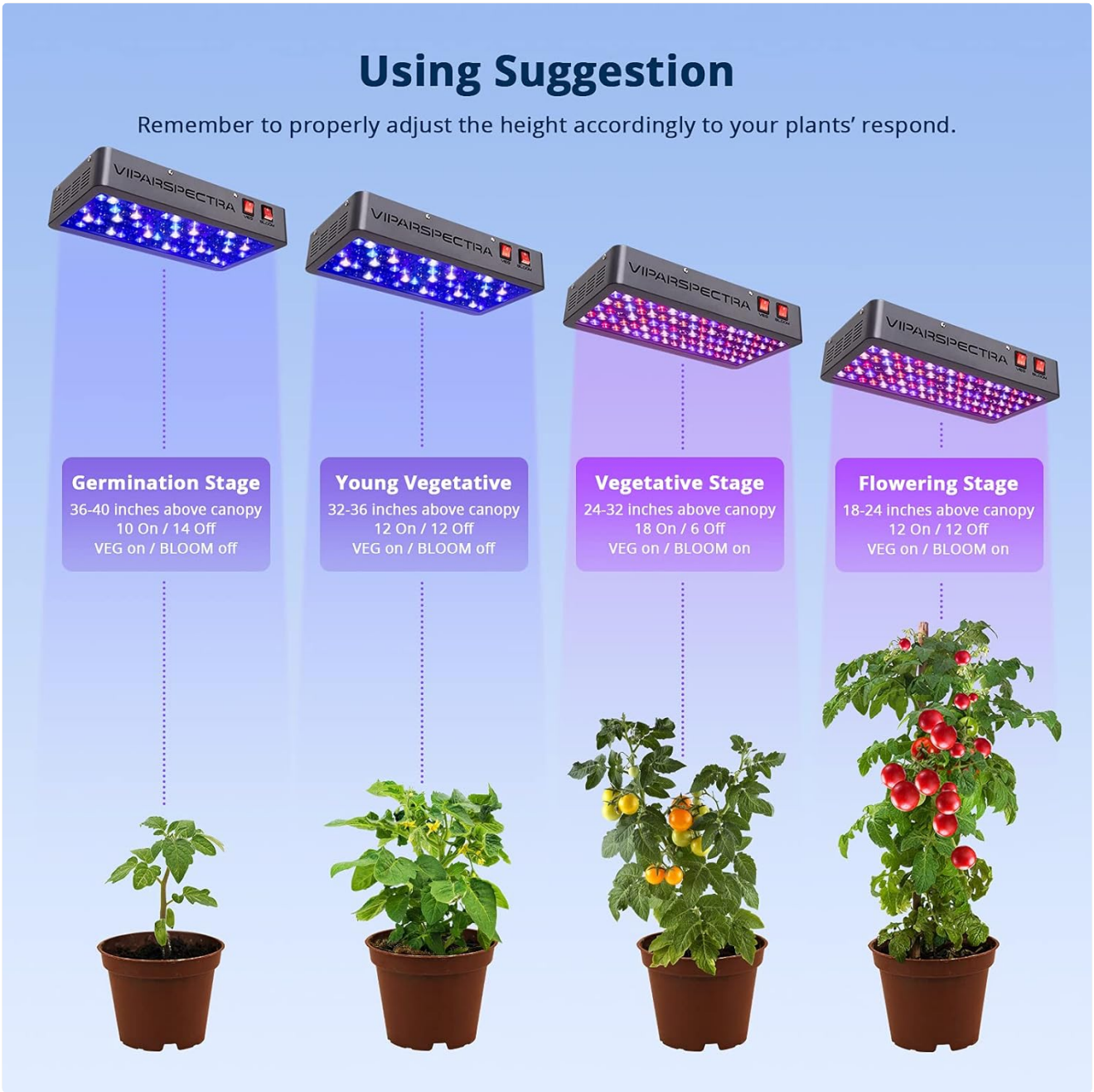

Figure 6.1: Usage suggestions for different plant growth stages

This image provides visual guidance for using the VIPARSPECTRA V450 LED Grow Light across different plant growth stages: Germination, Young Vegetative, Vegetative Stage, and Flowering Stage. For each stage, it illustrates the recommended hanging height above the plant canopy and specifies the appropriate light schedule (On/Off hours) and switch settings (VEG on/off, BLOOM on/off). It emphasizes the importance of adjusting height based on plant response.

7. Maintenance

Regular maintenance ensures the longevity and optimal performance of your VIPARSPECTRA V450 LED Grow Light.

- **Cleaning:** Periodically wipe the light's surface and reflectors with a soft, dry cloth to remove dust and debris. Ensure the light is unplugged before cleaning. Do not use liquid cleaners.
- **Fan Inspection:** Check the cooling fans periodically for any obstructions or excessive dust buildup. Keep the fan vents clear to ensure proper airflow and heat dissipation.
- **Cable Inspection:** Regularly inspect the power cord and daisy chain cables for any signs of damage, fraying, or loose connections. Replace damaged cables immediately.
- **Storage:** If storing the light for an extended period, ensure it is clean, dry, and stored in a cool, dark place

away from direct sunlight and moisture.

8. Troubleshooting

If you encounter issues with your VIPARSPECTRA V450 LED Grow Light, refer to the following common problems and solutions.

Problem	Possible Cause	Solution
Light does not turn on.	No power supply; loose connection; faulty outlet.	Check if the power cord is securely plugged into both the light and the outlet. Test the outlet with another device. Ensure switches are in the ON position.
Some LEDs appear dim or unlit.	Normal operation for Infrared (IR) LEDs.	This is normal. The light includes IR LEDs which are not visible to the naked eye but are crucial for plant growth.
Light is overheating.	Poor ventilation; obstructed fans.	Ensure adequate airflow around the light. Clear any dust or obstructions from the fan vents. Verify ambient temperature is below 40°C.
Daisy chain not working.	Incorrect connection; exceeding wattage limit.	Ensure cables are correctly connected between units. Verify the total true wattage of all connected lights does not exceed 600W.
Plants are showing signs of stress (e.g., burning, stretching).	Incorrect hanging height; improper light schedule.	Adjust the hanging height according to the plant's growth stage (refer to Section 6.3). Adjust light schedule as needed.

If the problem persists after attempting these solutions, please contact VIPARSPECTRA customer support.

9. Technical Specifications

Specification	Detail
Model Number	V450
Dimensions	15.8 x 8.4 x 2.4 inches (40.13 x 21.34 x 6.1 cm)
Item Weight	8.4 lbs (3.81 kg)
Replaces HPS/MH	400W
Avg. Power Draw	200W ± 3%
LED Type	90pcs High Intensity 5W Bridgelux/Epileds LEDs
LEDs Angle	90°
Input Voltage	AC100-240V
Frequency	50-60Hz
Lifespan	100,000 hours

Specification	Detail
Material	Iron
Color	Black
Vegetative Coverage (at 24")	2.5 x 2.5 ft
Flowering Coverage (at 18")	2 x 2 ft

Figure 9.1: PPFD map and coverage area for V450

This image presents a PPFD (Photosynthetic Photon Flux Density) map for the VIPARSPECTRA V450, tested in a 2 x 4 ft grow tent at a height of 12 inches. It shows the distribution of light intensity across the coverage area, with peak PPFD values. Below the map, it specifies the flowering coverage at 18 inches (2.0 x 2.0 ft) and vegetative coverage at 24 inches (2.5 x 2.5 ft), along with the actual power consumption of 200W.

10. Warranty and Support

VIPARSPECTRA is committed to providing quality products and professional customer service.

- **Warranty:** This product comes with a worry-free 3-Year US warranty.
- **Money Back Guarantee:** Enjoy a 30-day money-back guarantee from the date of purchase.
- **Customer Service:** For any questions, concerns, or technical assistance, please feel free to contact VIPARSPECTRA customer service via Amazon message. Our team is ready to provide professional guidance to help you and your plants grow better.