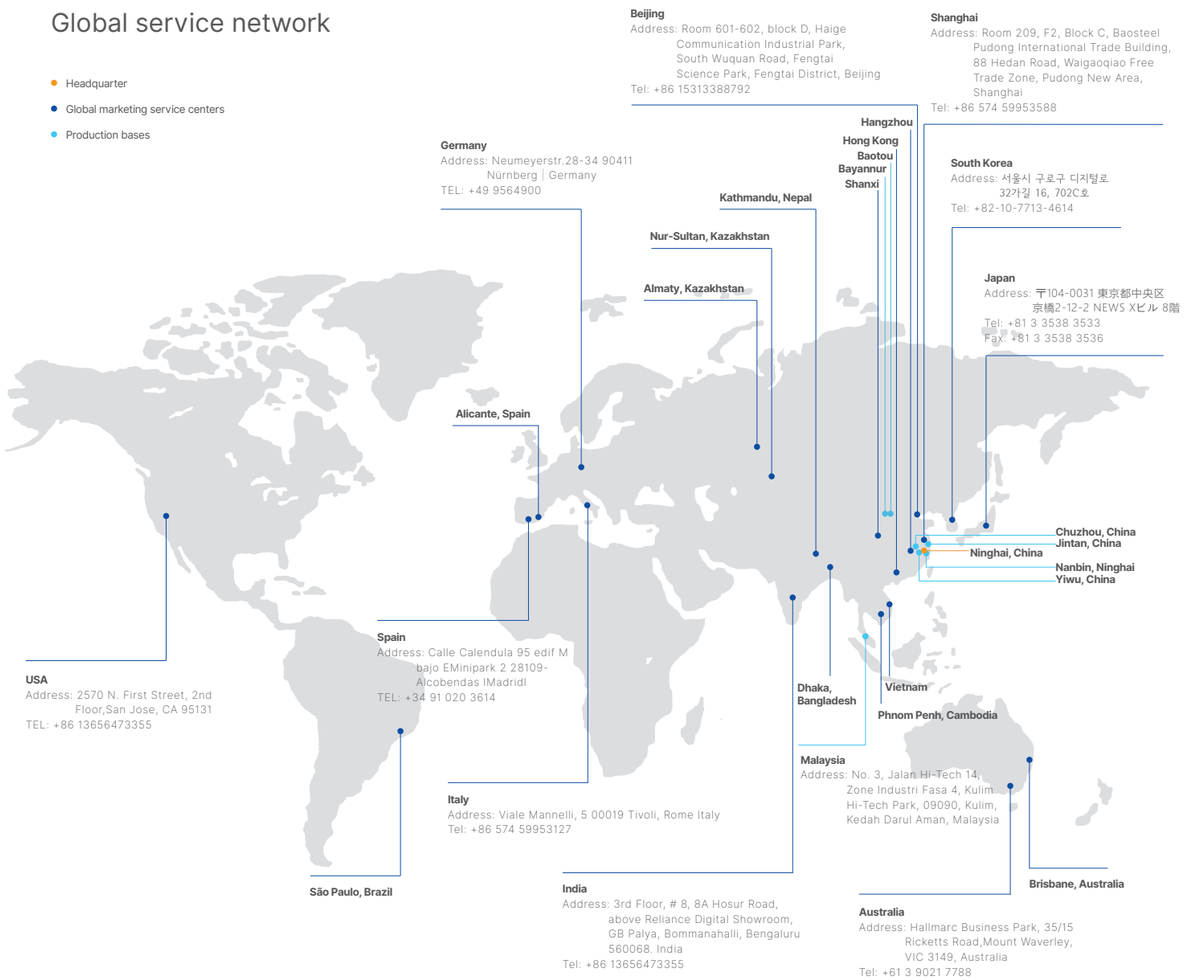
Global service network

- Headquarter
- Global marketing service centers
- Production bases



Beijing
Address: Room 601-602, block D, Haige Communication Industrial Park, South Wuquan Road, Fengtai Science Park, Fengtai District, Beijing
Tel: +86 15313388792

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Address: Room 209, F2, Block C, Baosteel Pudong International Trade Building, 88 Hedan Road, Waigaoqiao Free Trade Zone, Pudong New Area, Shanghai
Tel: +86 574 59953588

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Address: Neumeyerstr.28-34 90411 Nürnberg | Germany
TEL: +49 9564900

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Address: 서울시 구로구 디지털로 32가길 16, 702C호
Tel: +82-10-7713-4614

Japan
Address: 〒104-0031 東京都中央区 京橋2-12-2 NEWS Xビル 8階
Tel: +81 3 3538 3533
Fax: +81 3 3538 3536

USA
Address: 2570 N. First Street, 2nd Floor,San Jose, CA 95131
TEL: +86 13656473355

Spain
Address: Calle Calendula 95 edif M bajo EMinipark 2 28109- Alcobendas IMadridI
TEL: +34 91 020 3614

Italy
Address: Viale Mannelli, 5 00019 Tivoli, Rome Italy
Tel: +86 574 59953127

India
Address: 3rd Floor, # 8, 8A Hosur Road, above Reliance Digital Showroom, GB Palya, Bommanahalli, Bengaluru 560068. India
Tel: +86 13656473355

Malaysia
Address: No. 3, Jalan Hi-Tech 14, Zone Industri Fasa 4, Kulim Hi-Tech Park, 09090, Kulim, Kedah Darul Aman, Malaysia

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Address: Hallmarc Business Park, 35/15 Ricketts Road,Mount Waverley, VIC 3149, Australia
Tel: +61 3 9021 7788

Hangzhou
Hong Kong
Baotou
Bayannur
Shanxi
Kathmandu, Nepal
Nur-Sultan, Kazakhstan
Almaty, Kazakhstan
Alicante, Spain
Chuzhou, China
Jintan, China
Ninghai, China
Nanbin, Ninghai
Yiwu, China
Dhaka, Bangladesh
Vietnam
Phnom Penh, Cambodia
São Paulo, Brazil
Brisbane, Australia

risen

PRODUCT BROCHURE

Risen Energy Co., Ltd.
Address: Tashan Industry Zone, Meilin Street, Ninghai, Ningbo, China
Tel: 400 8291 000
Fax: +86 574 59953599
Email: marketing@risenenergy.com
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RS-PB-2024V2

www.risenenergy.com

ABOUT
RISEN ENERGY

As a global leading new energy enterprise, Risen Energy leads the global energy revolution with solar cells, solar modules, photovoltaic (PV) power stations, energy storage systems, and more. Providing the world with green solutions and integrated services in new energy, the company continuously helps customers achieve “low-carbon” or “zero-carbon” goals through its products, contributing to the transition into the carbon-neutral era for society as a whole.

As a national high-tech enterprise, Risen Energy possesses multiple core technologies in its main business and has established a national photovoltaic (PV) laboratory accredited by the international CNAS, capable of conducting testing for 54 projects based on international standards such as IEC 61215 and UL 1703. The establishment of the Photovoltaic Research Institute in November 2023 marks an important step in the company’s strategic development. It is primarily responsible for integrated technology research, product development and iteration, and technical management, and is committed to providing the lowest carbon PV solutions and building a global efficient PV R&D and innovation center, to strengthen the company’s technical support and consolidate its competitive position through products and technology. The company will leverage this institute as a platform for global exchange and cooperation, to make the PV technology universally known and applied across the globe, thereby laying a solid foundation for meeting the vision - “Risen with the World for Ages”.

Vision

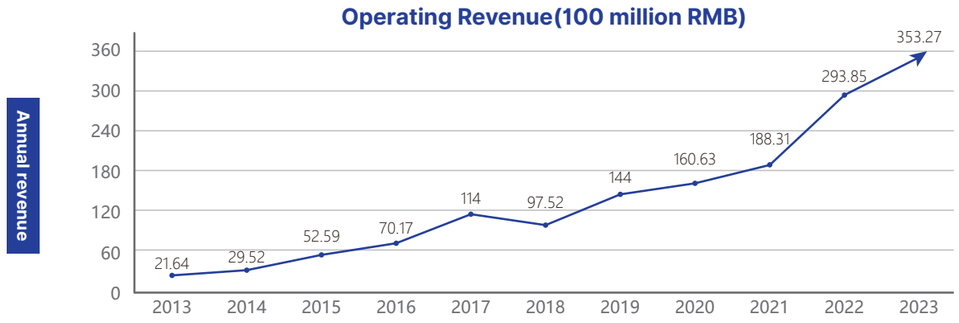
Creating a new life for mankind through green new energy.

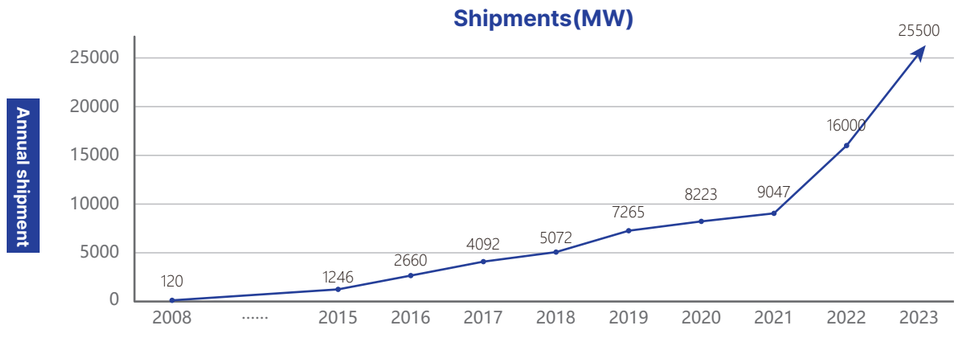
Service

Customer-centered, providing value through service.

Mission

Continuously improving the energy pattern with technological innovation and the quality of human life.





Company Capability

Tier 1
PV module manufacturer

Grade A
Financing eligibility ranking

15000+
Employees worldwide

48GW+
Modules capacity in 2024

86GW+
Cumulative shipment volume (by Q1 2024)

6.75+
R&D investment in 2023 (100 million RMB)

15000+
Customers worldwide

2059
R&D personnel in 2023

Product Certification

Comprehensive product and system certifications

IEC61215:2016; IEC61730-1/-2:2016

ISO 9001: 2015 quality management system

ISO 14001: 2015 environmental management system

ISO 45001: 2018 occupational health and safety management system

ISO 14064 greenhouse gas emission verification

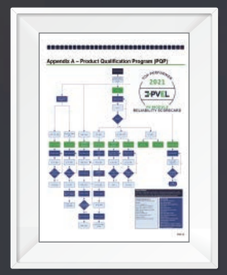
ISO9001
ISO14001
ISO45001
IEC62941

Italy EPD

Certisolis Carbon Footprint

3X IEC

Solar Congress



PQP

EUPD

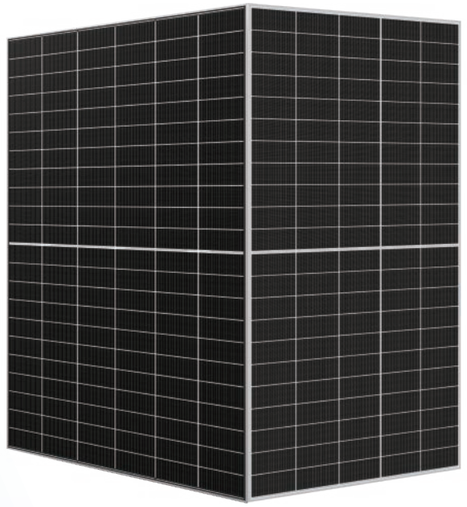
Product Warranty

Product series	Product warranty	Power warranty	First-year degradation	Annual degradation
Hyper-ion™	15 years	30 years	1%	0.3%
TOPCon	conventional products: **15** years all-black products: **25** years	30 years	1%	0.4%
TITAN	conventional products: **12** years all-black products: **25** years	mono-facial: **25** years bifacial: **30** years	2%	mono-facial: **0.55%** bifacial: **0.45%**

Contents

Hyper-ion™

Hyper-ion Series >>



Ultra-low carbon footprint

Industry-leading ultra-thin cell technology and low-temperature process, with a carbon footprint value lower than ***376.5kg eq CO_2/kWc***

Outstanding power retention rate

Over ***90%*** *power retention rate for products over 30 years*

Lower BOS and LCOE

Higher power and efficiency leading to lower BOS and LCOE

High strength alloy steel frame

Greater tear resistance

Better corrosion resistance

Lower carbon emissions, and lower energy consumption

Advanced product technologies

First to mass-produce the 0BB solar cell

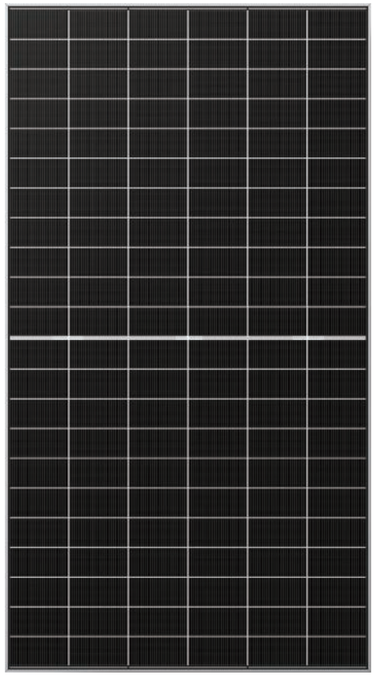
First to mass-produce the ultra-thin solar cell

First to adopt low-silver metallization materials in mass production

First to adopt Hyper-link technology in mass production

Hyper-ion 725Wp+

RSM132-8-700-725BHDG



132 cells
n-Type HJT module

700-725Wp
Module power

23.3%
Maximum conversion efficiency

85%±10%
Bifaciality

2384×1303×33/35mm
Module dimensions

37.5kg (Aluminum frame)
40.5kg (Steel frame)
Module weight

Solar cells	*n*-type HJT
Cell configuration	132 cells(6x11+6x11)
Temperature Coefficient of Voc	-0.22%/°C
Temperature Coefficient of Pmax	-0.24%/°C
Maximum System Voltage	1500VDC

Efficient HJT cells combined with efficient encapsulation technology
Maximum module power of 725Wp+
Maximum module efficiency of 23.3%

Highly stable temperature coefficient and exceptionally high bifaciality (85%±10%)for maximum power generation yield

Bloomberg TIER 1 — Global top Tier1 PV module manufacturer

LID — n-type cells with no B-O LID, first-year power degradation not exceeding 1%

PID — Excellent PID resistance

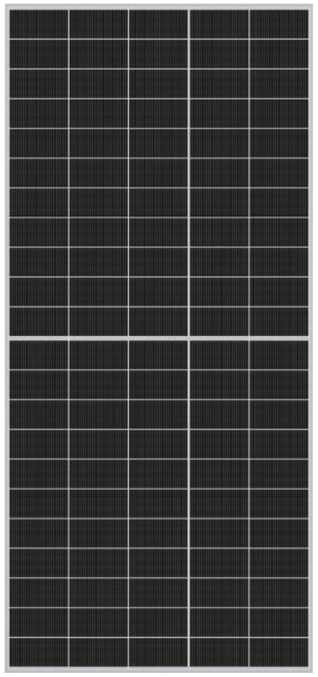
Outstanding low-temperature coefficient

Bifacial — Bifacial power generation technology provides additional power gain on the backside (up to 30%)

Higher power generation

Hyper-ion 605Wp+

RSM110-8-580-605BHDG



110 cells
n-Type HJT module

580-605Wp
Module power

23.2%
Maximum conversion efficiency

85%±10%
Bifaciality

2384×1096×30mm
Module dimensions

33.0kg (Aluminium frame)
34.0kg (Steel frame)
Module weight

Solar cells	*n*-type HJT
Cell configuration	110 cells(5x11+5x11)
Temperature Coefficient of Voc	-0.22%/°C
Temperature Coefficient of Pmax	-0.24%/°C
Maximum System Voltage	1500VDC

Efficient HJT cells combined with efficient encapsulation technology
Maximum module power of 605Wp+
Maximum module efficiency of 23.2%

Highly stable temperature coefficient and exceptionally high bifaciality (85%±10%)for maximum power generation yield

Bloomberg TIER 1 — Global top Tier1 PV module manufacturer

LID — n-type cells with no B-O LID, first-year power degradation not exceeding 1%

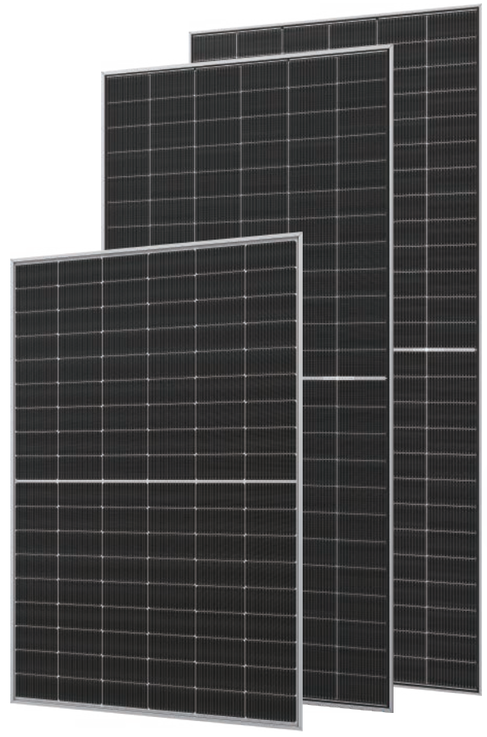
PID — Excellent PID resistance

Excellent temperature coefficient

Bifacial — Bifacial technology enables additional energy harvesting from rear side (up to 30%)

Higher power generation

TOPCon Series >>



High strength alloy steel frame

Greater tear resistance

Better corrosion resistance

Lower carbon emissions, and lower energy consumptio

Advanced product technologies

High-density encapsulation technology

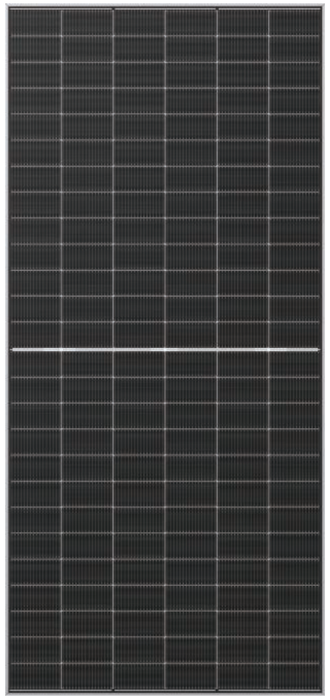
Non-destructive cutting technology

Better internal resistance design

SMBB technology

TOPCon 645Wp+

RSM156-9-620-645BNDG



156 cells
n-type TOPCon module

620-645Wp
Module power

23.1%
Maximum conversion efficiency

80%±10%
Bifaciality

2465×1134×30mm
Module dimensions

33.5kg (Aluminium frame)
Module weight

Solar cells	*n*-type TOPCon
Cell configuration	156 cells(6x13+6x13)
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Pmax	-0.29%/°C
Maximum System Voltage	1500VDC

Higher power and efficiency leading to lower BOS and LCOE

Increased packing density and lower logistics costs

Perfect match for tracker system

Global top Tier1 PV module manufacturer

n-type cells with no B-O LID, first-year power degradation not exceeding 1%

Excellent temperature coefficient

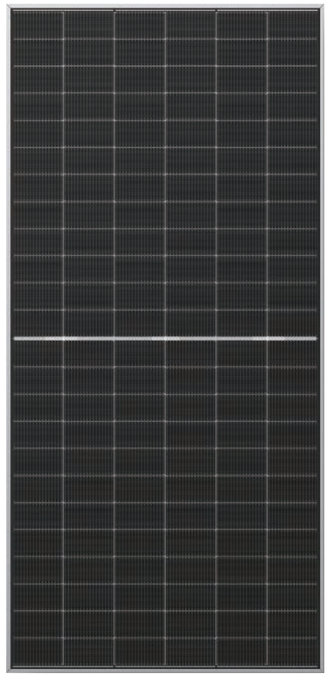
Bifacial power generation technology provides additional power gain on the backside (up to 30%)

Outstanding weak light power generation performance

Excellent PID resistance

TOPCon 620Wp+

RSM144-10-595-620BNDG



144 cells
n-type TOPCon module

595-620Wp
Module power

23.0%
Maximum conversion efficiency

80%±10%
Bifaciality

2382×1134×30mm
Module dimensions

32.0kg (Aluminium frame)
Module weight

Solar cells	*n*-type TOPCon
Cell configuration	144 cells(6x12+6x12)
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Pmax	-0.29%/°C
Maximum System Voltage	1500VDC

Higher power and efficiency leading to lower BOS and LCOE

Increased packing density and lower logistics costs

Perfect match for tracker system

Global top Tier1 PV module manufacturer

n-type cells with no B-O LID, first-year power degradation not exceeding 1%

Excellent temperature coefficient

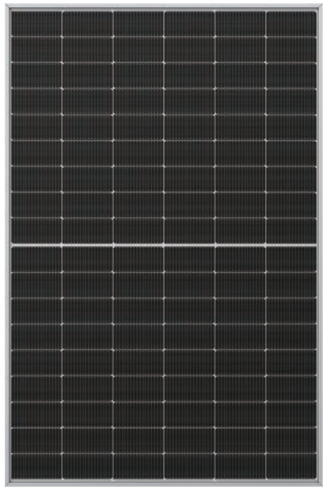
Bifacial power generation technology provides additional power gain on the backside (up to 30%)

Outstanding weak light power generation performance

Excellent PID resistance

TOPCon 460Wp+

RSM108-10-435-460BNDG



108 cells
n-type TOPCon module

435-460Wp
Module power

22.5%
Maximum conversion efficiency

1800×1134×30mm
Module dimensions

25.0kg (Aluminium frame)
Module weight

Solar cells	*n*-type TOPCon
Cell configuration	108 cells(6x9+6x9)
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Pmax	-0.29%/°C
Maximum System Voltage	1500VDC

n-type technology leads to a lower power degradation rate

Better temperature coefficient, higher bifaciality, and lower LID/LeTID for increased power generation yield

Perfectly suitable for rooftop installations, with options of silver and black frames

Bloomberg TIER 1 — Global top Tier1 PV module manufacturer

LID — n-type cells with no B-O LID, first-year power degradation not exceeding 1%

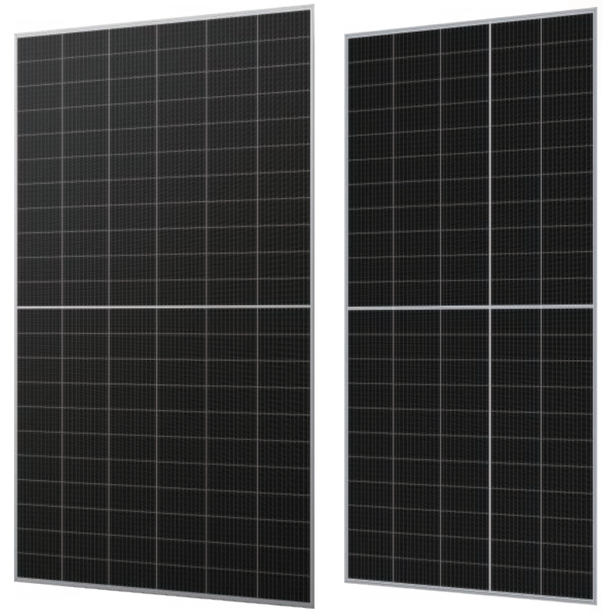
Excellent temperature coefficient

Bifacial — Bifacial power generation technology provides additional power gain on the backside (up to 30%)

Outstanding weak light power generation performance

PID — Excellent PID resistance

Titan Series >>



High strength alloy steel frame

Greater tear resistance

Better corrosion resistance

Lower carbon emissions, and lower energy consumptio

Advanced product technologies

High-density encapsulation technology

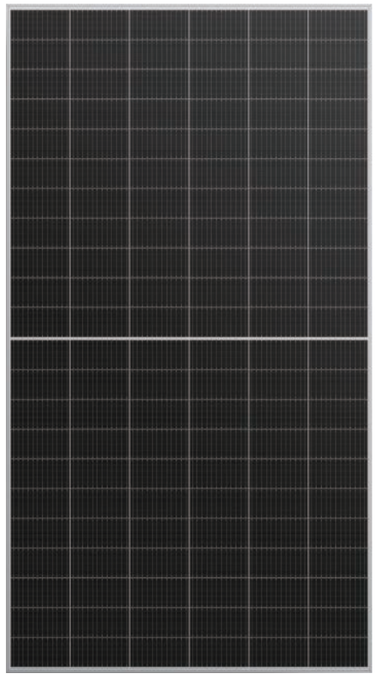
Non-destructive cutting technology

Better internal resistance design

SMBB technology

Titan 670Wp+

RSM132-8-650-670BMDG



Mono-facial

132 cells
Monocrystalline PERC modules

650-670Wp
Module power

21.6%
Maximum conversion efficiency

2384×1303×35mm
Module dimensions

33.5kg (Aluminium frame)
35.0kg (Steel frame)
Module weight

Bifacial

2384×1303×33/35mm
Module dimensions

38.3kg (Aluminium frame)
40.0kg (Steel frame)
Module weight

Solar cells	Monocrystalline PERC
Cell configuration	132 cells(6x11+6x11)
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Pmax	-0.34%/°C
Maximum System Voltage	1500VDC

Low voltage, high string power to reduce system costs

Half-cut solar cell encapsulation technology, optimized circuit design, and ability to increase module power generation by 10%

NDS and MBB technologies to enhance long-term reliability of modules

Global top Tier1 PV module manufacturer

12- year warranty for product materials and process technolgy

Outstanding weak light power generation performance

Bifacial power generation technology provides additional power gain on the backside (up to 30%)

Module current sorting to reduce mismatch losses

Certified for 2400Pa wind load and 5400Pa snow load with specified installation methods

Titan 560Wp+

RSM110-8-540-560BMDG

Mono-facial

110 cells
Monocrystalline PERC modules

540-560Wp
Module power

21.4 %
Maximum conversion efficiency

2384×1096×30/35mm
Module dimensions

28.5kg (Aluminium frame)
30.5kg (Steel frame)
Module weight

Bifacial

2384×1096×30mm
Module dimensions

33.5kg (Aluminium frame)
33.5kg (Steel frame)
Module weight

Solar cells	Monocrystalline PERC
Cell configuration	110 cells(5x11+5x11)
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Pmax	-0.34%/°C
Maximum System Voltage	1500VDC

Low voltage, high string power to reduce system costs

Half-cut solar cell encapsulation technology, optimized circuit design, and ability to increase module power generation by 10%

Lower BOS and LCOE

Outstanding weak light power generation performance

Excellent PID resistance

0~+3% positive tolerance

Two EL inspection tests securing defect-free products

Module current sorting to reduce mismatch losses

Certified for 2400Pa wind load and 5400Pa snow load with specified installation methods

PV Projects

Continuously improve the energy layout and enhance the human life quality with scientific and technological innovations

Australia
Completed: 2020

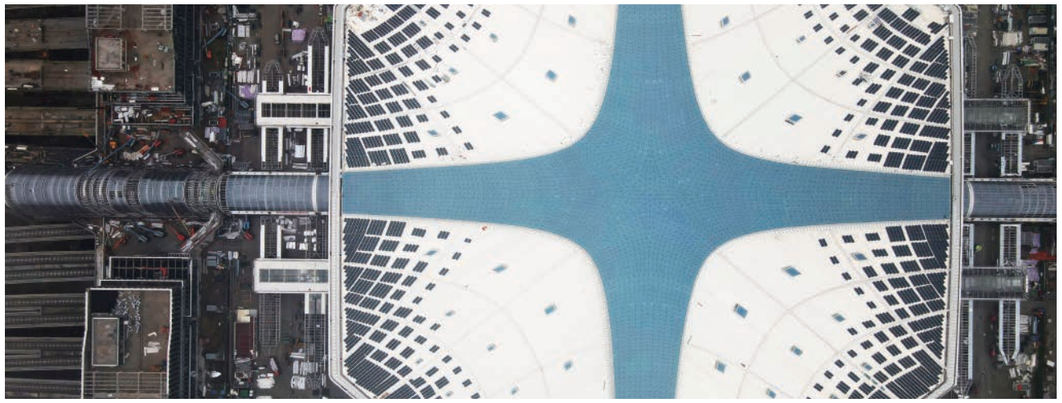
100MW

Inner Mongolia, China
Completed: 2021

150MW

Guizhou, China
Completed: 2023

269MW



Hangzhou, China
Completed: 2022

3MW

Hainan, China
Completed: 2023

5MW

Mexico
Completed: 2023

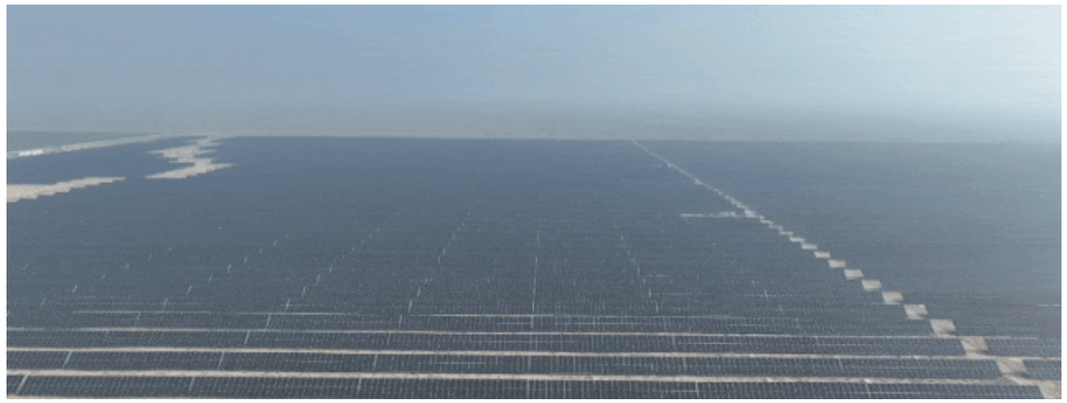
7MW

Rio de Janeiro, Brazil
Completed: 2020

6.8MW

shanxi, China
Completed: 2023

115MW



Xinjiang, China
Completed: 2023

600MW