Solargiga Energy

Solargiga Energy Holdings Limited | **Advanced Productivity**

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About Solargiga 1

Make the World a Better Place

Founded in 2000,Solargiga Energy is a well-known photovoltaic company. Listed in HKEX in 2008 (00757.HK), Solargiga Energy integrates R&D, production, sales&marketing and system application of PV modules. We employ more than 3,000 staff worldwide and have production bases in Jinzhou (Liaoning), Yancheng (Jiangsu). Our Marketing&Operation Center located in Suzhou (Jiangsu)，and set up Beijing Office. Our business footprint covers major PV markets around the globe. We are committed to providing global customers with high-quality PV products, technical support, after-sales services&solutions, and promoting the development of the clean energy industry.

23 Year's Journey

still forging ahead...

2000

2000
Solargiga Energy was officially established

2005

2005
Founding of Jinzhou Yangguang Energy Co., Ltd.

2006
Start of PV cell manufacturing

2007
Start of PV system integration business

2008

2008
Listing of Solargiga Energy Holdings Limited in HKEX Stock Code 00757.HK

2009
Start of PV module manufacturing

2015

2015
One of the initial suppliers of National Top Runner projects

2016
Set-up of Japan Office

2018

2018
Certified as National Green Factory

2019
Founding of Jiangsu Yueyang Photovoltaic Technology Co., Ltd.
Scaling up of advanced module productivity

2022

2021
Set-up of Suzhou Office
Amplifying the Sales &Marketing framework
Advanced productivity takes up 90% of all

2022
The module capacity is increasing year by year
The module shipment of 2022 has reached over 5GW
Certified as National Pioneer Enterprise of Smart Photovoltaic

2023

2023
Set-up of Beijing Office
Set-up of Australia Office

Productivity Layout 2

Productivity Layout

1 + 1 > 2

JINZHOU YANGGUANG ENERGY CO., LTD.

JIANGSU YUEYANG PHOTOVOLTAIC TECHNOLOGY CO., LTD.

Module

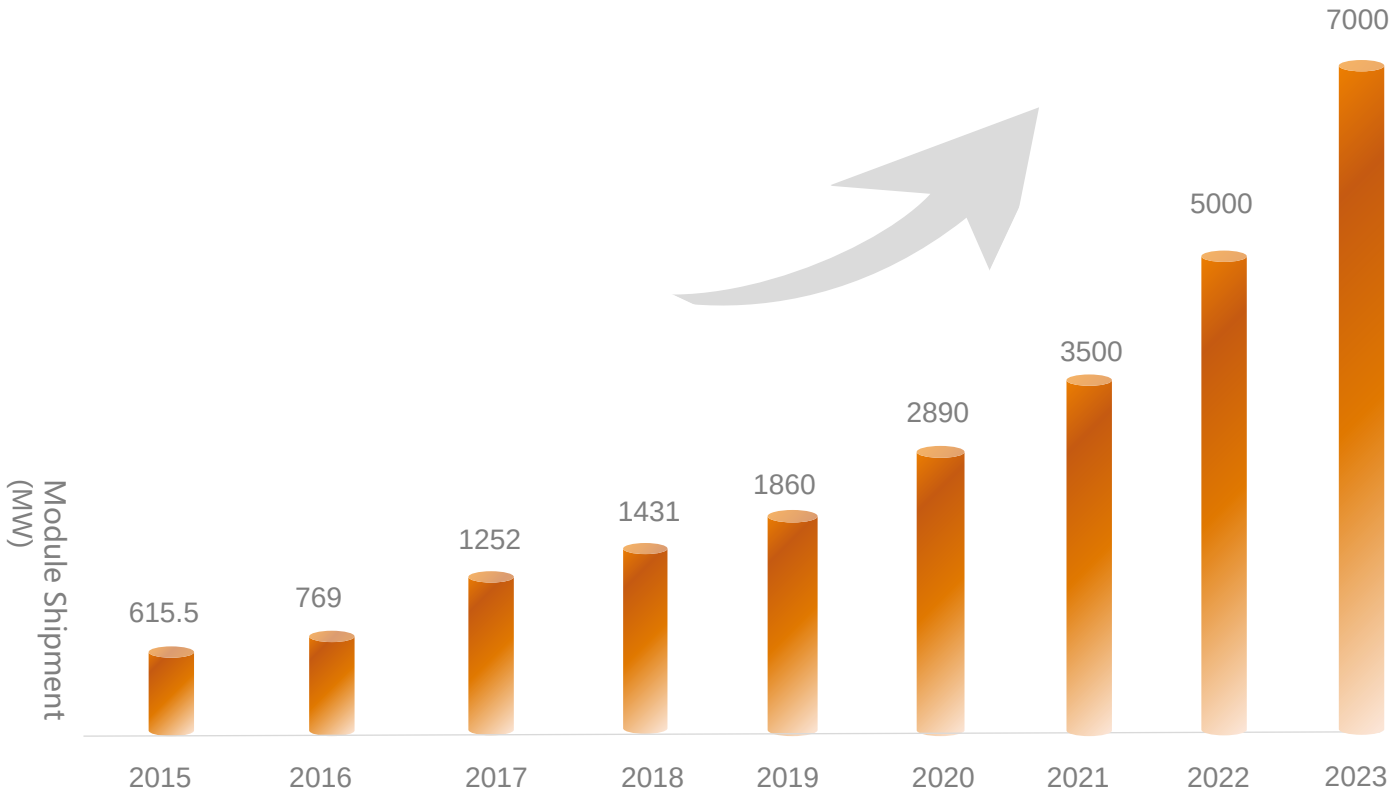
2022	2024
10GW	**20GW**

Measurable Performance

never stop climbing…

7GW

The shipment of module is in constant rising year by year since its mass production in 2009, with a witnessed proliferation in recent years. The module shipment of 2023 has reached over 7GW.



Jinzhou, LIAONING

PV module specialized

ANNUAL CAPACITY: 2GW

Phase 1 - 0.4GW annual

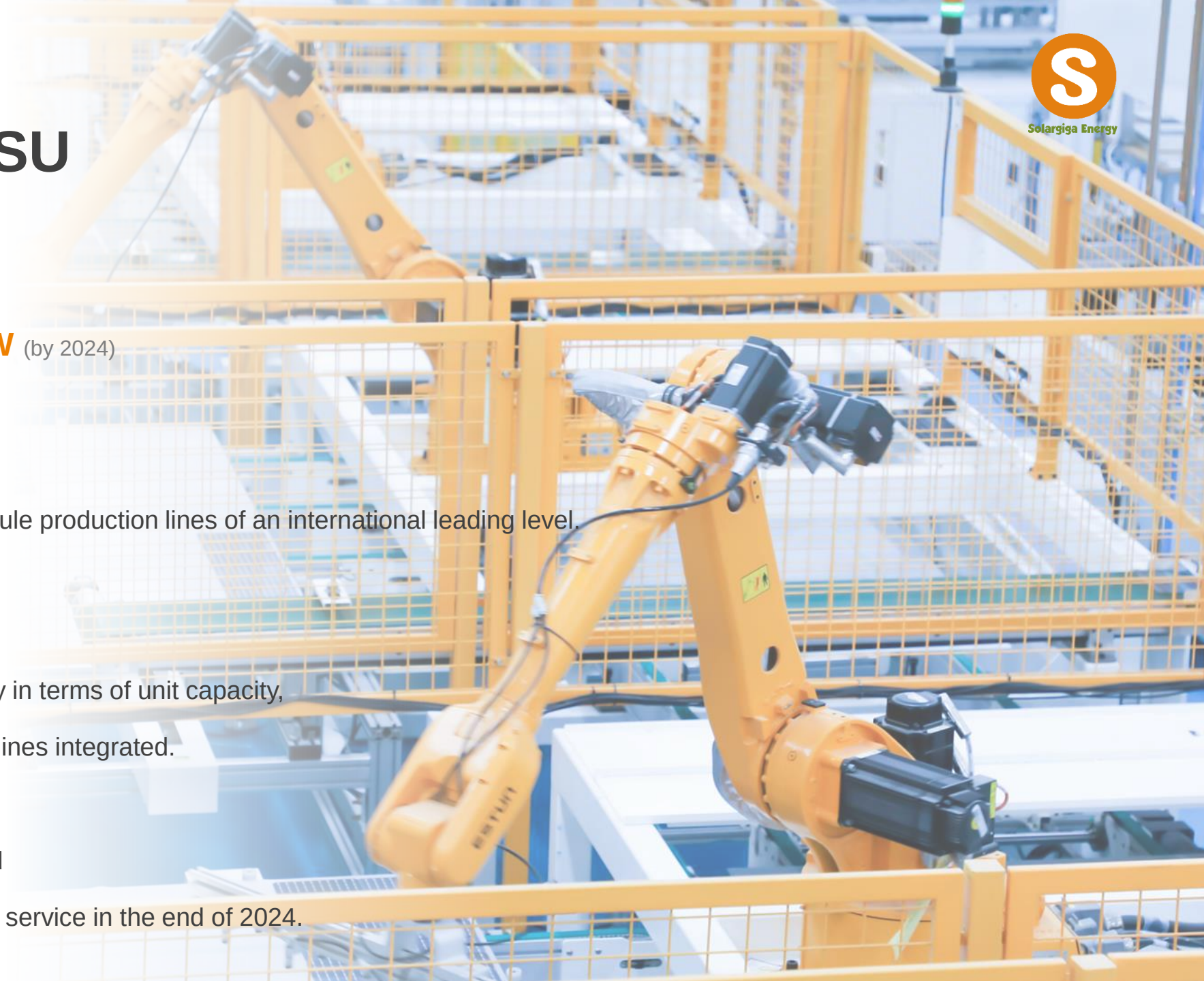
4 production lines for customized orders including BS, Tile, BIPV modules mainly.

Phase 2 - 1.6GW annual

4 production lines, 2 for M6 sized and 2 for M10 sized. Possible to switch into a full-scale workshop of an annual capacity 1.6GW for M10 sized module.

Jianhu, JIANGSU

PV module specialized



ANNUAL CAPACITY: 18GW (by 2024)

Phase 1 - 2GW annual

Consists of 4 highly roboticized module production lines of an international leading level.

Phase 2 - 6GW annual

The biggest workshop in the industry in terms of unit capacity,

with 7 intelligent module production lines integrated.

Phase 3 - 10GW annual expected

Construction begined in 2022 and in service in the end of 2024.

Manufacturing Archive 3

Automated Processing

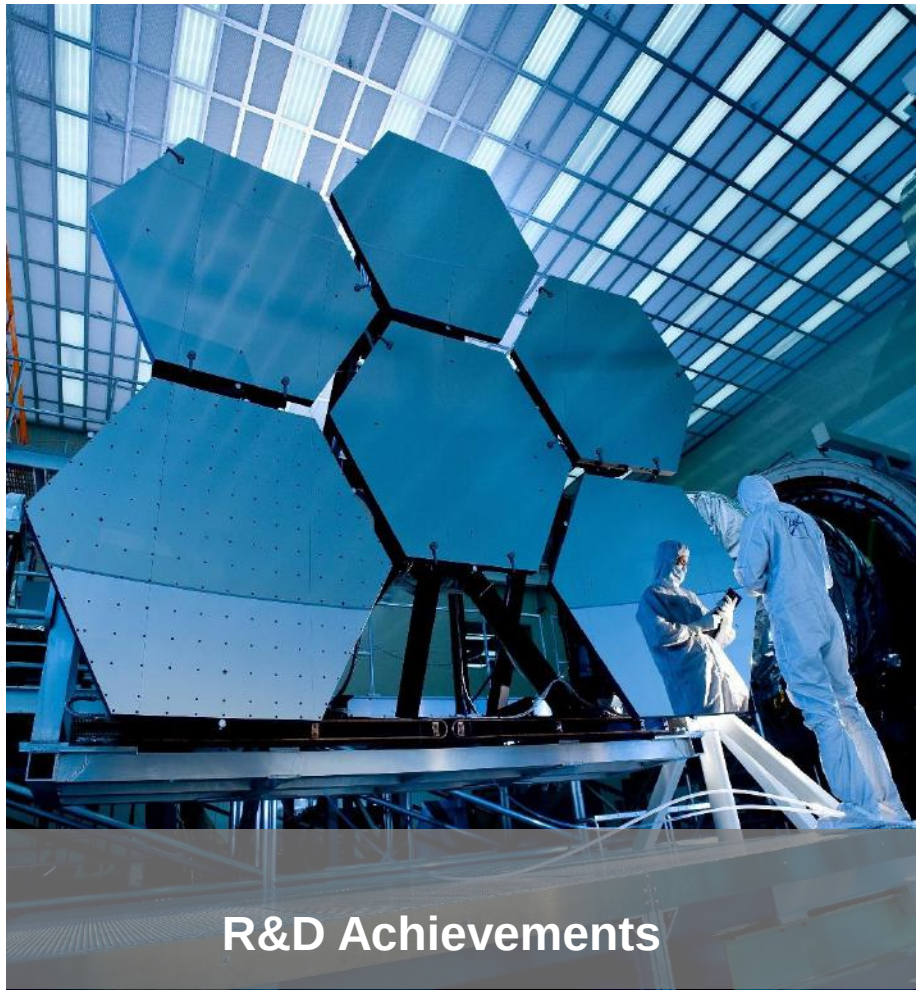
Solargiga Energy has set up fully-automated production lines adapting to kinds of requests for production set forward by advanced technologies. Our production lines can be flexibly adjusted to modules of wafer sized from M10 to G12. Automatic testing technology is embedded to realize a leap from simple manufacturing to an intelligent one.

Real-time Data Management

Our ERP platform integrates real-time interaction, planning, implementation and instant report-forming and analysis, offering continuous protection of innovative processes. A CNAS-certified laboratory realizes date sharing of test processes and mutual recognition of test results.

End-to-end Quality Control

Our end-to-end quality control system is certified by ISO9001, ISO14001, and ISO45001, ensuring an overall coverage of every link related to product quality in the system supervising the module design and processing. A Solargiga-tailored QC system is already in place.



R&D Achievements

Committed to Innovation

Solargiga Energy is committed to innovation, investing about 5% of its operating revenue in R&D and innovation every year on average. We have won 400+ national patents, 50+ science and technology awards.

Industry-University-Research Cooperation

Solargiga Energy and Shenyang Jianzhu University jointly developed BIPV series products. Solargiga Energy is also collaborating with Dr. Rui Wang‘s team at Westlake University, and the laboratory of Zhejiang University on photovoltaic perovskite technology research.

Constantly Upgrading Technology

Solargiga Energy has successively accelerated the innovation of M10 and G12 module. N-type bifacial cell, and N-type bifacial module. We own the most cutting-edge N-type IBC cell technology and FPC module sealing technology.

CNAS Certified Laboratory

China National Accreditation Service for Conformity Assessment certified laboratory.

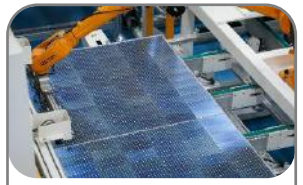
Module Processing

01.Automatic Glass Loading

02.Automatic EVA Loading

03.Laser Scribing

04.Welding



05.Automatic Lay-up

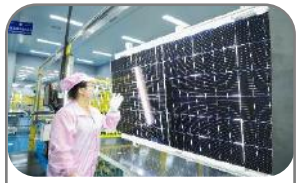
06.EVA & Backsheet Loading

07.Visual Inspection

08.EL Test

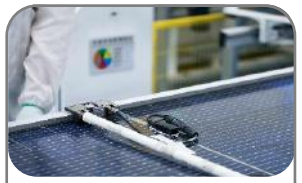
09.Lamination

10.Edge Trimming

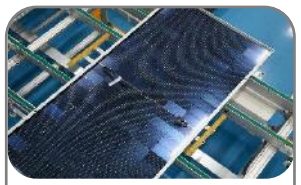


11.Visual inspection

12.Automatic Framing



13.Junction-box Loading



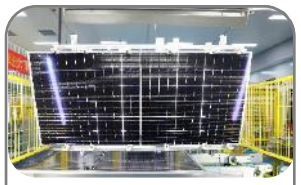
14.Junction-box Soldering

15.Curing

16.Trimming & Cleaning

17.Sun Simulator

18.IV & Load test



19.Final EL & Visual inspection

20.Packaging & Warehousing

Innovative Roadmap

2023-2024

2023

N-type TOPCon Module

Module efficiency>22.95%

Power up to 700W+

2024

N-type TOPCon-0BB Module

N-type HJT Module

Escalation iteration

Decrease cost and improve efficiency

Future

N-type BC Module

Long-term reserve of N-type technology

Develop and research 750W+ PV module and other products

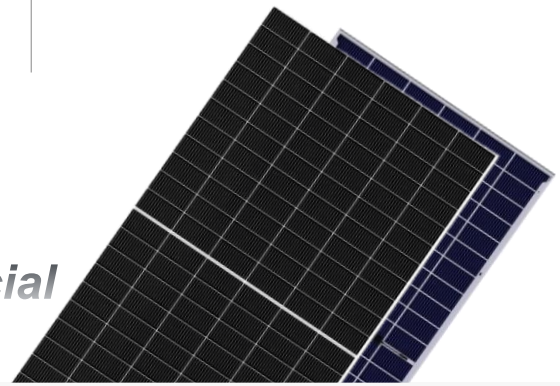
All-Round Upgrade

Product Matrix

Industrial and Commercial Distribution

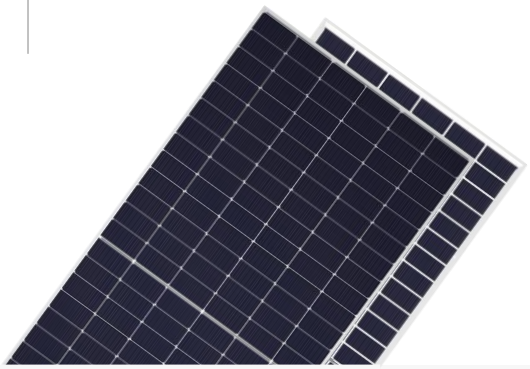
Bifacial 210R 66 Cells

N-Type：JMPV-XVT6/66-605~620(R)



Bifacial 182 78 Cells

N-Type：JMPV-XV6/78-625~640 (R)



Mono 210 66 Cells

P-Type：JMPV-T1/66-660~670 (R)

Bifacial 210 66 Cells

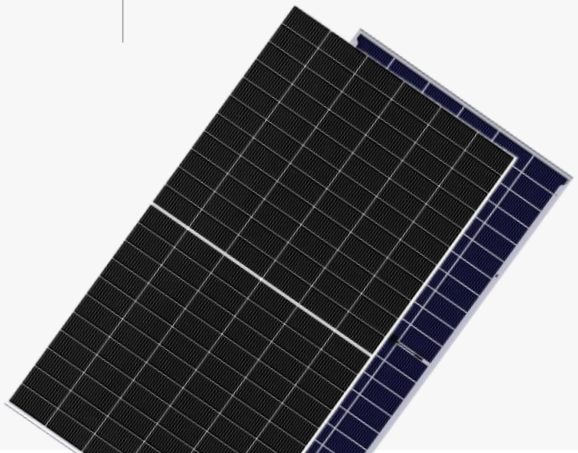
P-Type：JMPV-TV2/66-660~670(R)

N-Type ：JMPV-TV6/66-695~715 (R)

Large Power Station

Bifacial 210R 66 Cells

N-Type：JMPV-XVT6/66-605~620(R)



Mono 182 72 Cells

P-Type：JMPV-X1/72-545~555 (R)

N-Type：JMPV-X6/72-580~590(R)

Bifacial 182 72 Cells

P-Type：JMPV-XV2/72-545~555 (R)

N-Type：JMPV-XV6/72-580~590(R)

Mono 210 66 Cells

P-Type：JMPV-T1/66-660~670 (R)

Bifacial 210 66 Cells

P-Type：JMPV-TV2/66-660~670(R)

N-Type：JMPV-TV6/66-695~715 (R)

Product Matrix

Residential Application

Mono 182 54 Cells

P-Type：JMPV-X1/54-410~420 (R)

Bifacial 182 54 Cells

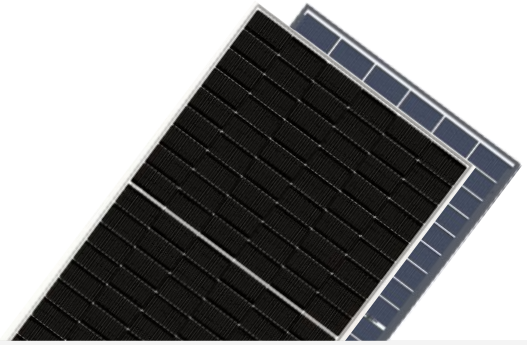
P-Type：JMPV-XV2/54-410~420 (R)

Mono 182 54 Cells

N-Type：JMPV-X6/54-425~440 (R)

Bifacial 182 54 Cells

N-Type：JMPV-XV6/54-425~440 (R)

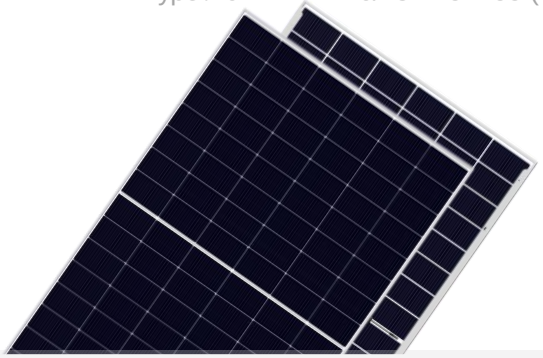


Mono 210R 48 Cells

N-Type：JMPV-XT6/48-445~455 (R)

Bifacial 210R 48 Cells

N-Type：JMPV-XVT6/48-445~455 (R)

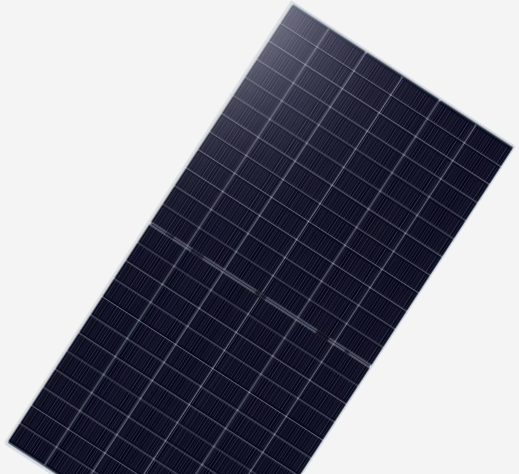


BIPV Application

N-Type Module

for residence

545-555W 72 Cells



IBC Module

for residence

350-360W 48 Cells

182 Tile Module

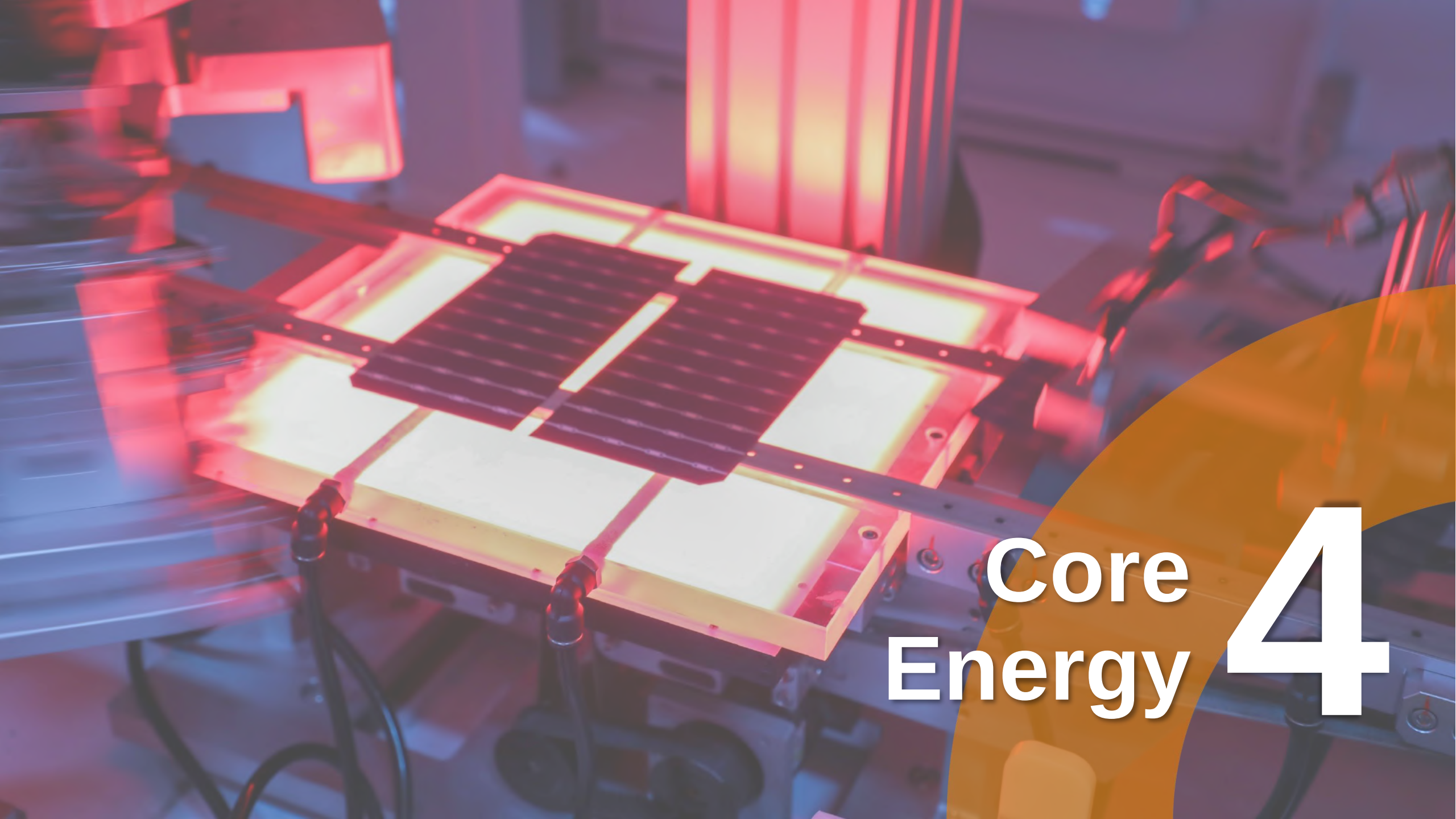
for residence

56-66W

Flexible Module

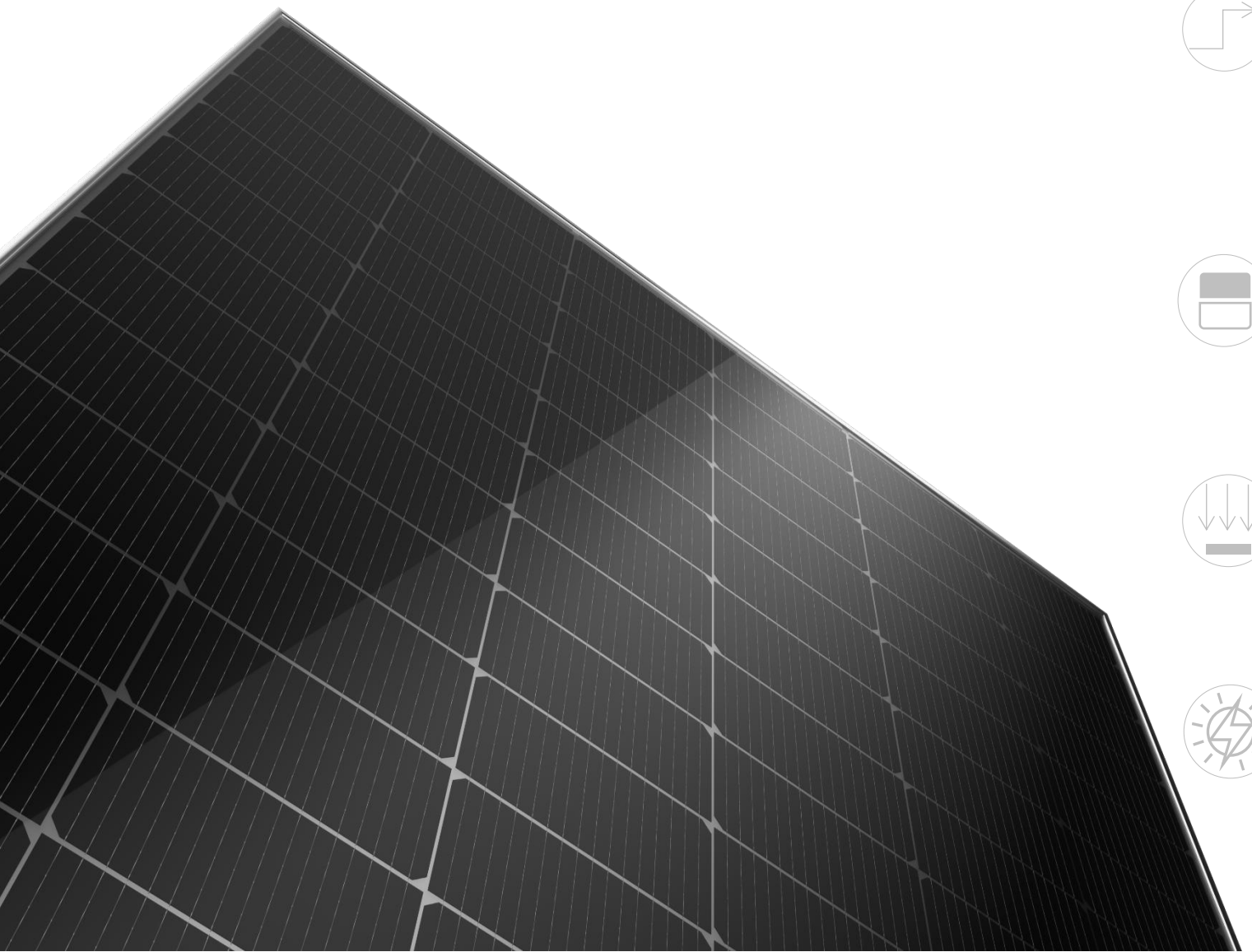
Mono 182 32 Cells

JMPV-XQ1/32-225~235(R)



Core Energy 4

Technology Highlights



High Efficiency, High Power

Multi-Busbar bifacial PERC technology with more current collection.
Half cell design reduces inner current loss, improving power output.
Rear power generation up to 5-25%.

Advanced Cell to Module Technology

Optional for M10/G12 mono or bifacial cells, N-type is also available.

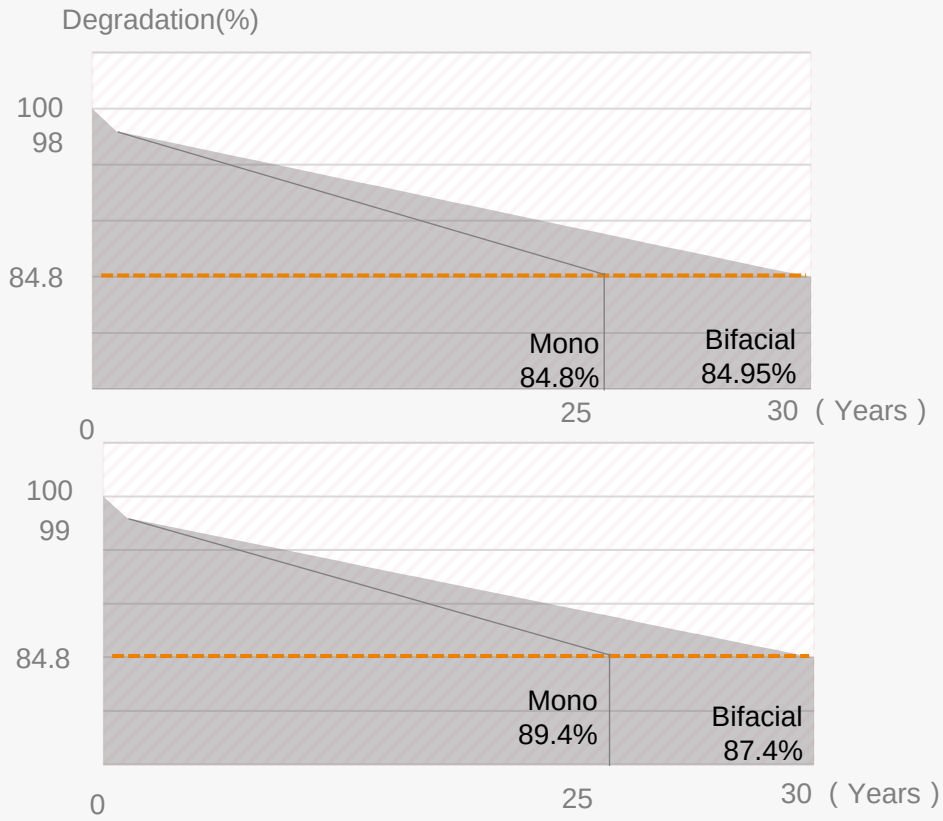
Enhanced Mechanical Load

5400 Pa snow load 2400 Pa wind load

Premier Solution for various application scenarios

M10/G12 high power module enables lower BOS cost and reduces LCOE

Trustworthy Quality



Lower Annual Power Degradation

Reliable Linear Performance Warranty

25/30-year linear performance warranty

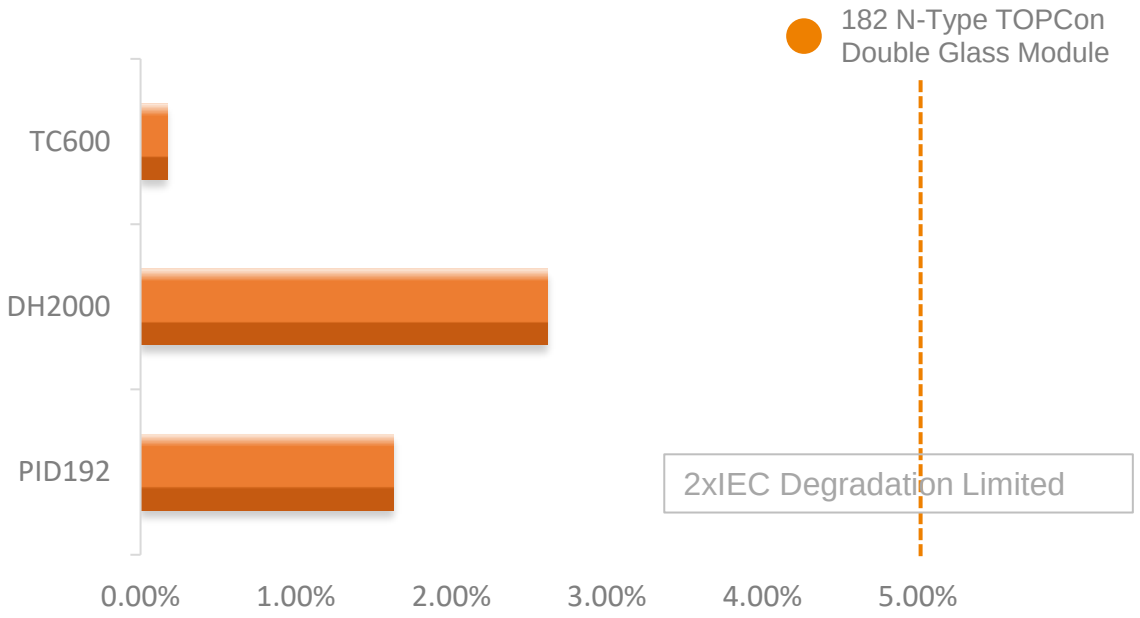
2% for the first year, 0.55%(mono)/0.45%(bifacial) annual degradation.

The first year of N-type products degradation is less than 1%,

and ensure that the output power of N-type products after 30 years is not less than 87.40% of the original power.

Fully certified by professional organizations

Test Performance



Testing Information

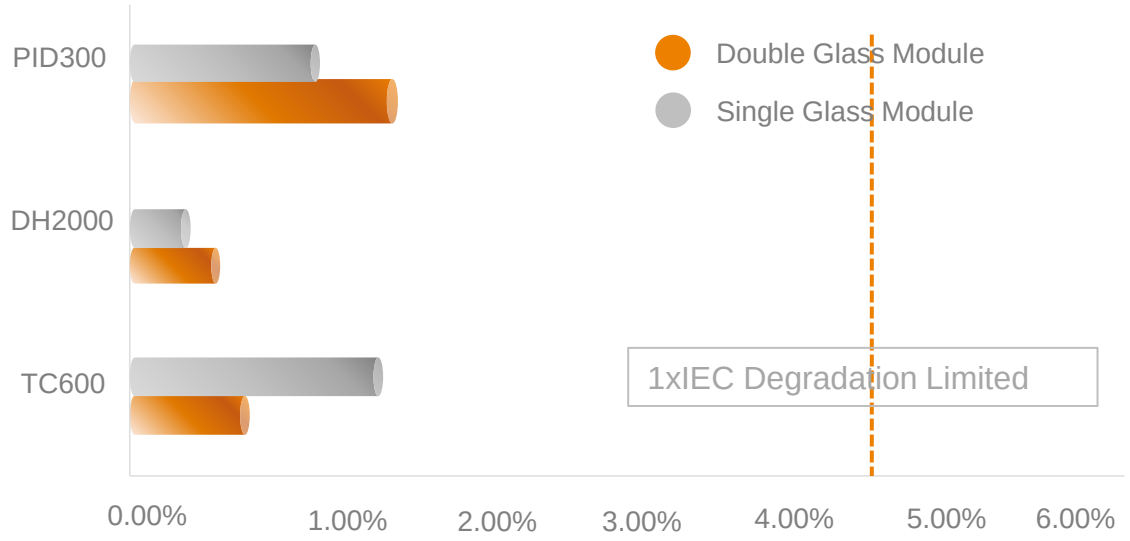
Test Lab: TÜV

Test Period： From January to May 2024

182 double glass Module: JMPV-XV6/78-620(R)

Item	PID192	DH2000	TC600
182(M10) Double Glass	1.63%	2.62%	0.17%

Test Performance



Testing Information

Test Lab: UL Test

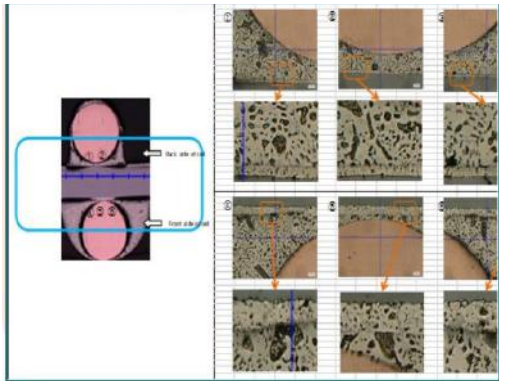
Test Period：June to November 2021

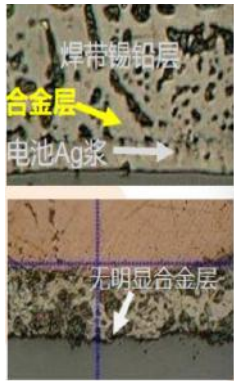
182 double glass Module: JMPV-XV2/72・545（R）

182 single glass Module: JMPV-X1/72・545（R）

Item	LeTID	LID60	PID300	UV60	DH2000	TC600
182(M10)Single Glass	1.45%	0.31%	1.34%	0.41%	0.44%	0.51%
182(M10)Double Glass	1.03%	0.42%	0.90%	0.44%	0.27%	1.21%

Solid Welding





Strengthened quality control over welding

Metallography experiment of EGS is included in the quality management of module design and processing. The best welding parameters for the alloy layer are verified through the experiment on cell and welding to ensure the welding quality of modules.

In the case that the alloy layer fails to be synthesized, there will be a risk of welding strings splitting off the cell while the module is working. As a consequence, the generating efficiency will be cut down and other risks, such as the burning of module caused by increased contact resistance and local temperature rise, may occur.

Certified Management System

Fully certified by

ISO9001 Quality Management System

ISO45001 Occupational Health and Safety Management System

ISO14001 Environmental Management System

RB/T101 Energy Management System

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Customer Benefit is underscored in Solargiga Energy. We make every effort to understand and satisfy customer demands.

We emphasize employees' physical and mental health and urge the improvement of their safety and sanitary skills by employing international standards.

We possess "Green Passport" to the international market and are committed to sustainability by shipping "Green Products" to every corner of the planet.

Constantly optimizing energy efficiency, usage and consumption is our everlasting goal in business.

Thank you

@Solargiga Energy