Orayafid D-1510

Orayafid D-1510 Solar Panel for Security Cameras User Manual

Model: D-1510

1. Introduction

Thank you for choosing the Orayafid D-1510 Solar Panel. This manual provides essential information for the proper installation, operation, and maintenance of your solar panel. This device is designed to provide continuous power to various outdoor electronics, including security cameras, trail cameras, and other low-power devices, utilizing solar energy and an integrated high-capacity battery.

2. Product Overview

2.1 Key Features

- **High-Efficiency Solar Charging:** Equipped with 15W monocrystalline solar cells, offering a conversion efficiency of 22-24% for effective power generation even in varying light conditions.
- **Integrated 20,000 mAh Battery:** Features a built-in rechargeable lithium-ion battery to store solar energy, ensuring continuous power supply to your devices day and night.
- **Advanced Battery Protection:** Incorporates over-voltage, over-charge, and short-circuit protection mechanisms, rigorously tested for up to 500 charge cycles.
- **Versatile Output Compatibility:** Includes multiple adapters (DC 5.5x2.1mm, DC 4.0x1.7mm, DC 3.5x1.35mm, Mini USB, Type-C, Micro USB) to support a wide range of devices.
- **360° Adjustable Mounting Bracket:** Allows for flexible positioning to optimize sunlight exposure and maximize energy capture.
- **Durable Weather-Resistant Design:** IP65 waterproof rating and an operating temperature range of -20°C to 50°C ensure reliable performance in harsh outdoor environments.

2.2 Product Components

The Orayafid D-1510 Solar Panel package includes the following components:

- 15W Solar Panel with integrated battery
- Adjustable Mounting Bracket
- 3-meter Power Cord
- Multiple Output Adapters (DC 5.5x2.1mm, DC 4.0x1.7mm, DC 3.5x1.35mm, Mini USB, Type-C, Micro USB)

- Mounting Screws and Anchors



Image 2.1: The Orayafid D-1510 Solar Panel with its adjustable mounting bracket. This image provides a general view of the product, highlighting its compact design and ready-to-mount structure.



Image 2.2: Illustration of the 20,000 mAh battery capacity and integrated protection features. This graphic details the discharge capacity, short-circuit protection, overcharge protection, and operating temperature range of the internal battery.



Image 2.3: Diagram illustrating the premium monocrystalline solar panel quality. It highlights features such as high efficiency (up to 22% photovoltaic conversion), fast charging even in cloudy weather, long durability, and good light transmission through tempered glass.



*Image 2.4: Visual representation of the solar panel's compatibility with various devices, including security cameras, and the multiple output interfaces provided (DC 3.5*1.35, Micro USB, USB-C). This image demonstrates the versatility of the panel for powering different electronics.*

3. Setup Instructions

3.1 Unboxing and Component Check

Carefully unpack all components. Verify that all items listed in Section 2.2 are present and undamaged. If any components are missing or damaged, contact customer support.



Image 3.1: An illustration detailing the packing list and the physical dimensions of the solar panel. This image helps users confirm they have all components and understand the size of the unit.

3.2 Mounting the Solar Panel

1. **Choose a Location:** Select a location that receives direct sunlight for the majority of the day. Avoid areas with significant shade from trees, buildings, or other obstructions.
2. **Install the Mounting Bracket:** Use the provided screws and anchors to securely attach the adjustable mounting bracket to a wall, fence, or pole. Ensure the surface is stable enough to support the panel's weight.
3. **Attach the Solar Panel:** Secure the solar panel to the mounting bracket.
4. **Adjust the Angle:** Utilize the 360° adjustable feature of the bracket to angle the solar panel towards the sun for optimal exposure. In the Northern Hemisphere, a south-facing angle is generally recommended. In the Southern Hemisphere, a north-facing angle is preferred. Adjust the tilt angle based on your latitude and the season.



Image 3.2: The solar panel mounted on a wall, illustrating its dimensions and the 90-degree adjustable angle of the bracket. This image helps visualize the installation process and the flexibility of positioning.

3.3 Connecting to Devices

Connect the 3-meter power cord from the solar panel to your device. Use the appropriate adapter from the included set to match your device's input port. Ensure a secure connection to prevent power interruptions.

4. Operating Instructions

4.1 Initial Charging

For optimal performance, it is recommended to fully charge the solar panel's internal battery before its first use. Place the panel in direct sunlight for at least 8-10 hours without any connected devices to allow the battery to reach full capacity.

4.2 Powering Your Devices

Once the solar panel is installed and charged, it will automatically begin powering your connected device and recharging its

internal battery whenever sufficient sunlight is available. The integrated battery ensures continuous power supply during periods of low light or at night.

4.3 Optimizing Performance

- Regularly check the panel's angle to ensure it is optimally positioned towards the sun, especially during seasonal changes.
- Keep the solar panel surface clean from dust, dirt, snow, or debris to maintain maximum charging efficiency.



Image 4.1: Examples of the solar panel's multiple applications in isolated environments without electricity, such as a forest hut, courtyard, camping site, and yacht. This demonstrates the product's versatility for various outdoor power needs.

5. Maintenance

5.1 Cleaning the Solar Panel

To ensure optimal energy conversion, periodically clean the surface of the solar panel. Use a soft, damp cloth to wipe away any dust, dirt, or debris. Avoid abrasive cleaners or harsh chemicals that could damage the panel surface.

5.2 Battery Care

The integrated lithium-ion battery is designed for durability. To prolong its lifespan, avoid prolonged storage in extreme temperatures. If storing the panel for an extended period, ensure the battery is partially charged (around 50%) and recharge it every few months.

5.3 Weather Resistance

The Orayafid D-1510 Solar Panel has an IP65 waterproof rating, making it resistant to dust and water jets. While it is designed to withstand heavy rain and snow, ensure all connections are tight and sealed to prevent moisture ingress.



Image 5.1: An image depicting the solar panel's IP66 waterproof rating (note: product spec states IP65, image text says IP66, using product spec). The image shows the panel in a stormy outdoor setting with rain and lightning, emphasizing its durability against harsh weather.

6. Troubleshooting

- **Device Not Receiving Power:**
  - Check if the solar panel is receiving direct sunlight.
  - Ensure all cables are securely connected and the correct adapter is used.
  - Verify that the connected device is compatible with the solar panel's output voltage (DC 5V).
  - Allow the internal battery to charge for several hours in direct sunlight if it is depleted.
- **Low Charging Efficiency:**
  - Clean the surface of the solar panel to remove any dirt or obstructions.
  - Adjust the panel's angle to face the sun directly.
  - Ensure there are no shadows cast on the panel.
- **Panel Not Holding Charge:**
  - The internal battery may have reached the end of its lifespan. Contact customer support for assistance.
  - Ensure the panel is exposed to sufficient sunlight for an adequate charging period.

7. Specifications

Brand	Orayafid
Model Number	D-1510
Max Power	15 Watt
Max Voltage	5 Volts (DC)
Output Voltage	5 Volts (DC)
Amperage	3 A
Battery Type	10 Lithium-ion cells (included), 20,000 mAh capacity

Conversion Efficiency	22-24%
Product Dimensions (L x W x H)	22.8 x 32 x 18.7 cm
Item Weight	1.85 Kilograms
Material	Glass
Waterproof Rating	IP65
Operating Temperature	-20°C to 50°C
Connector Types	DC 5.5 x 2.1 mm, DC 4.0 x 1.7 mm, DC 3.5 x 1.35 mm, Mini USB, Type-C, Micro USB
Included Components	15W Solar Panel, Batteries, Mount, 3m Power Cord, Multiple adapters
UPC	784728456232

8. Warranty and Support

Information regarding product warranty and customer support contact details is not available in the provided product data. Please refer to the product packaging or the seller's website for specific warranty terms and support options.

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