

**HORAY**

# **HORAY SOLAR**

## **2025 INTRODUCTION**

EXCELLENT PV MODULE MANUFACTURER

[www.horaysolar.com](http://www.horaysolar.com)

- 1.3MW Project in Italy

# CONTENT

**01**

About Horay

**02**

Products Introduction

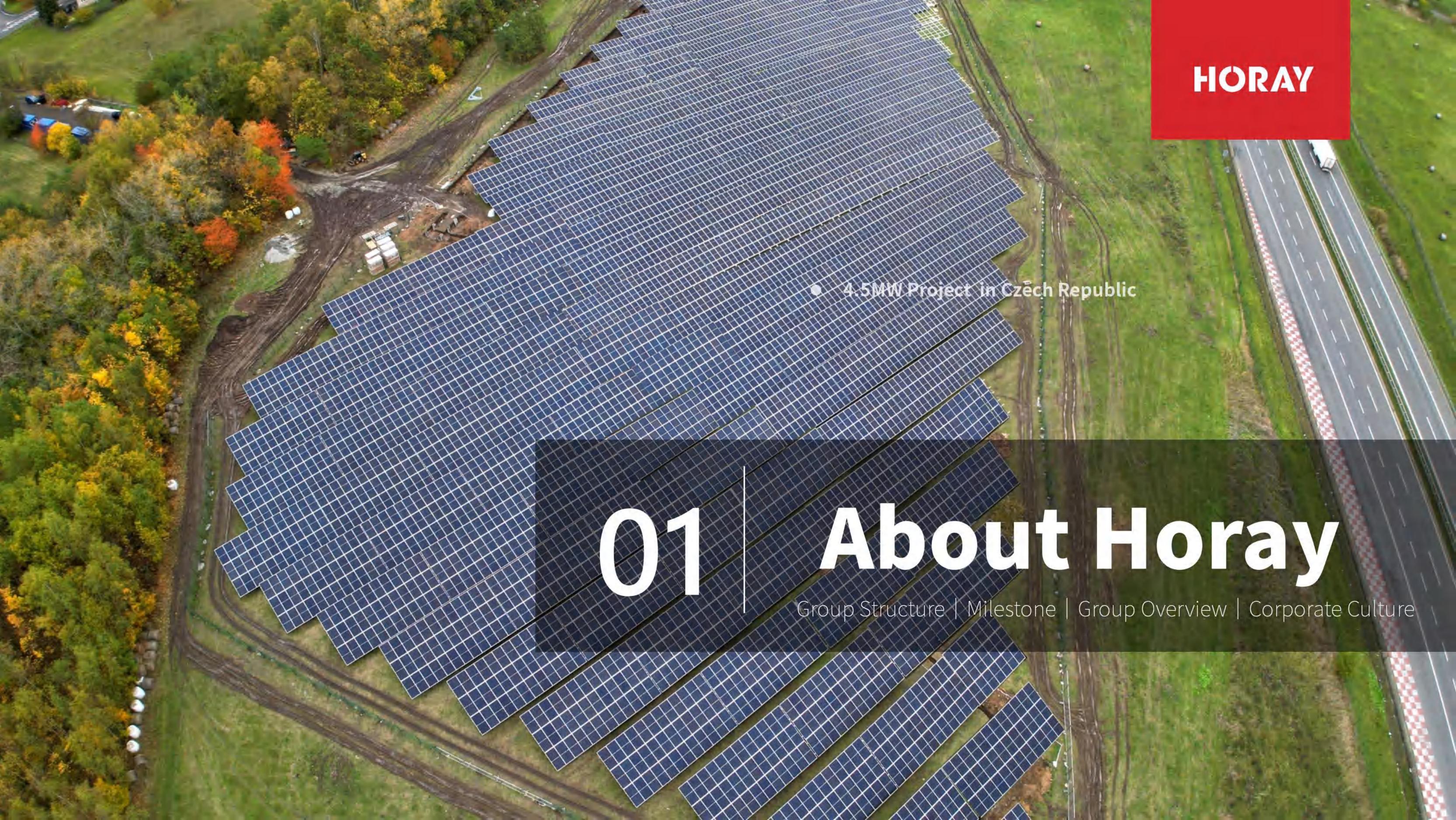
**03**

Technology

**04**

Solutions





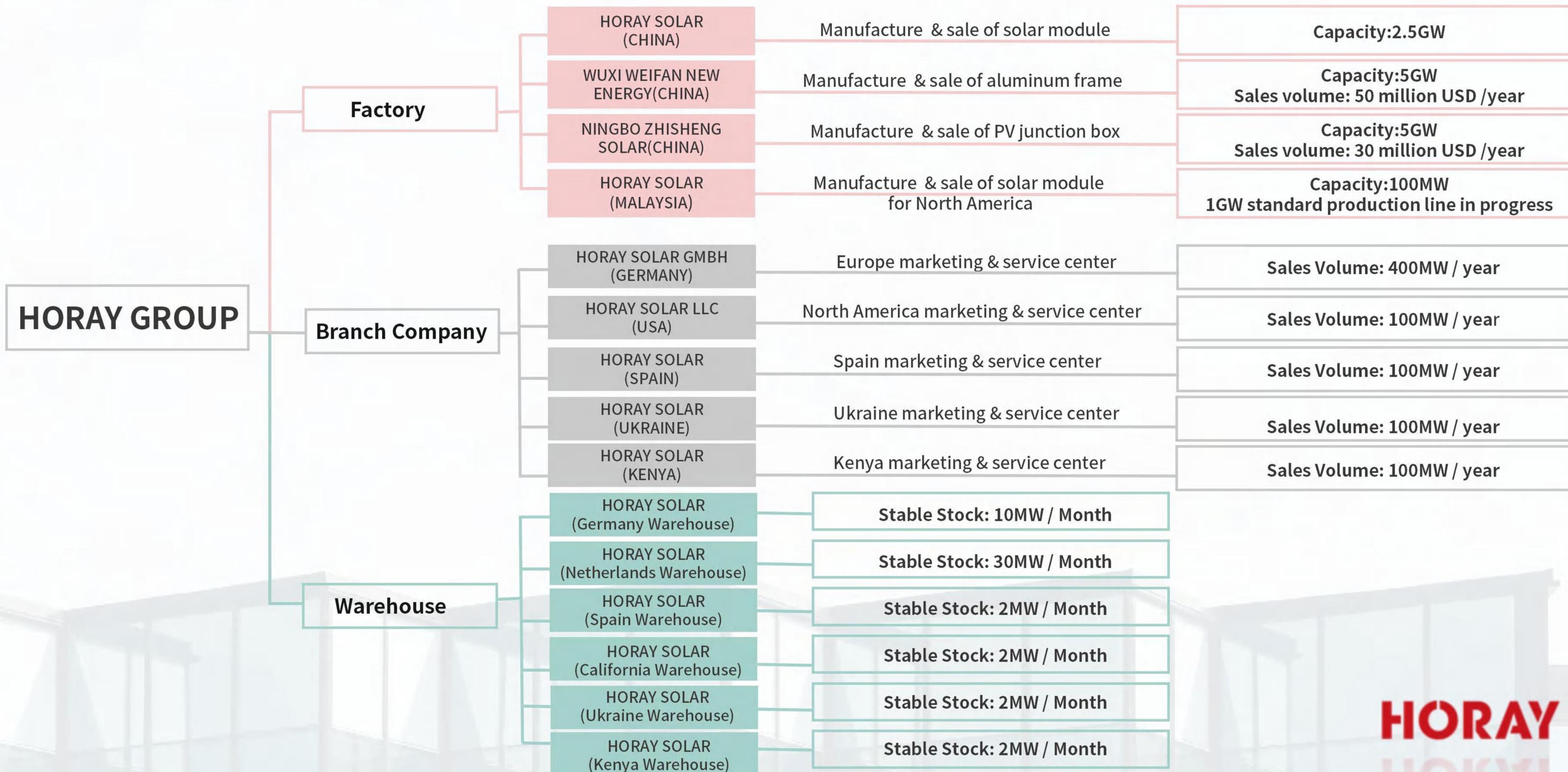
**HORAY**

● 4.5MW Project in Czech Republic

**01**

# About Horay

Group Structure | Milestone | Group Overview | Corporate Culture



**2010**  
**HORAY SOLAR**  
 Founded (CHINA)  
 Classic solar  
 module factory

**2018**  
**HORAY SOLAR**  
 Netherlands  
 Warehouse  
 Stock for European  
 market

**2021**  
**HORAY SOLAR**  
 (MALAYSIA)  
 A Horay Group  
 wholly-owned  
 subsidiaries for  
 USA market

**2020**  
**HORAY SOLAR**  
 Headquarter (CHINA)  
 Half-cell solar  
 module factory

**2021**  
**HORAY SOLAR**  
 (GERMANY)  
 Europe marketing and  
 customer service  
 center

**2022**  
**HORAY SOLAR**  
 USA Warehouse  
 Stock for North  
 American market

**2022**  
**HORAY SOLAR**  
 (USA)  
 Serving the North America  
 marketing and customer  
 service center

**2023**  
**HORAY SOLAR**  
 Spain Warehouse  
 Stock for Spanish  
 market

**2024**  
**HORAY SOLAR**  
 New Factory  
 Total Production  
 capacity 2.5 GW

**2024**  
**HORAY SOLAR**  
 Germany Warehouse  
 Stock for Germany  
 market

**2024**  
**HORAY SOLAR**  
 (UKRAINE)  
 Ukraine Marketing  
 Center & Warehouse

**2025**  
**HORAY SOLAR**  
 (KENYA)  
 Kenya Marketing Center  
 & Warehouse

Horay Solar is an integrated photovoltaic company focusing on the R&D, production and sales of solar modules and solar power system. Our products include standard solar module and customized solar module.

Horay Solar has always been committed to the development of globalization with an eye to the global industrial layout.

With strong technical support, scientific production management and strict quality control, all the products have reached the industry-leading level and have been approved by the international authorized certification.

## Horay Group

**15 Years**

In Solar Industry

**16 Bases**

Throughout The World

**5**

PV Module  
Production Lines

**2.5 GW**

Capacity

**3**

Raw Material Factories

**50+**

ODM Partners

Embrace the Sun Step into a Bright Future with Horay Solar





### • HORAY SOLAR (New Factory) •

Horay's new factory was officially completed and commenced operations in 2025.

Newer equipment, greater production capacity, more complete staffing, and better factory environment.



### • HORAY SOLAR (CHINA) •

Horay Solar is an integrated photovoltaic company focusing on the R&D, production and sales of solar modules and solar power system.

Horay Solar has always been committed to the development of globalization with an eye to the global industrial layout.



### • HORAY SOLAR (MALAYSIA) •

A Horay Group wholly-owned subsidiary, especially for North American market.

A global leader in sustainable innovation, specializing in reliable low to medium-wattage modules, customized solutions, and OEM services.



### • HORAY SOLAR (GERMANY) •

The Europe marketing and customer service center in Germany.

Manages local warehouse and spot logistics in Rotterdam, offering global services like pre-sales consulting, after-sales support, and EPC installation services.

### • HORAY SOLAR LLC (USA) •

The North America marketing and customer service center in the USA.

To provide services for our customers all over the world, including pre-sales product consulting and after-sales service, EPC installation service and consulting, etc.

### • HORAY SOLAR (SPAIN) •

The Spain marketing and customer service center in Spain.

Offers comprehensive services throughout the Spanish market, encompassing pre-sales product consultation, after-sales support, EPC installation, and consulting.

### • HORAY SOLAR (UKRAINE) •

The Ukraine marketing and customer service center in Ukraine.

Offers comprehensive services throughout the Ukraine market, encompassing pre-sales product consultation, after-sales support, EPC installation, and consulting.

### • HORAY SOLAR (KENYA) •

The Kenya marketing and customer service center in Kenya.

Offers comprehensive services throughout the Kenya market, encompassing pre-sales product consultation, after-sales support, EPC installation, and consulting.

# HORAY

# HORAY

• **NETHERLANDS WAREHOUSE** •

Add: Vlakbodem 3   
Dirksland, Rotterdam,  
Netherlands



• **USA WAREHOUSE** •

 Add: 12345 Mills Ave,  
Chino, CA, USA

• **SPAIN WAREHOUSE** •

Add: C/ Sierra d' espadá   
4 Pol. Ind. Pla dels Olivars  
46460 Silla (Valencia), Spain



• **GERMANY WAREHOUSE** •

 Add: Horay Warehouse, Robert-  
Bosch-Straße 27-29, 63225  
Langen, Germany

• **UKRAINE WAREHOUSE** •

Add: Bud. 26, Street Zaporizka,   
Boryspilsky District, Kyiv  
Region, Ukraine



• **KENYA WAREHOUSE** •

 Add: Mudher Industrial Park,  
Syokimau, Nairobi, Kenya



## Malaysia

HORAY SOLAR SDN. BHD (YADA NEW ENERGY SDN. BHD.)  
 地址: 75 Jalan I-Park SAC 6, Taman Perindustrian I-Park SAC,  
 Senai Johor, Malaysia  
 电话: +60 18 783 1738  
 E-mail: sales@horaysolar.com sales@yada.com.my



## Germany

HORAY SOLAR GMBH  
 地址: Robert-Bosch-Straße 27-29, 63225 Langen (Hessen),  
 Germany



## USA

HORAY SOLAR LLC  
 地址: 350 Pauma Place, Escondido CA, USA



## Netherlands

HORAY SOLAR (Netherlands Warehouse)  
 地址: Vlakhodem 3 Dirksland, Rotterdam,  
 Netherlands



## Spain

HORAY SOLAR (Spain Warehouse)  
 地址: C/ Sierra d' espadá 4 Pol. Ind. Pla dels Olivars 46460 Silla  
 (Valencia), Spain



## USA

HORAY SOLAR (America Warehouse)  
 地址: 12345 Mills Ave, Chino, CA, USA



## Spain

HORAY SOLAR (Spain Marketing Center)  
 地址: Calendula 93 Edificio J, Semisótano  
 Soto de la Moraleja 28109 Madrid



## Ukraine

HORAY SOLAR (Ukraine)  
 地址: Bud. 26, Street Zaporizka, Boryspilsky District, Kyiv  
 Region, Ukraine



## Kenya

HORAY SOLAR (Kenya)  
 地址: Mudher Industrial Park, Syokimau, Nairobi, Kenya



## Solar Module Factory

HORAY SOLAR CO.LTD  
 Add: No. 300 Huiming Road, Huishan District Wuxi,  
 Jiangsu, China  
 Tel: +86 510-8358 0688  
 E-mail: sales@horaysolar.com



## Solar Module Factory

HORAY SOLAR (China)  
 Add: Jinchang Road, Yanqiao Streets, Huishan District,  
 Wuxi, Jiangsu, China  
 E-mail: sales@horaysolar.com



## Aluminum Alloy Frame Factory

Wuxi Weifan New Energy Technology Co., LTD  
 Add: No.38 Liming Road, Changan Streets, Huishan District  
 Wuxi, Jiangsu, China  
 E-mail: sales@horaysolar.com



## PV Junction Box Factory

Ningbo Zhisheng Solar Technology Co., LTD  
 Add: No.698 Yu'an Road, Zhouxiang Town, Cixi City,  
 Ningbo, Zhejiang, China  
 E-mail: sales@horaysolar.com

# HORAY

# HORAY



### Europe

- Spain
- Romania
- Italy
- Slovakia
- Switzerland
- Netherlands
- Macedonia
- Bulgaria
- Austria
- Estonia
- Germany
- Czech Republic
- Poland
- Greece
- Latvia
- Belgium
- Croatia
- Sweden
- Moldova
- Lithuania
- Portugal
- Denmark
- Slovenia
- Britain
- Ireland

### Oceania

- Australia
- New Zealand

### Asia

- China
- Burma
- Japan
- Laos
- Indonesia
- The United Arab Emirates
- Saudi Arabia
- Lebanon

### Africa

- Mali
- Gabon
- Gambia
- Kenya

### America

- USA
- Paraguay
- Canada
- Brazil
- Mexico
- Dominica
- Honduras
- Chile

## Six Advantages

### • Production Advantage •

- **Awards:** "Provincial-level Intelligent Workshop"
- **Expertise:** Over 15 years production experience.
- **Efficient:** Smart workshop ensures productivity.

### • Product Advantage •

- **Quality:** Top5 global materials.
- **Flexibility:** Customizable to diverse needs.
- **Cost-effective:** Competitive price, valuable.

### • Global Presence •

- **Locations:** 5 factories, 5 marketing centers, 6 warehouses worldwide.
- **Efficient Logistics:** Prompt DDP delivery.

### • Talent Advantage •

- **Professional Team:** Highly skilled, enough industry-experience.
- **Innovation:** Industry-leading products.
- **Service:** Exclusive customized service.

### • Project Experience •

- **Portfolio:** Nearly 1,000 global projects.
- **Support:** Installation, commissioning, and maintenance services.

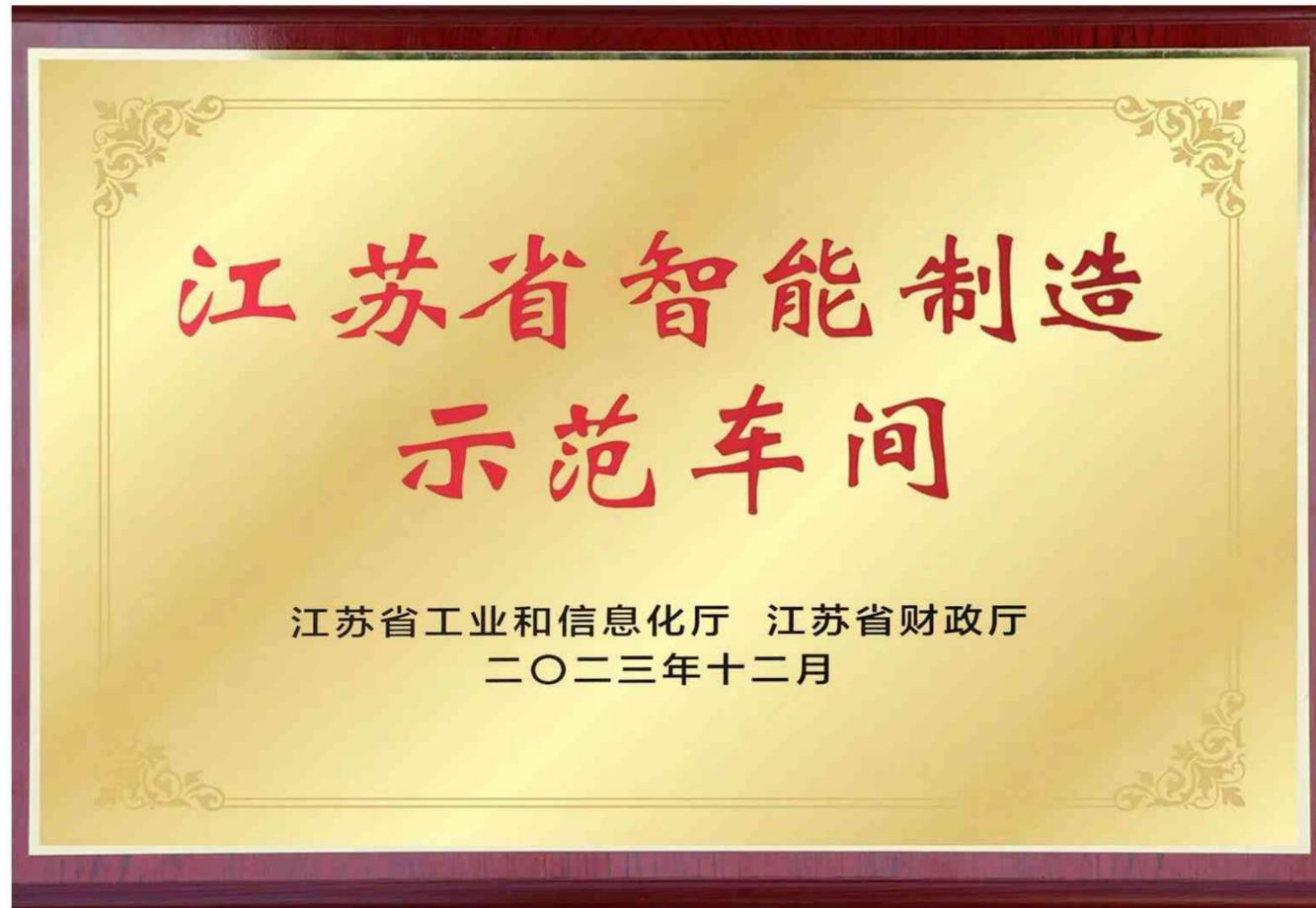
### • Value-added Services •

- **Assurance:** 12/15/30-year product warranty and 25/30-year power warranty.
- **Support:** Timely, after-sales services.
- **Risk Management:** MES and Lloyd's Assurance.

-  2023 Jiangsu Province Intelligent Manufacturing Demonstration Workshop
-  2023 High-Tech Enterprise Certification
-  Internationally Recognized Brands to be Cultivated and Developed in Jiangsu Province, 2023-2025
-  2024 Wuxi Engineering Technology Research Center Certification
-  2024 Wuxi Enterprise Technolog Center Certification
-  2024 Capability Maturity Model Manufacturing Certification
-  2025 Jiangsu Provincial Advanced Intelligent Factory



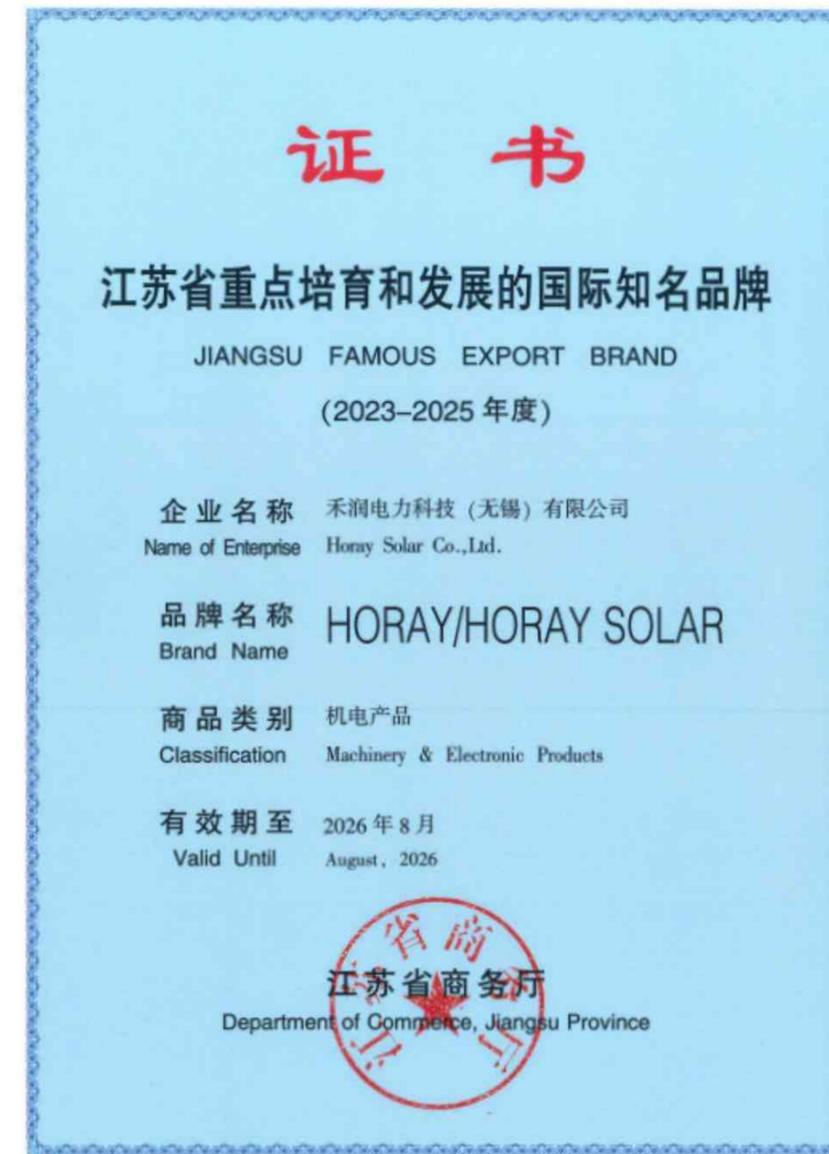
## 2023 Jiangsu Province Intelligent Manufacturing Demonstration Workshop



## 2023 High-Tech Enterprise Certification



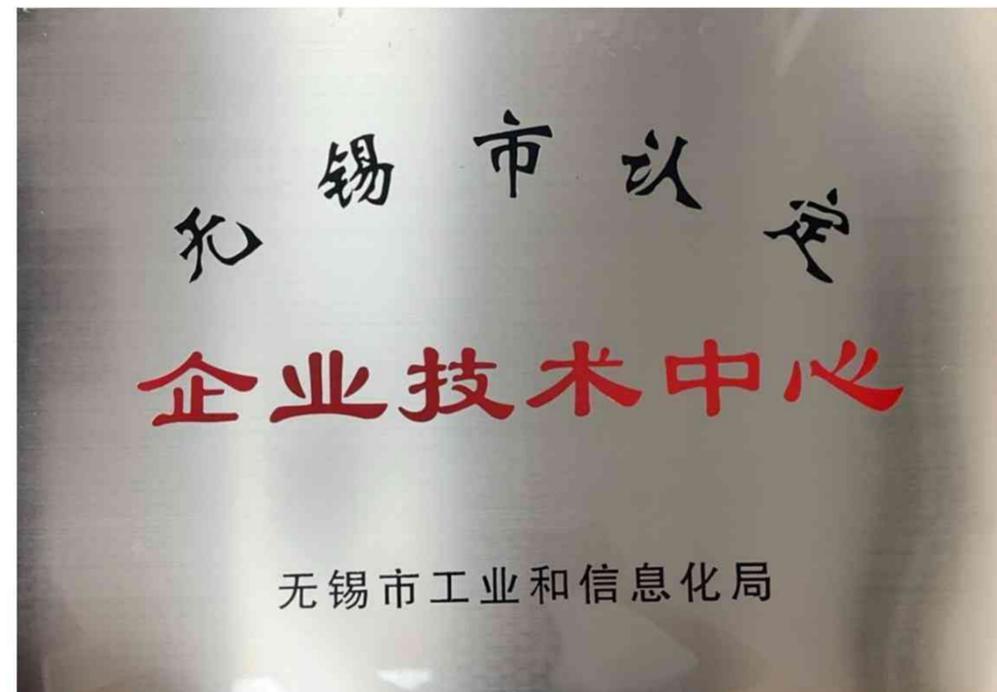
## Internationally Recognized Brands to be Cultivated and Developed in Jiangsu Province, 2023-2025



## 2024 Wuxi Engineering Technology Research Center Certification



## 2024 Wuxi Enterprise Technology Center Certification



## 2024 Capability Maturity Model Manufacturing Certification



**H****Hopeful**

Horay Solar has been devoted to the global expansion, has a promising future with strong technical support, scientific production management and strict quality control.

**O****Outstanding**

Our products have outstanding advantages, including higher output power and harsh environmental adaptability, etc.

**R****Responsible**

Undertaking great social responsibility, HoRay Solar determined to become a leading photovoltaic company in pursuit of good quality.

**A****Aspiring**

Our colleagues have the greater ambition to produce cleaner and much more efficient solar panel.

**Y****Youthful**

Everyone of our team is full of youth and vigour.

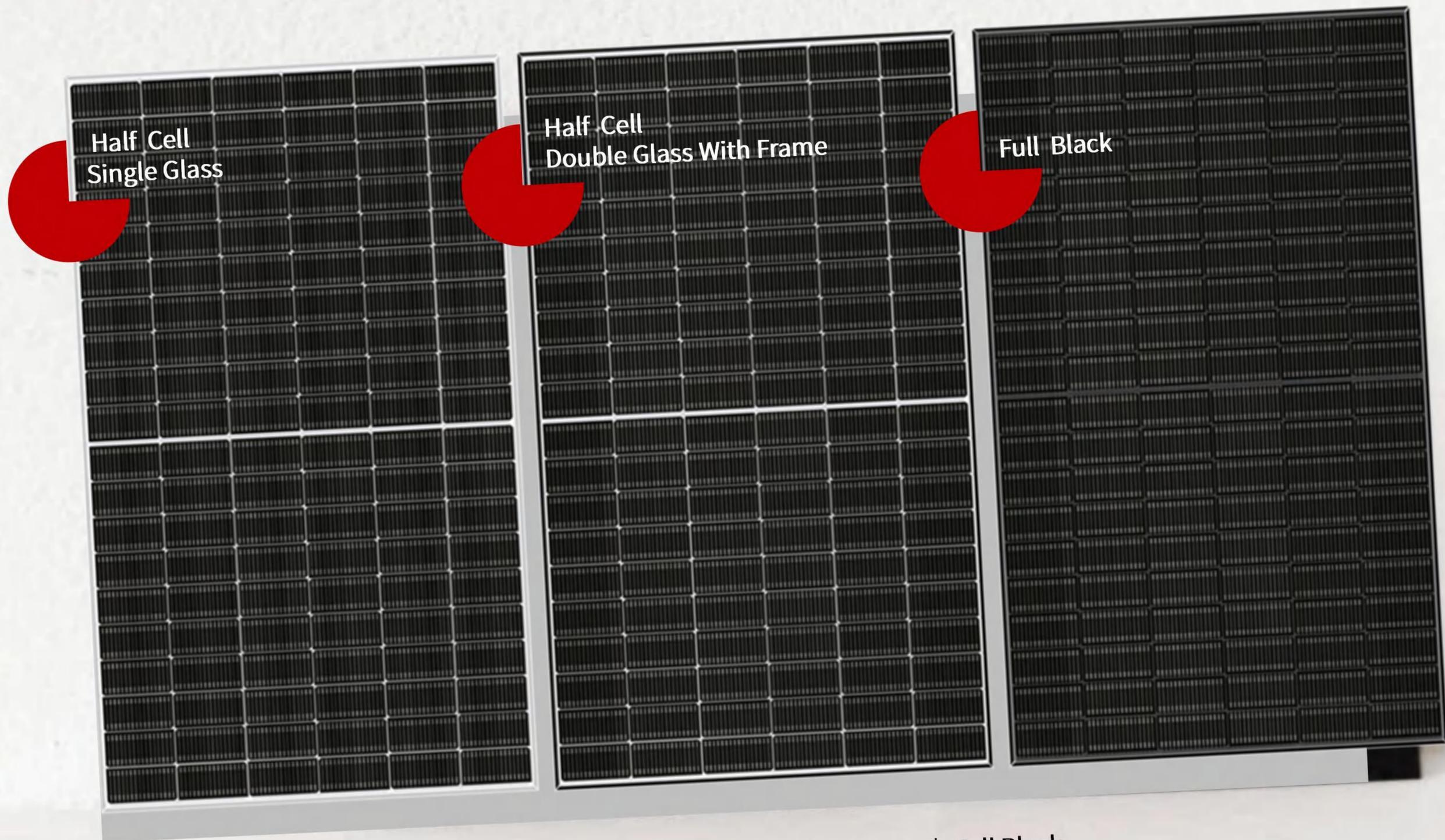
**HORAY****HORAY**

● 120.24KW Project in Tematínska, Slovakia

02

# Products Introduction

Solar Ocean (N-Type/ Perc) | Solar Galaxy (N-Type/ Perc) | Solar Cosmos (N-Type) | Solar Creek series



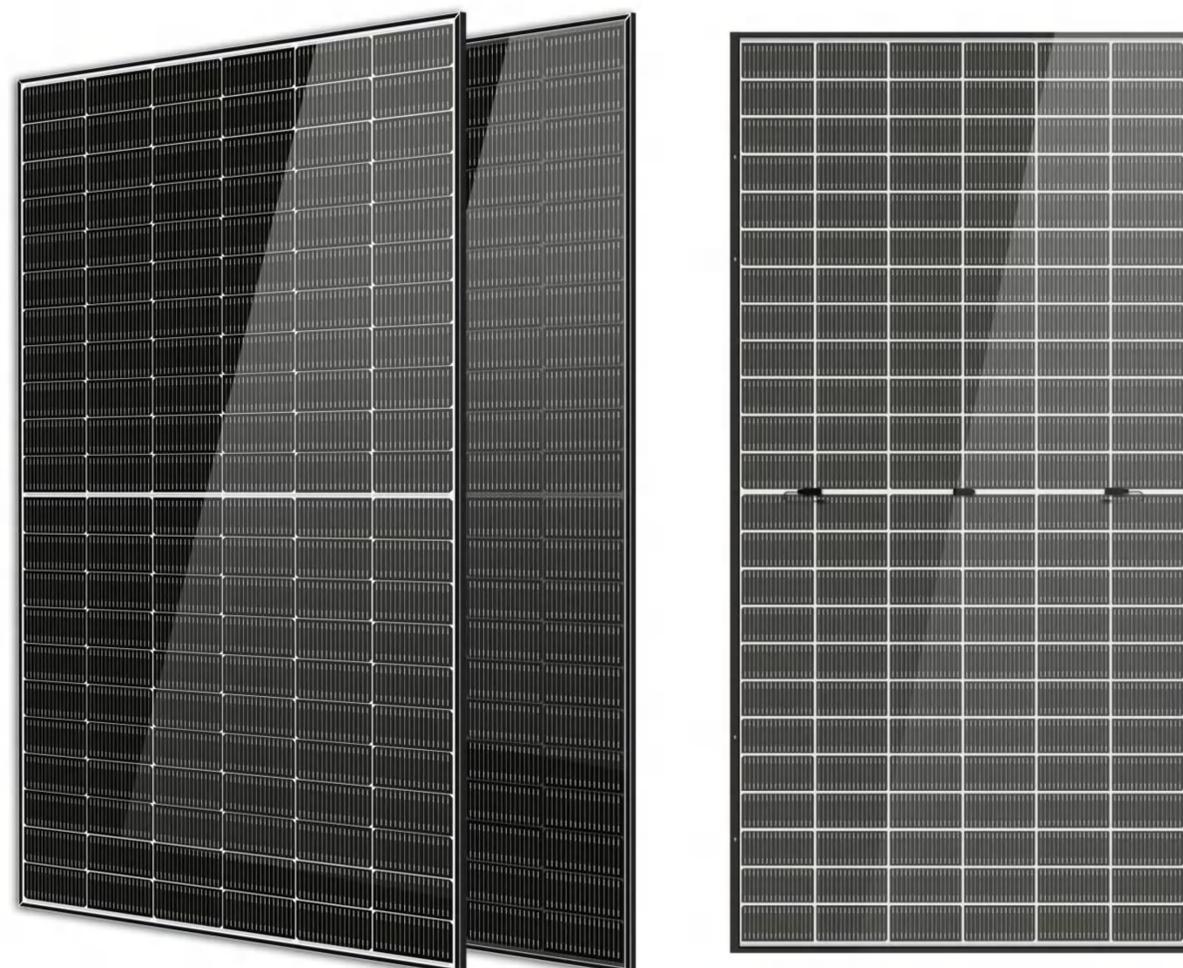
Half Cell  
Single Glass

Half Cell  
Double Glass With Frame

Full Black

-  MBB/SMBB
-  HIGHER  
OUTPUT POWR
-  HIGHER  
EFFICIENCY

Single Glass | Double Glass With Frame | Full Black



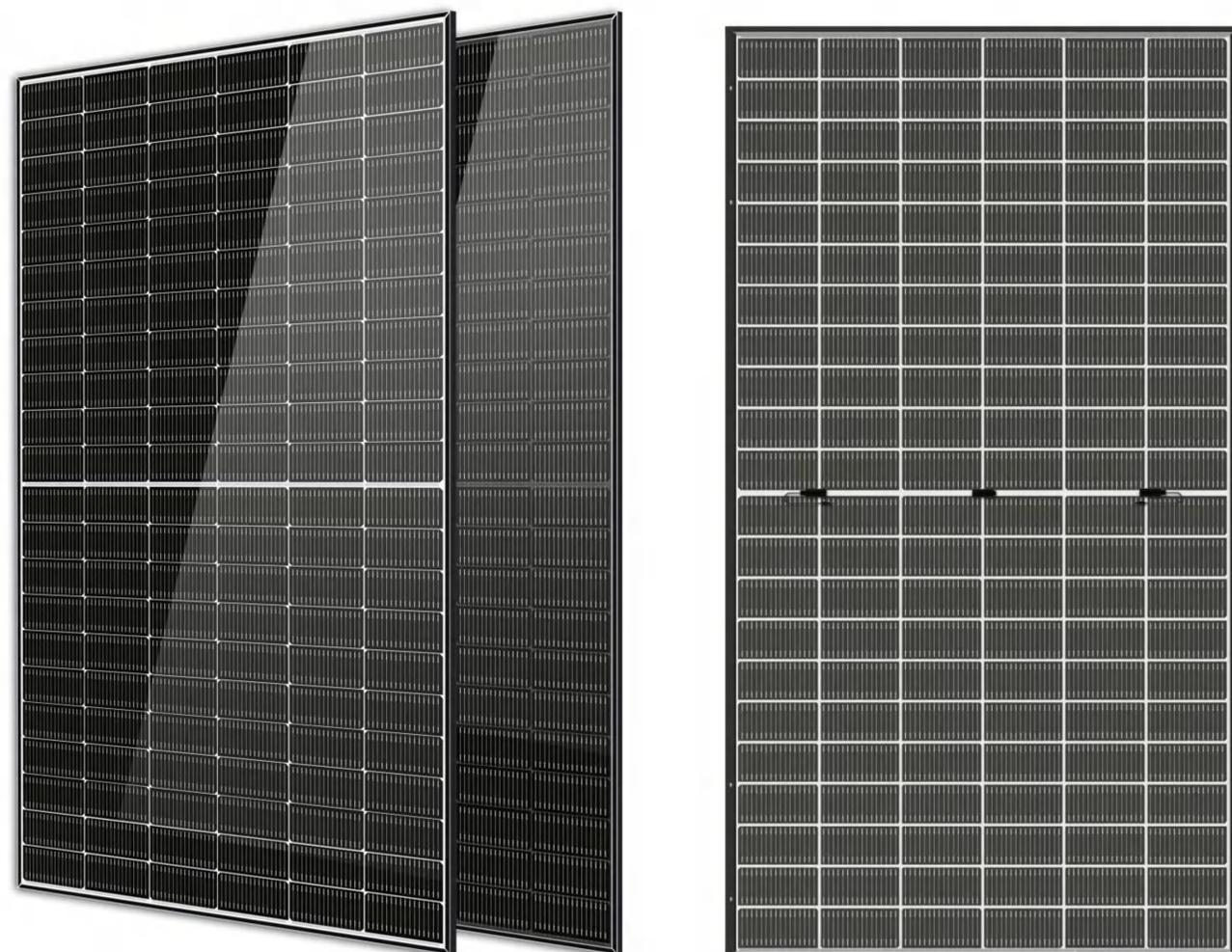
**HALF CELLS - 182mm**

## SOLAR OCEAN PERC **MBB** SOLAR MODULES

**MONO FACIAL MODULES | MONO BIFACIAL MODULES**

- ✓ POWER: 405W-420W  
Cell Amount: 108 half-cells
- ✓ POWER: 450W-470W  
Cell Amount: 120 half-cells
- ✓ POWER: 495W-515W  
Cell Amount: 132 half-cells
- ✓ POWER: 535W-560W  
Cell Amount: 144 half-cells

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**HALF CELLS - 182mm**

## SOLAR OCEAN N-Type **SMBB** SOLAR MODULES

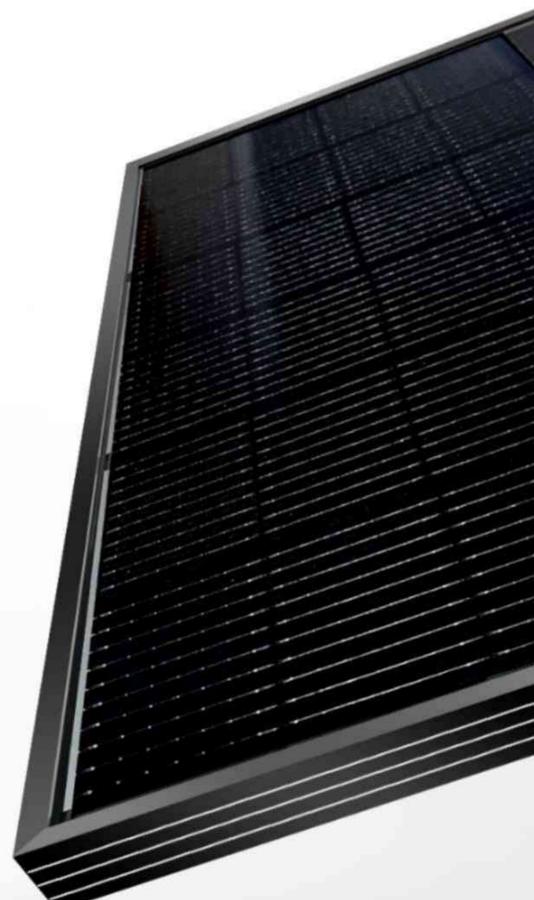
**MONO-FACIAL MODULES | BIFACIAL MODULES**

- ✓ POWER: 420W-440W  
Cell Amount: 108 half-cells
- ✓ POWER: 470W-490W  
Cell Amount: 120 half-cells
- ✓ POWER: 520W-540W  
Cell Amount: 132 half-cells
- ✓ POWER: 570W-590W  
Cell Amount: 144 half-cells

- SMBB Cell
- ✓ MBB Cell
- LID Free
- Optimized Temperature Coefficient
- Outstanding Low Light Performance
- Higher Bifacial Gain
- Higher Efficiency & Output Power
- Ultra-high Power Generation
- ✓ Lower Attenuation Rate
- ✓ Harsh Environmental Adaptability
- ✓ Excellent Load Capacity
- Longer Warranty
- ✓ PID Protection

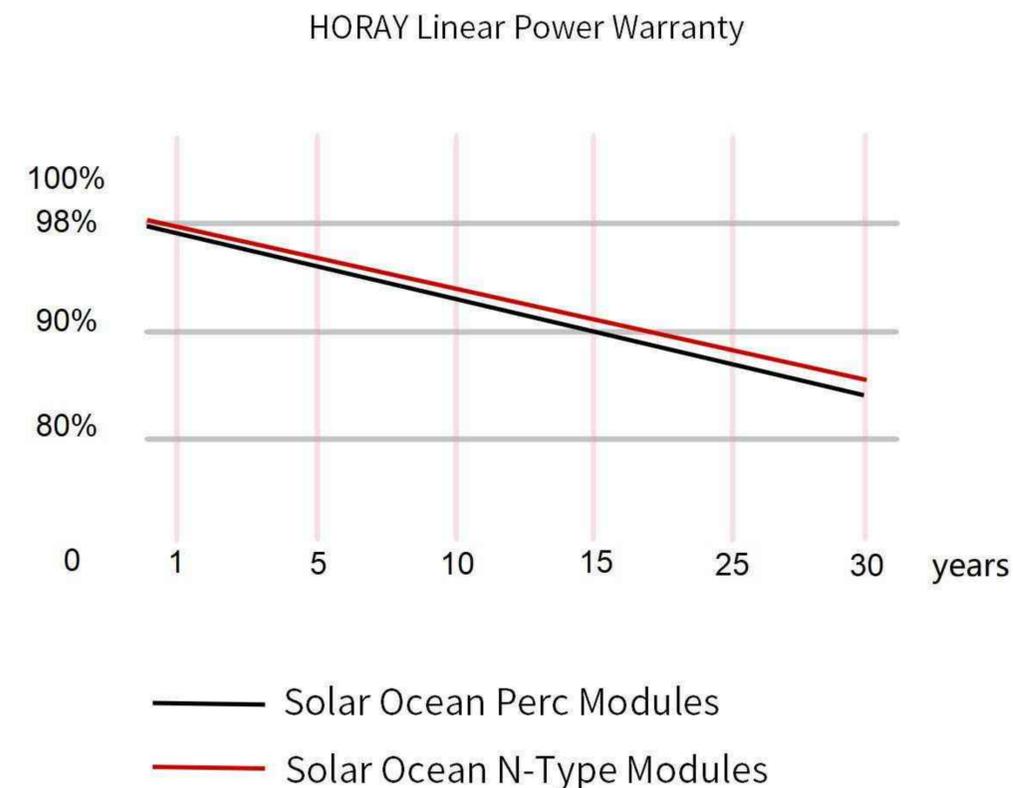
**Perc**

- ✓ SMBB Cell
- MBB Cell
- ✓ LID Free
- ✓ Optimized Temperature Coefficient
- ✓ Outstanding Low Light Performance
- ✓ Higher Bifacial Gain
- ✓ Higher Efficiency & Output Power
- ✓ Ultra-high Power Generation
- ✓ Lower Attenuation Rate
- ✓ Harsh Environmental Adaptability
- ✓ Excellent Load Capacity
- ✓ Longer Warranty
- ✓ PID Protection

**N-Type****HORAY**

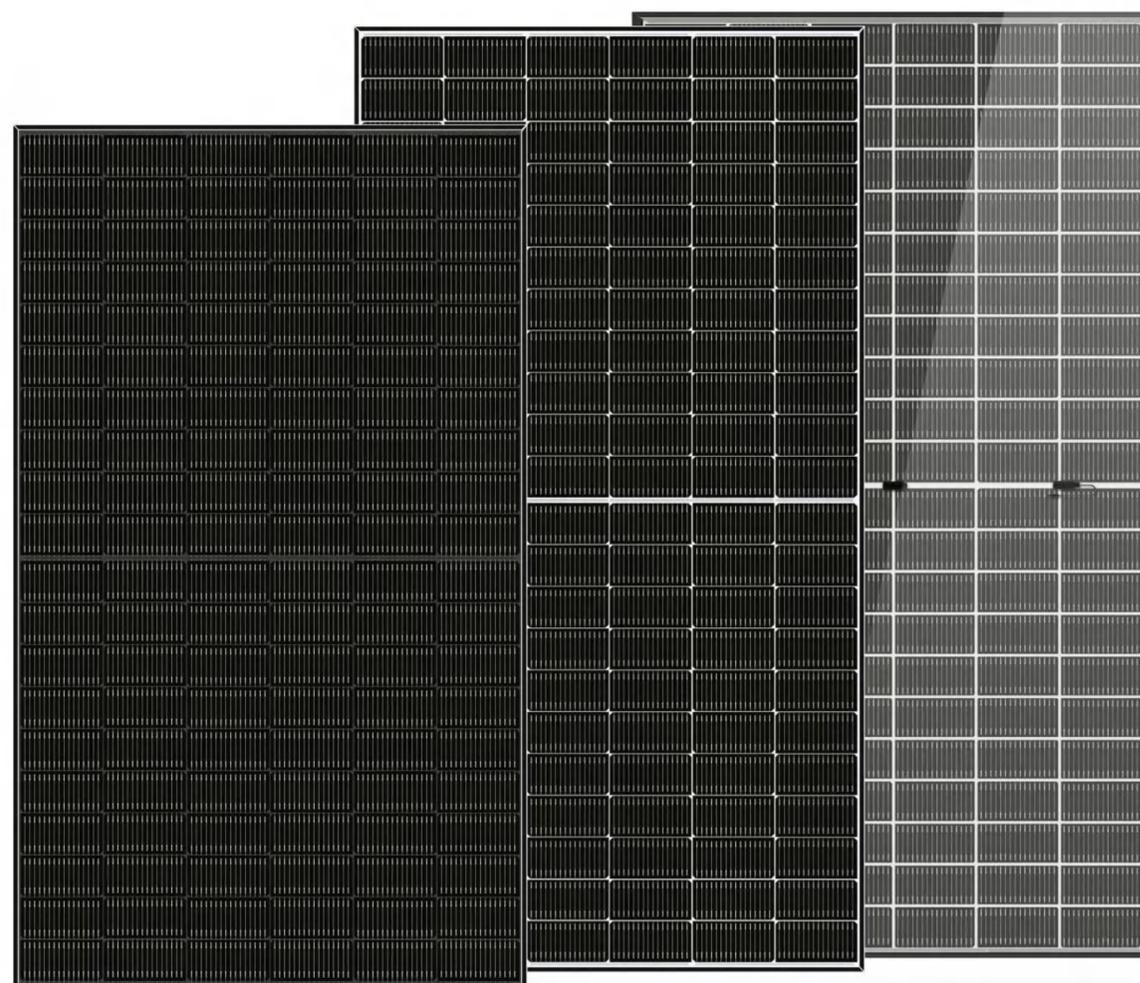
- Compatible with existing packaging, container space, and logistics methods
- Ensures system safety and reliability while aligning with mainstream solar system designs.
- Higher performance under low light environment.
- Strict salt spray and ammonia corrosion test by the third party.
- Modules designed with arm span, easy installation, and reduced risk of damage.
- Offers high power per unit area, lower BOS cost, and compatibility with mainstream mounting systems (1p and 2p).
- Ensure the attenuation probability caused by PID phenomenon is minimized.
- Mechanical load tests including wind load 2400Pa and snow load 5400Pa done by TUV.

### Solar Ocean Series Modules



## SOLAR GALAXY PERC **MBB** SOLAR MODULES

**MONO FACIAL MODULES | MONO BIFACIAL MODULES**



**HALF CELLS - 210mm**



POWER:485W-500W  
Cell Amount: 100 half-cells



POWER:535W-550W  
Cell Amount: 110 half-cells



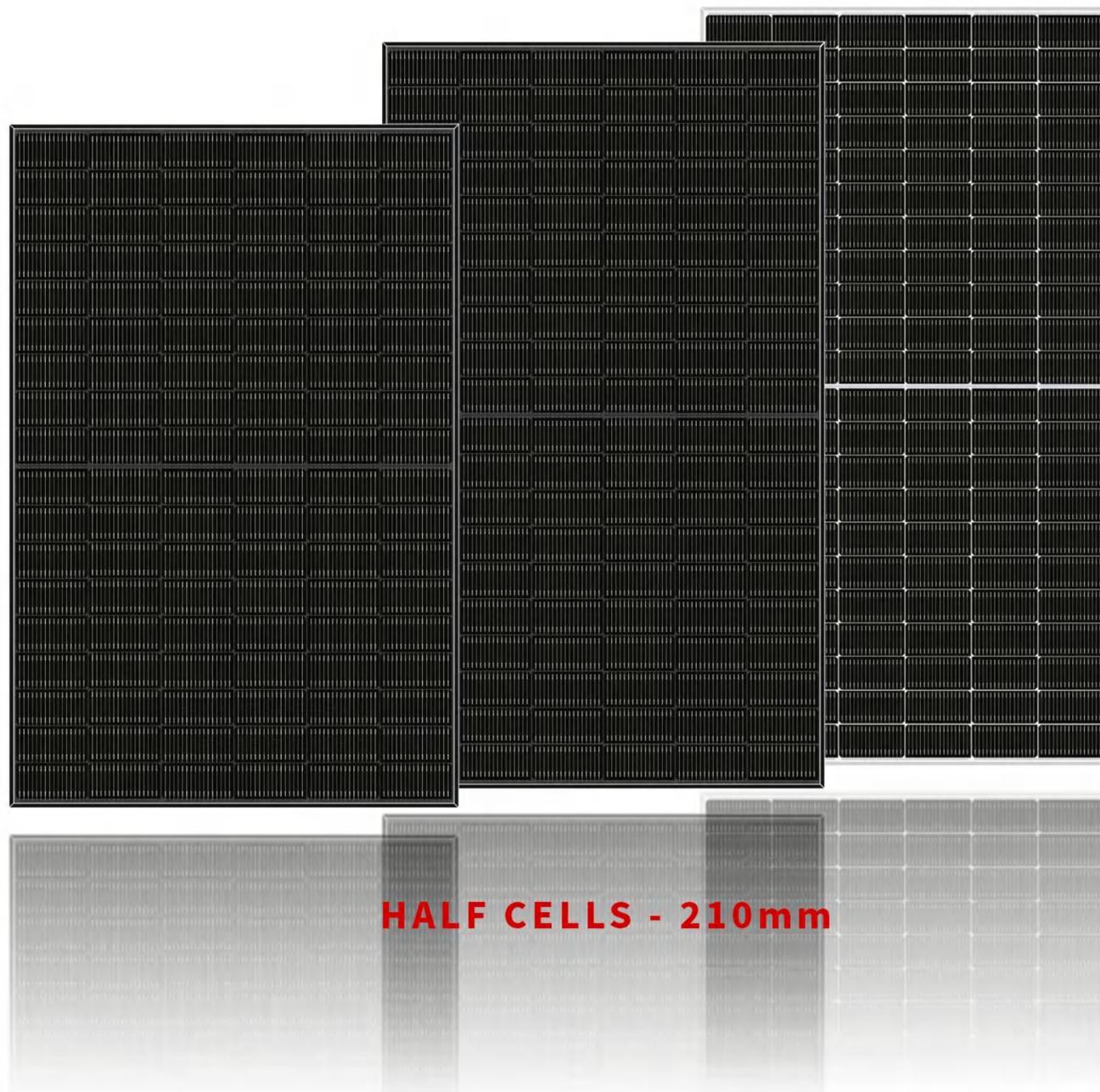
POWER:585W-600W  
Cell Amount: 120 half-cells



POWER:640W-665W  
Cell Amount: 132 half-cells

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## SOLAR GALAXY N-Type **SMBB** SOLAR MODULES

**MONO FACIAL MODULES | MONO BIFACIAL MODULES**



POWER:510W-535W  
Cell Amount: 100 half-cells



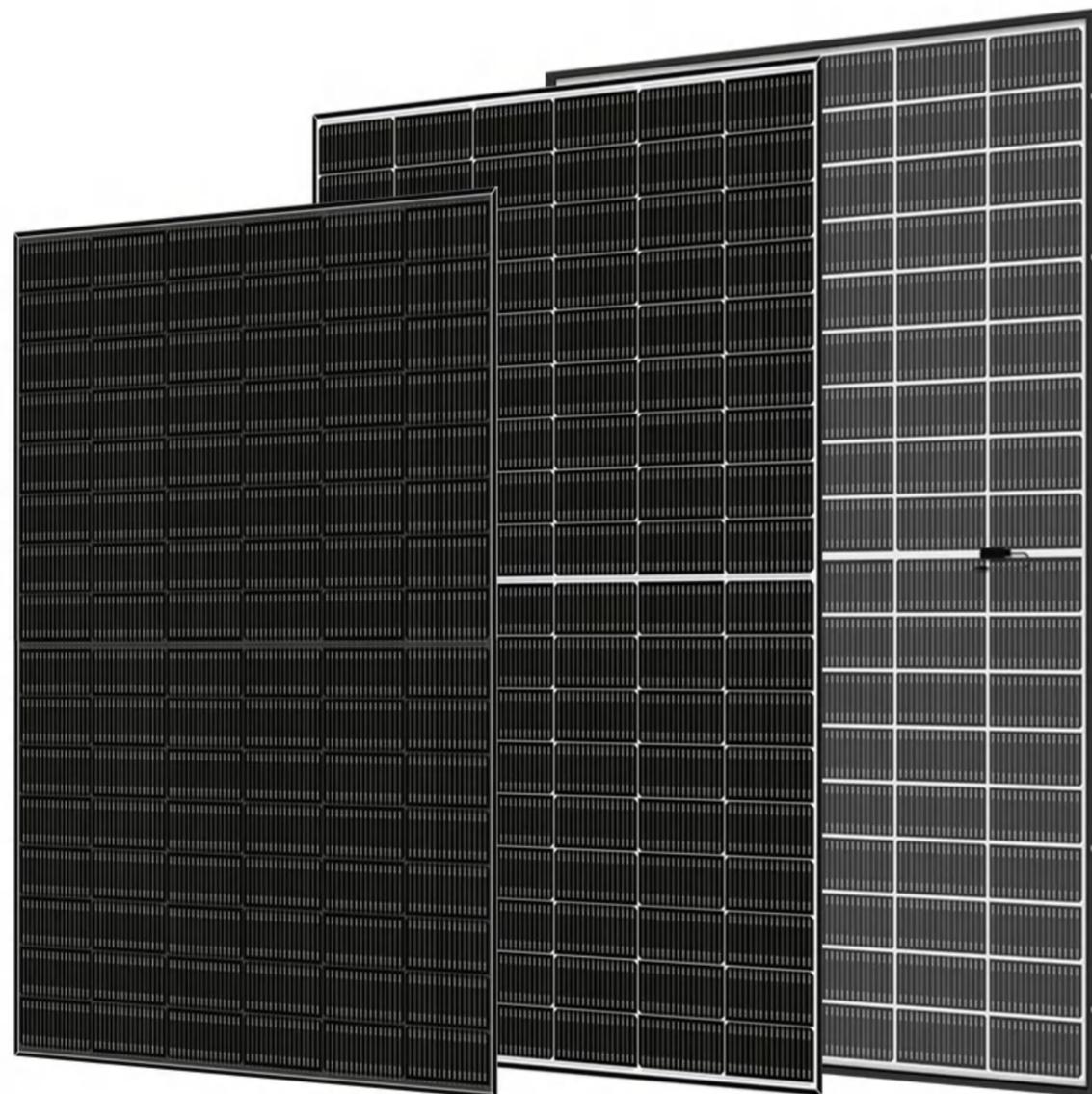
POWER:560W-585W  
Cell Amount: 110 half-cells



POWER:610W-635W  
Cell Amount: 120 half-cells



POWER:685W-710W  
Cell Amount: 132 half-cells



182 X 210mm

## SOLAR COSMOS N-Type **SMBB** SOLAR MODULES

**MONO FACIAL MODULES | MONO BIFACIAL MODULES**



POWER:435W-455W  
Cell Amount: 96 half-cells



POWER:495W-515W  
Cell Amount: 108 half-cells



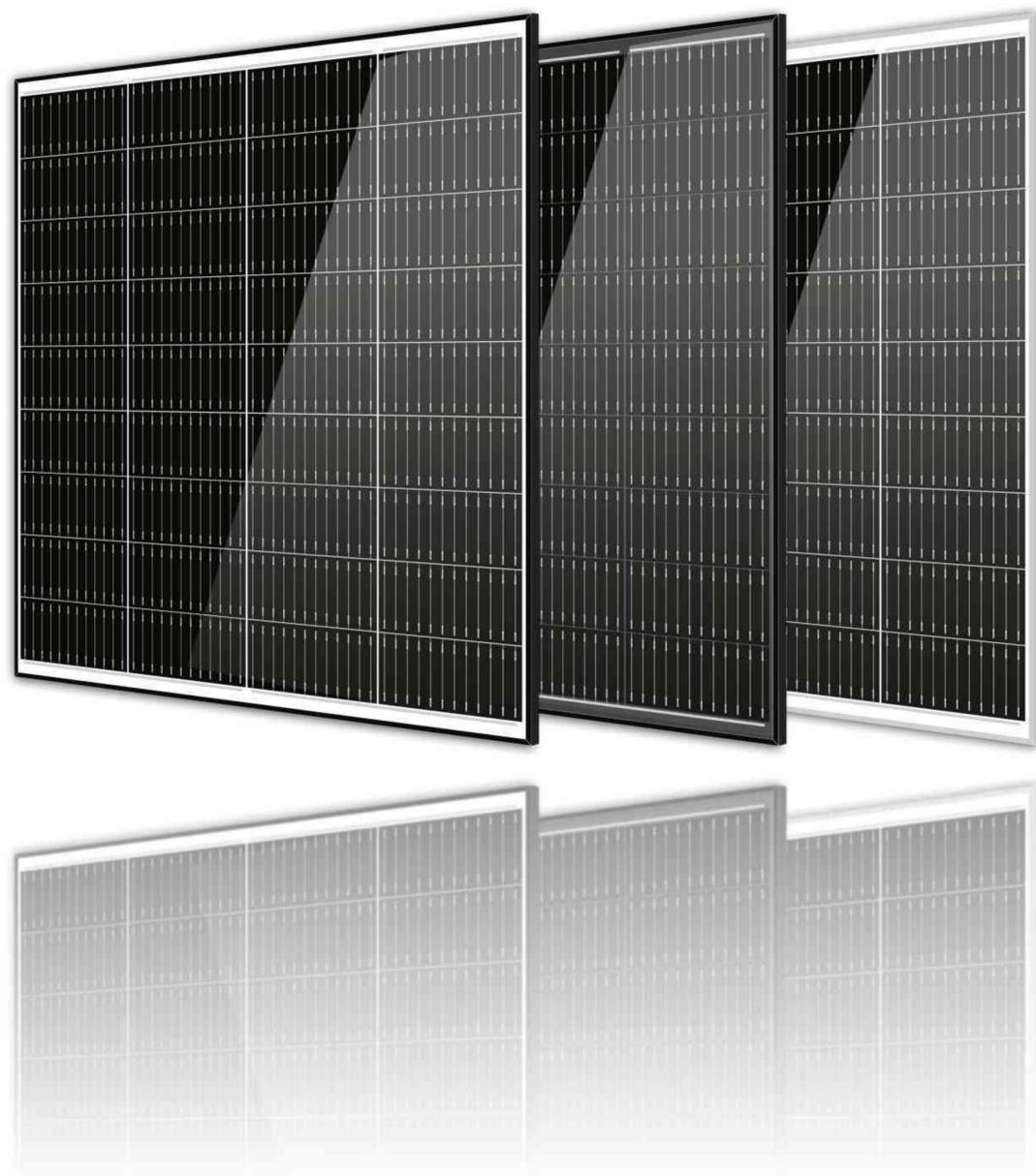
POWER:550W-570W  
Cell Amount: 120 half-cells



POWER:610W-630W  
Cell Amount: 132 half-cells

**HORAY**

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## Solar Creek **Customized** Solar Modules

- ✓ POWER:10W-380W
- ✓ CUSTOMIZED SIZE

**HORAY**

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### • Outdoor Solar •

Portable, lightweight, high efficiency.

- Max. STC Power 180W
- System Voltage 1500V
- Size 1020mm\*875mm\*35mm



### • Solar Street Light •

Tailored for diverse street light systems.

- Max. STC Power 110W
- System Voltage 1500V
- Size 820mm\*700mm\*30mm



### • Photovoltaic RV Car •

Lightweight solar panel perfect for RVs.

- Max STC Power 130WP
- Max System Voltage 1500V
- Size 890mm\*765mm\*30mm

03

# Technology

Specification | Certificate | PERC | N-Type



### Maximum Rating

Power selection **0~+5W**

Measuring uncertainty of Pm **0~±3%**

Operating Temperature **-40°C~+85°C**



### Low Light

High Performance in Low-light environment



### Warranty

**25/30 Years** Power Output Warranty

10 Years 90%, 25 Years 80%

15 Years Product Warranty on Materials



### Qualified Materials

**MBB/SMBB** Cell

Higher Output Power

Harsh Environmental Adaptability

PID Protection



### Enhanced External Load

Wind Load **2400Pa**

Snow Load **5400Pa**



### Certification

IEC61215: 2021 IEC61730: 2016

TUV Rheinland Standard, IEC, CE,

ETL, UL, MCS, CB, JP-AC, INMETRO

ISO9001, ISO14001, CQC, CSI, etc

# Certificates

## For Products

Tested by the Third-party, Horay Solar 's modules obtained international certifications. Incl. TUV , IEC, CE, MCS, CSI, INMETRO, CB,ETL, BSCI, JP-AC, CQC etc.

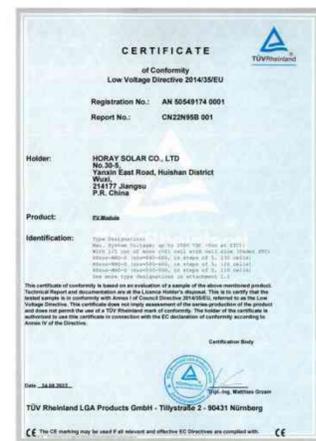
For full details, please contact us.



TUV



IEC



CE



INMETRO



CQC



MCS



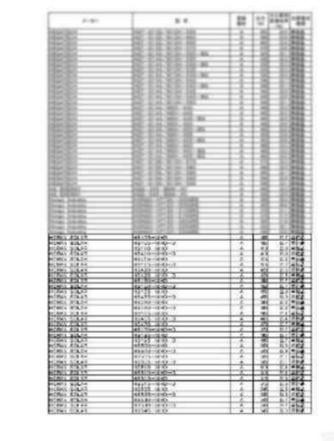
CSI



CB



ETL



JPAC

# Certificates

## For Factory

Tested by the Third-party, Horay Solar factory obtained international certifications. Incl. BSCI, ISO9001, ISO14001, ISO45001 etc.

For full details, please contact us.



BSCI



ISO 9001



ISO 14001



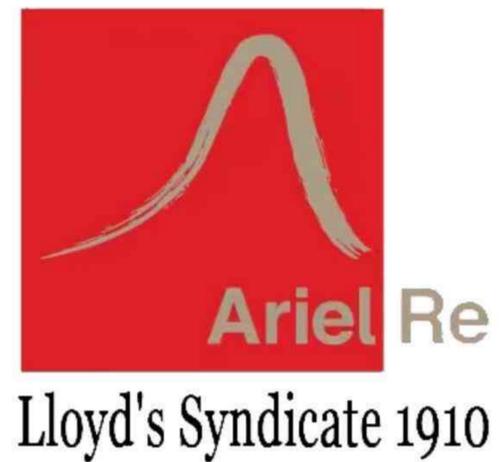
ISO 45001

# Certificates

## Additional Services

Horay offers solar performance insurance lasting up to 30 years, along with module recovery and recycling services.

For full details, please contact us.



LLOYD Ariel Re



PV CYCLE

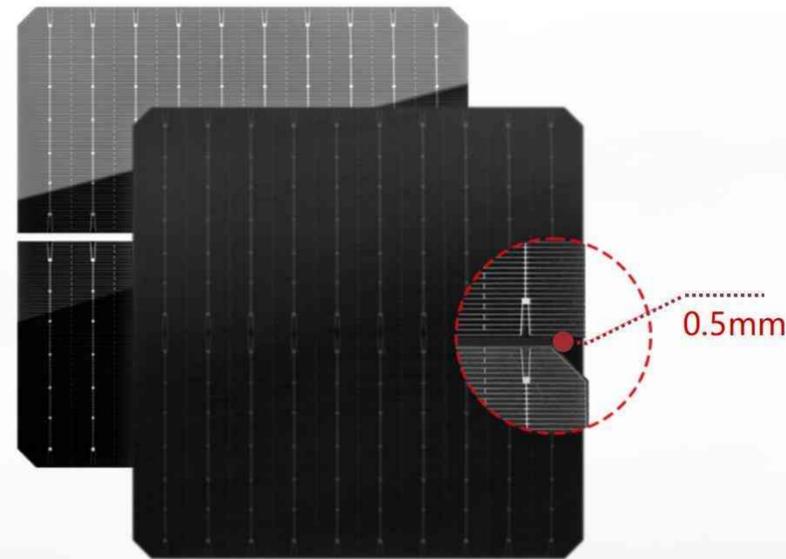
## PERC Technology 182mm & 210mm High Efficiency Cell

### High Efficiency

- ✓ Enlarged cell area

### MULTI-BUSBAR

- ✓ Reduced micro-cracking risk
- ✓ Increased active working area



### HALF-CUT TECHNOLOGY

- ✓ High-precision laser cutting
- ✓ Lower internal power loss

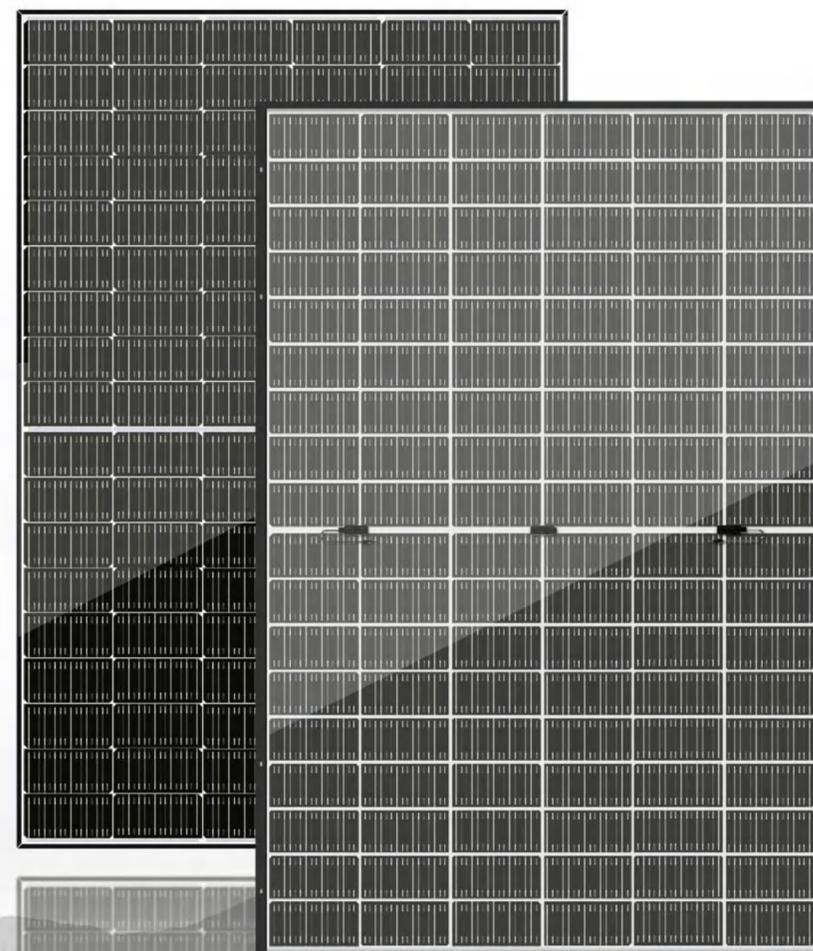
### MINIMIZED CELL GAP

- ✓ High-density encapsulation

## Innovative N-Type Technology

### Innovative Cell Technology

- ✓ Selective passivation contact
- ✓ Slim multi-busbar
  
- ✓ Larger active working area
- ✓ Higher power output
- ✓ Lower attenuation rate



### Extra Power Gain From Bifacial Applications

- ✓ A significant power increase from the backside
  
- ✓ High intensity encapsulation
- ✓ Superior load capacity

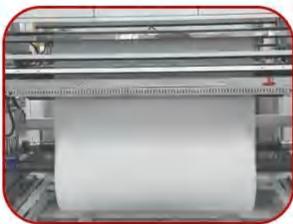


- Manufacturing Statistics
- Product Line Management
- Quality Control
- Fault Management
- Material Management
- Planning and Scheduling
- BOM Management





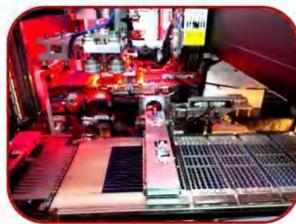
01 First Glass Loading



02 First EVA Lamination



03 Laser Cutting



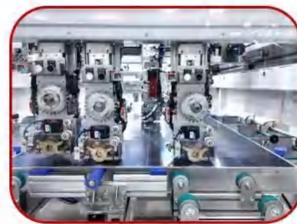
04 Cell Stringing



05 Cell Layout



06 Bussing



07 Tape and Barcode Application



08 Second EVA Lamination



09 Second Glass Application



18 Visual Inspection



17 Second EL Testing



16 Edge Trimming



15 Tape Removal



14 Lamination



13 Framing Tape



12 Edge Taping



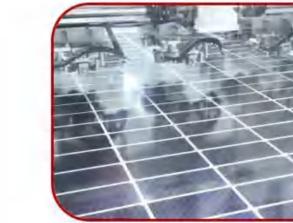
11 First EL Testing



10 Ribbon Bending



19 Framing



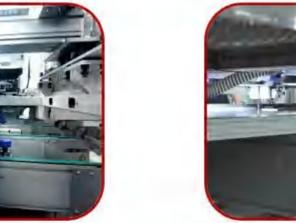
20 Automatic Ribbon Lifting



21 Glue Application



22 Junction Box Installation



23 Junction Box Welding



24 Junction Box Potting



25 Curing



26 Corner Sealing



34 Palletizing



33 Final Appearance Inspection



32 Labeling



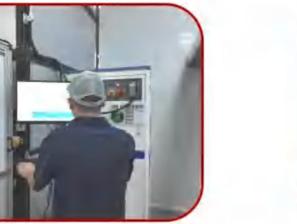
31 Third EL Testing



30 Hi-pot Testing



29 IV Testing



28 Installation of IV Test Fixtures



27 Cleaning



27 Cleaning

- 6.6MW Project in Czech Republic

# 04 | Global PV Station

PV Power Plants | Commercial & Industrial | Residential

**HORAY**

• **Serbia | 7.68MW**



**Horay brand Solar Galaxy Modules**

**HORAY**

• **Czech Republic | 6.6MW**



**Horay brand Solar Galaxy Modules**

**HORAY**

• **Germany | 6.38MW**



**Horay brand Solar Galaxy Modules**



**HORAY**

• **China | 5.2MW**



**Horay brand Solar Galaxy Modules**

**HORAY**

• **Czech Republic | 4.5MW**



Horay brand Solar Ocean Modules



• **Italy | 2MW**

 **Horay brand Solar Galaxy Modules**



**HORAY**



• **Malaysia | 1.3MW**

 **Horay brand Solar Ocean Modules**

• **Germany | 1MW**

 **Horay brand Solar Ocean Modules**



# HORAY

Follow us @ Horay Solar   



Embrace the Sun Step into a Bright Future with Horay Solar

**Horay Solar Co.,Ltd**

**HORAY**

# THANKS

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Author: Horay Solar Marketing Department

-  [www.horaysolar.com](http://www.horaysolar.com)
-  [sales@horaysolar.com](mailto:sales@horaysolar.com)
-  +86 510 8358 0688
-  Robert-Bosch-StraBe 27-29, 63225 Langen, Germany

