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Yinleader CSMS-170W

Yinleader 340W PERC Monocrystalline Solar Panel (2x170W) - User Manual

Model: CSMS-170W

Overview Introduction Setup Safety Instructions Operating Maintenance Troubleshooting Product Specifications Warranty & Support

1. Introduction

Thank you for choosing the Yinleader 340W PERC Monocrystalline Solar Panel. This manual provides essential information for the safe and efficient installation, operation, and maintenance of your solar panel system. Please read this manual thoroughly before installation and keep it for future reference.

2. Safety Instructions

Always observe the following safety precautions to prevent personal injury or damage to the product:

- **Installation:** Installation should be performed by qualified personnel. Ensure all local electrical codes and regulations are followed.
- **Handling:** Handle solar panels with care. Avoid dropping or subjecting them to strong impacts. Do not step on the panels.
- **Electrical Safety:** Solar panels generate electricity when exposed to light. Always cover the panels with an opaque material during installation to prevent electric shock. Do not touch live electrical parts.
- **Wiring:** Ensure all wiring is correctly connected and securely fastened. Use appropriate cables and connectors (MC4 type recommended).
- **Environment:** Do not install panels in areas prone to excessive shading, extreme temperatures, or corrosive substances.
- **Maintenance:** Disconnect the system from all power sources before performing any maintenance.

3. Product Overview

The Yinleader 340W PERC Monocrystalline Solar Panel system consists of two 170W panels designed for high efficiency and durability. These panels are TUV certified and feature advanced technology for optimal performance.

Key Features:

- **High Conversion Efficiency:** Utilizes monocrystalline silicon technology to achieve up to 22.5% conversion efficiency, ensuring maximum power generation even in low light conditions.

- **Durable and Lightweight Design:** Each 170W panel measures 132 x 66.4 x 1.7 cm and weighs approximately 8.6 kg, making it easy to handle and install. Constructed with reinforced glass and an aluminum frame for resistance against harsh weather.
- **IP67 Waterproof:** Certified IP67 for dust and water resistance, ensuring reliable operation in various outdoor environments.
- **Versatile Applications:** Suitable for residential rooftops, balconies, commercial facilities, carports, farms, and marine applications.
- **Easy DIY Installation:** Equipped with universal MC4 connectors and a 90cm 12AWG cable for straightforward setup.

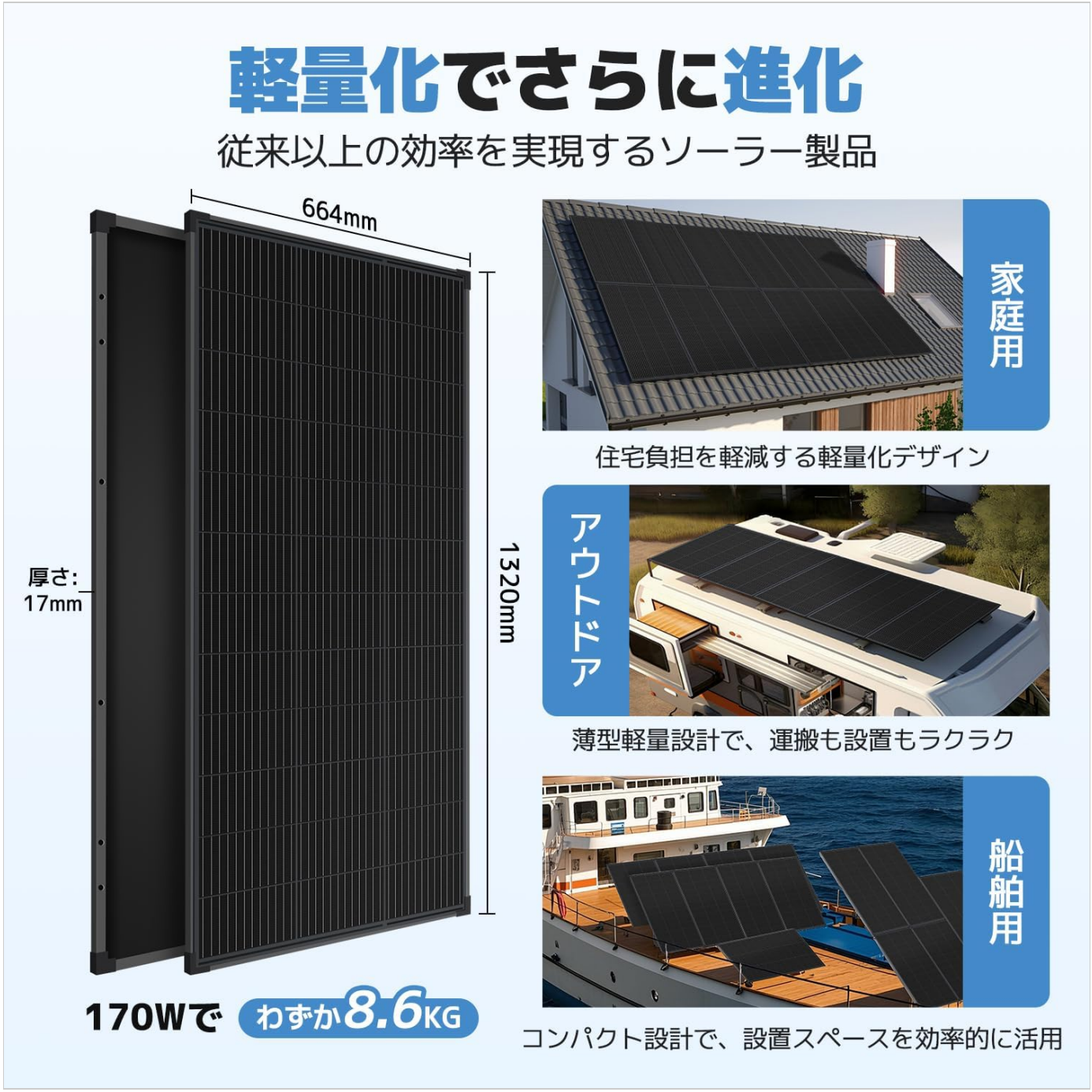


Figure 3.1: Lightweight design and versatile applications for residential, outdoor, and marine use.

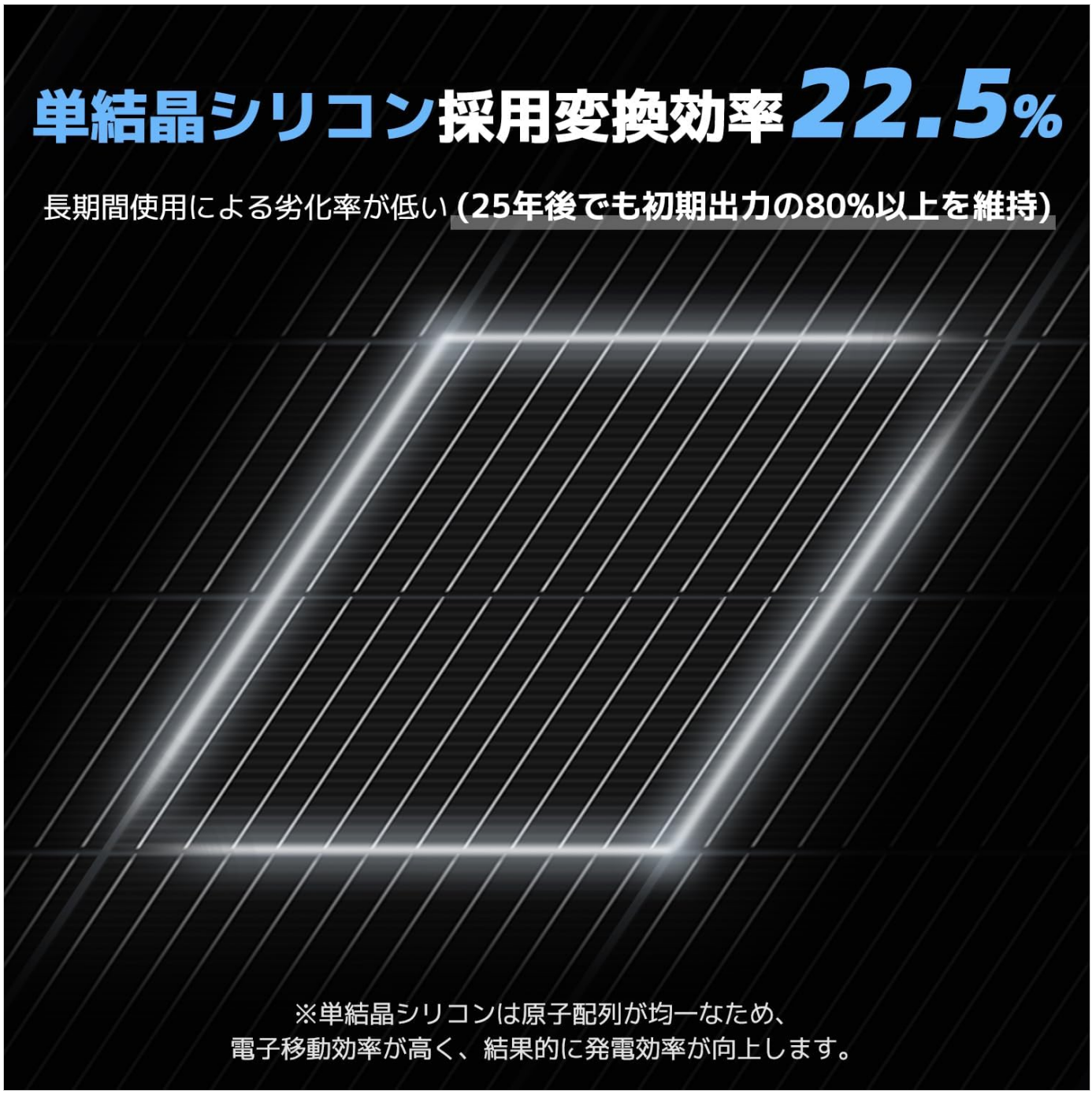


Figure 3.2: Monocrystalline silicon technology ensures high conversion efficiency of 22.5%.

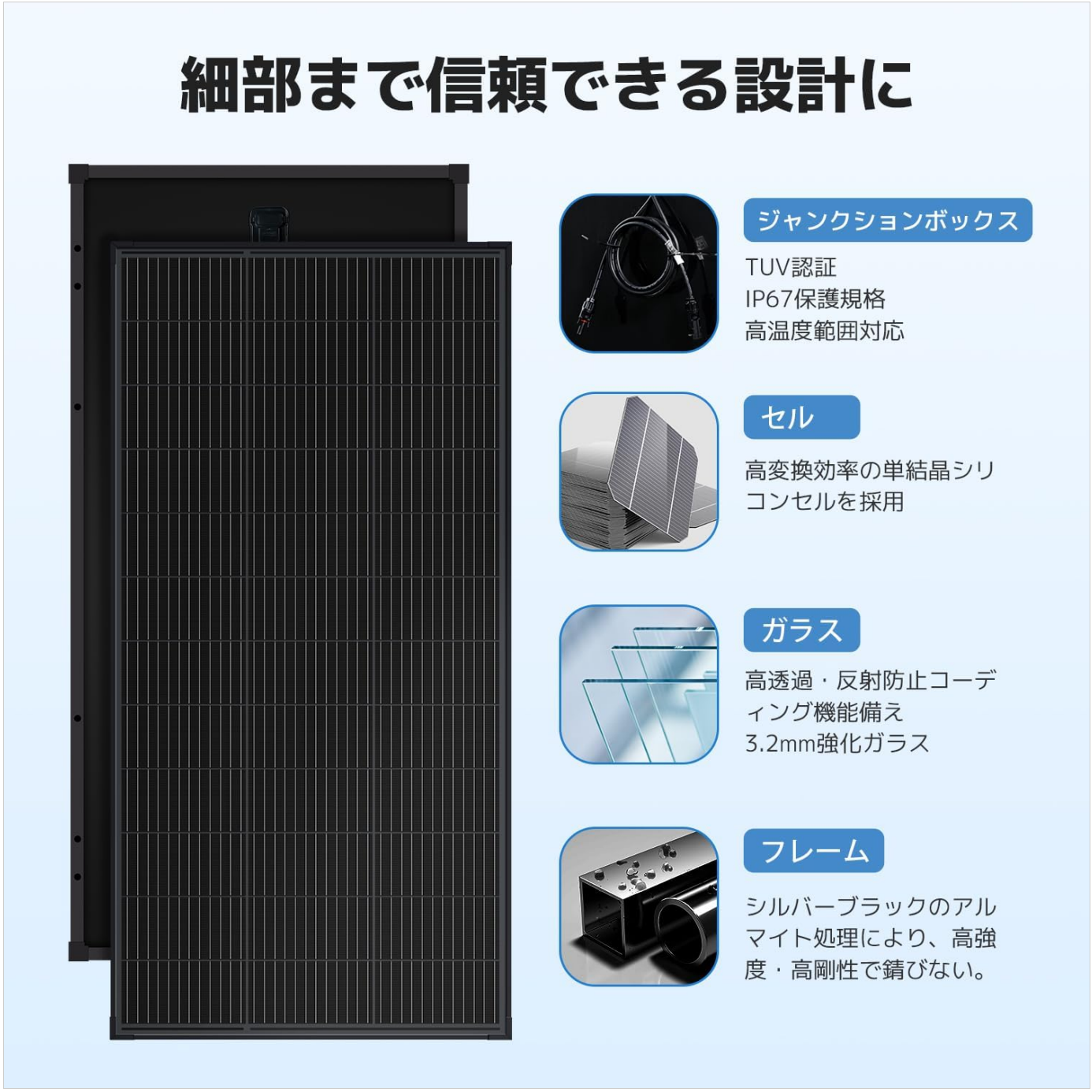


Figure 3.3: Detailed design showing junction box, high-efficiency cells, 3.2mm reinforced glass, and aluminum frame.

4. Setup

This section outlines the general steps for setting up your Yinleader solar panels. For detailed instructions, consult a qualified installer.

4.1 Site Selection

Choose a location that receives maximum sunlight throughout the day, free from shading by trees or buildings. Consider the optimal tilt angle for your geographical location to maximize energy harvest.

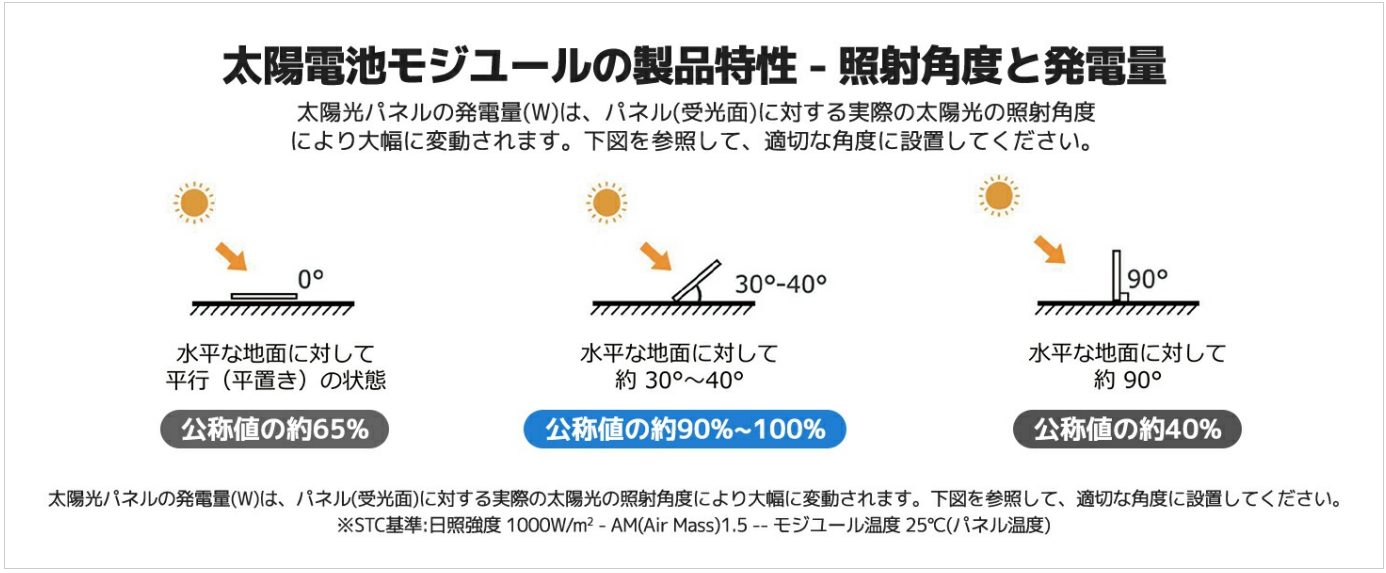


Figure 4.1: Optimal irradiation angles for solar panel power generation. Power output varies significantly with the actual solar irradiation angle relative to the panel surface.

4.2 Mounting the Panels

Securely mount the solar panels using appropriate mounting hardware (not included). The panels are designed to be thin and lightweight for easier installation on various structures.

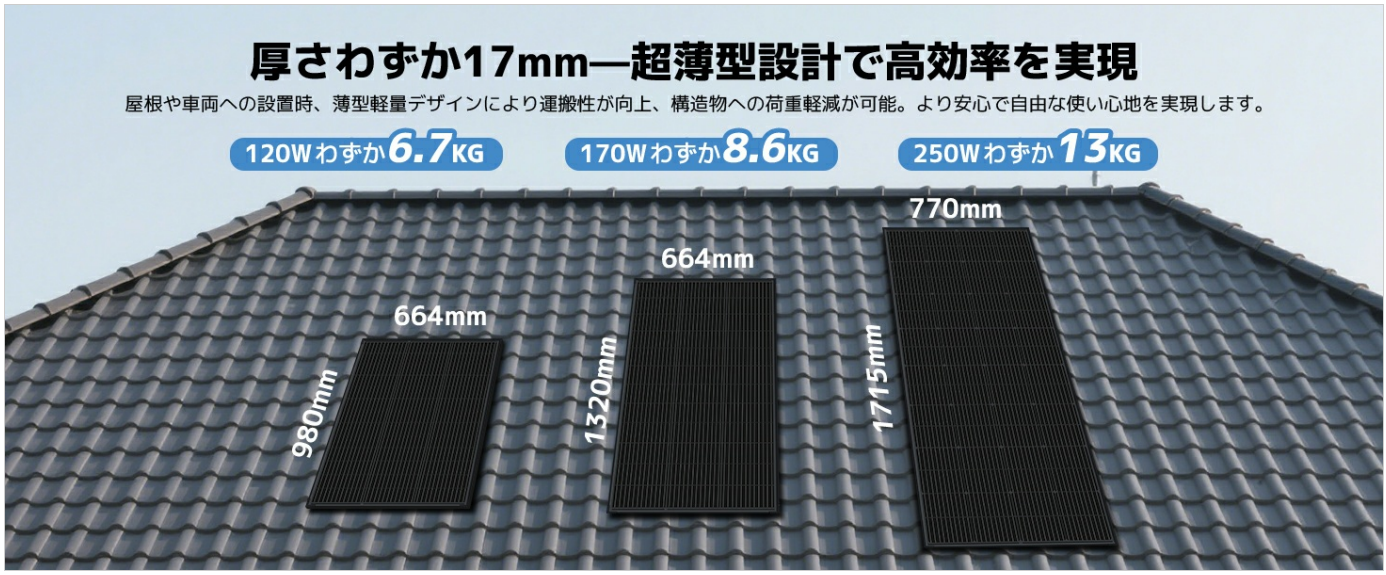


Figure 4.2: The ultra-thin 17mm design and lightweight construction (8.6kg for 170W) simplify transport and installation.

4.3 Electrical Connections

Connect the panels using the integrated MC4 connectors. Ensure positive and negative terminals are correctly matched. The panels come with 90cm long, 12AWG cables for flexible connections. Refer to the wiring diagram for your specific system configuration.

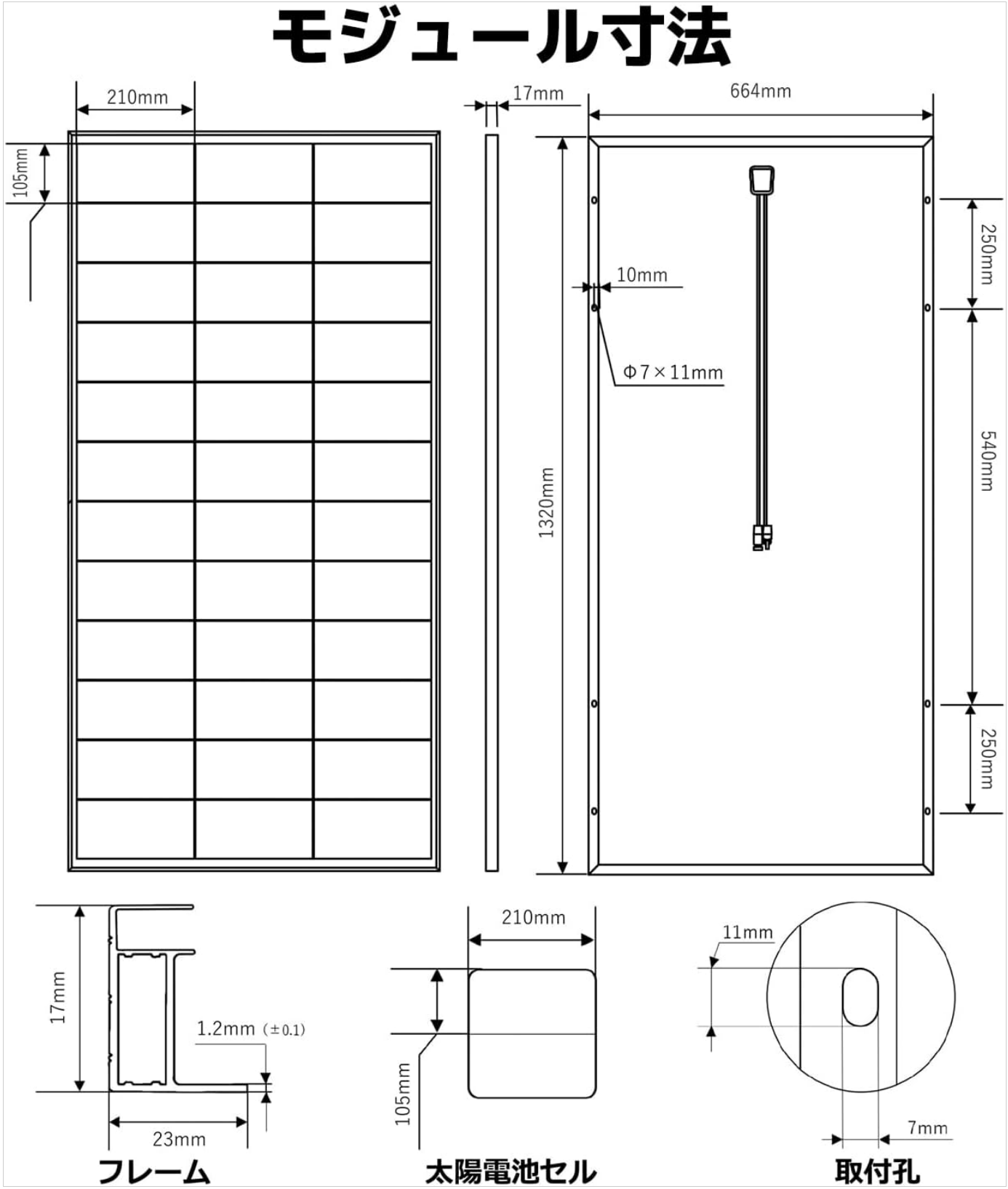


Figure 4.3: Module dimensions and mounting hole details for installation planning.

4.4 System Integration

Integrate the solar panels with your charge controller, battery bank, and inverter as per your system design. This product is designed for DIY installation, but professional assistance is recommended for complex systems.

Video 4.1: An overview of a solar power system setup, demonstrating how various components like solar panels, inverters, and batteries integrate to provide power. This video is provided by the seller.

5. Operating

Once installed, your Yinleader solar panels will automatically begin generating electricity when exposed to sunlight. The generated DC power is then converted to AC power by an inverter for household use or stored in batteries.

5.1 Power Generation

The 340W system (two 170W panels) can generate approximately 680Wh of electricity per day under average sunlight conditions (4 hours of peak sun per day, calculated over 365 days). This translates to about 248 kWh annually, contributing to significant energy savings.



Figure 5.1: Example of daily power generation (approx. 680Wh) and its usage for common household appliances.

Video 5.1: A detailed look at solar panels in operation, showcasing their installation on residential rooftops and their contribution to energy independence. This video is provided by the seller.

6. Maintenance

Regular maintenance ensures optimal performance and longevity of your solar panels.

- **Cleaning:** Periodically clean the surface of the panels to remove dust, dirt, leaves, or other debris that may reduce

efficiency. Use a soft cloth and water. Avoid abrasive materials or harsh chemicals.

- **Inspection:** Regularly inspect the panels for any physical damage, such as cracks in the glass, loose frames, or damaged cables. Check for any signs of corrosion on connectors.
- **Wiring Check:** Ensure all electrical connections are secure and free from wear or damage.
- **Shading:** Monitor for new sources of shading (e.g., growing trees) and address them to maintain optimal sunlight exposure.

7. Troubleshooting

If your solar panel system is not performing as expected, consider the following common issues:

- **Low Power Output:**
  - **Shading:** Check if any part of the panel is shaded.
  - **Dirt/Debris:** Clean the panel surface.
  - **Cloudy Weather:** Output naturally decreases in low light.
  - **Incorrect Angle:** Ensure the panel is oriented correctly towards the sun.
- **No Power Output:**
  - **Loose Connections:** Inspect all MC4 connectors and wiring for secure connections.
  - **Inverter/Charge Controller Issue:** Check the status indicators on your inverter or charge controller.
  - **Damaged Panel:** Inspect the panel for visible damage. If damaged, contact support.
- **System Overheating:** Ensure adequate ventilation around the panels and other system components.

For persistent issues, please contact Yinleader customer support.

8. Specifications

Below are the detailed specifications for the Yinleader 170W PERC Monocrystalline Solar Panel (each panel):

構造的特徴

170W



太陽電池セル	単結晶シリコン
太陽電池アレイ	36セル(3x12)
寸法（長さ x 幅 x 厚み）	664x1320x17mm (L × W × H)
重量	約 8.6 kg
ガラス面	強化ガラス 3.2mm (高透過 /反射防止コ-テイング)
バックシート	ブラック
フレーム	アルミニウム合金 (アルマイト処理/表面:シルバ-)
ジャンクションボックス	IP 67 準拠
ケーブル	2.5sq/MC4コネクタ-90cm
ダイオード数量	3
設計正圧耐荷重 (耐風)	正圧:3600Pa/負圧:2400Pa(试験荷重:5400Pa)
コネクター	MC4互換

Figure 8.1: Structural features of the 170W solar panel.

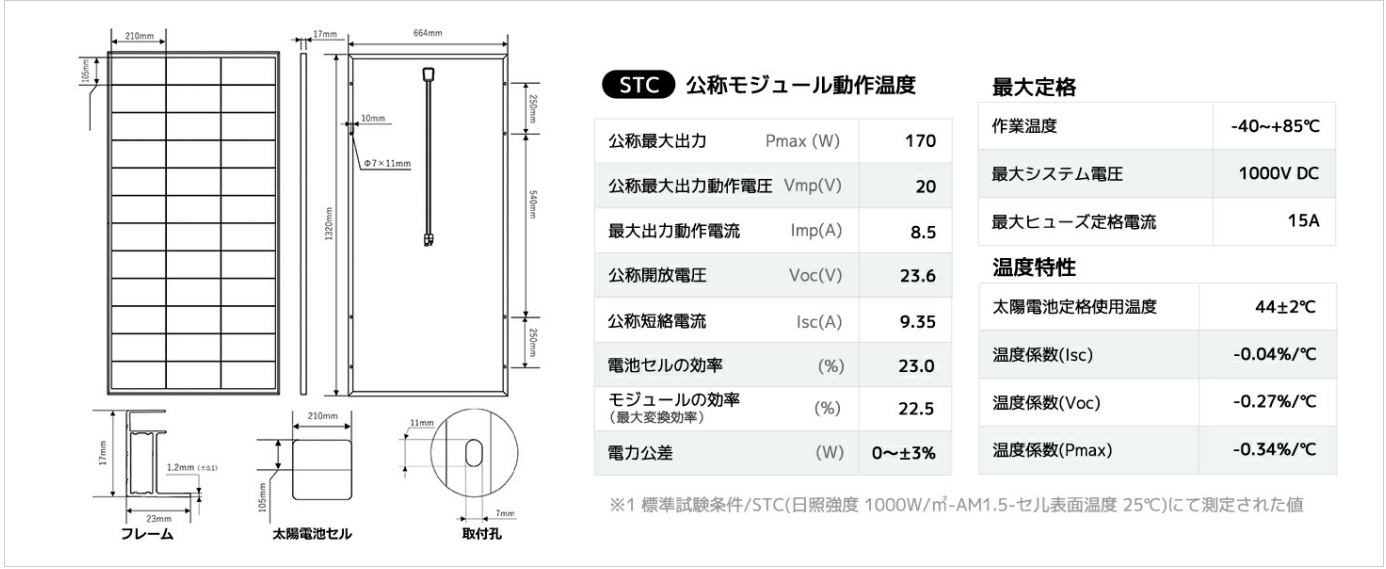


Figure 8.2: Module dimensions and Standard Test Conditions (STC) nominal module temperature characteristics.

Technical Specifications (per 170W panel)

Feature	Value
Brand	Yinleader
Model Number	CSMS-170W
Product Dimensions (L x W x H)	132 x 66.4 x 1.7 cm
Weight	Approx. 8.6 kg
Maximum Power (Pmax)	170 Watts
Cell Type	Monocrystalline Silicon
Conversion Efficiency	Up to 22.5%
Glass Surface	3.2mm Reinforced Glass (High transmittance / Anti-reflective coating)
Frame Material	Aluminum Alloy (Anodized / Silver finish)
Junction Box	IP67 Compliant
Cable Length	90 cm (12AWG)
Connector Type	MC4 Compatible
Max System Voltage	1000V DC
Operating Temperature	-40°C to +85°C
Positive Load Resistance	3600 Pa
Negative Load Resistance	2400 Pa
Certifications	TUV, IEC61215/IEC61730/IEC61701/IEC62716, ISO 9001, ISO 14001, ISO 45001

9. Warranty and Support

Yinleader provides a 1-year manufacturer's warranty for this product, covering defects in materials and workmanship. Additionally,

the solar panels come with a 25-year output warranty, ensuring at least 85% of initial output after 25 years.

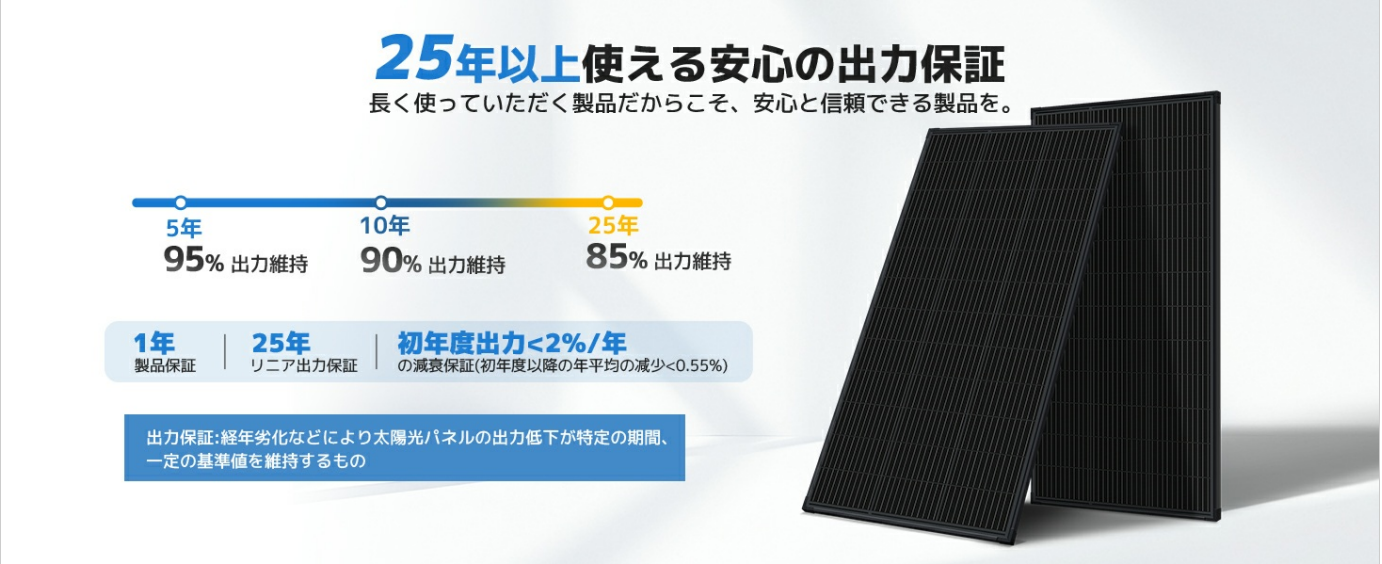


Figure 9.1: Output warranty details over 5, 10, and 25 years.

Customer Support:

For any questions, technical assistance, or warranty claims, please contact Yinleader customer support via phone or email. Our team is dedicated to providing comprehensive support and aims to respond to inquiries within 24 hours.
We also offer free online support for first-time installers to ensure a smooth setup process.

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Details

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