



LONGI

Aesthetic · Efficient · Reliable · Intelligent

**Hi-MO 6**

**Series Module Products**



# About LONGi

**Y2021** Operating Income  
\$12.694 B

**Y2021** Net Profit  
\$1.425 B

**Y2021** R&D Investment  
\$689 M

Founded in 2000, LONGi is committed to being the world's leading solar technology company, focusing on customer-driven value creation for full scenario energy transformation.

**Y2021** Wafer Shipments  
75+ GW

**Y2021** Module Shipments  
~39 GW

Under its mission of "Utilizing Solar Energy, Building a Green World" and brand philosophy of "Steadfast and Reliable, Technology Leadership", LONGi has dedicated itself to technology innovation and established five business sectors, covering mono silicon wafers, mono cell and modules, commercial & industrial distributed solar solutions, green energy solutions and hydrogen equipment. The company has honed its capabilities to provide green energy and has, more recently, also embraced green hydrogen products and solutions to support global zero carbon development.

**Y2022** Wafer Capacity  
150 GW

**Y2022** Module Capacity  
85 GW



2000  
Foundation



60,000+  
Global Employees



30+  
Global Network



15+  
Manufacturing Bases

# Robust and reliable, leading technology

LONGi's technological breakthroughs will quickly be transformed into large-scale advanced production capacity and will be commercially offered to customers, leading to continuous reduction of photovoltaic costs.



## Intelligent welding technology

Reduce the risk of cracking and maximize frontal exposure to sunlight



## M6 silicon wafer standard

Leading the industry into the era of 450W+ ultra-high power



## M10 silicon wafer standard

Leading the industry toward optimal standardized module design



## Full-cycle quality standards for photovoltaic power stations

Ensure reliable operation throughout the product life cycle



## Diamond wire slicing technology

Significantly accelerates the mono-crystalline mass production output



## Monocrystalline silicon PERC cell technology

Establishing a benchmark of low-attenuation and high-efficiency components



## Mono PERC technology

The market share of mono PERC increased to 90% by the change in industry trend



## Bifacial power generation technology

The versatility of PERC bifacial technology has unlocked more applications

# Conversion efficiency gains are key drivers for PV industry development

Continuous large-scale mass production of high-efficiency cell helps achieve global zero carbon development

New technology evolution: mass production of high efficiency cells

Cell efficiency: **25%+**



Next generation cell technology

🕒 2022-now

Monocrystalline replaces polycrystalline:

Cell efficiency: **21%-24%**



Advances in monocrystalline technology



PERC cell

🕒 2016-2021

Inefficient polycrystalline:

Cell efficiency: **<20%**



Polycrystalline BSF

🕒 2000-2016

# High efficiency HPBC cells driving PV evolution

Efficiency of conventional HPBC cells exceeds 25%

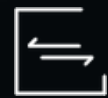
Efficiency of PRO version HPBC cells reaches 25.3%



## Light absorption

Multi-layer anti-reflection film and absence of front grid increase light absorption

Light absorption 



## Photoelectric conversion

Multi layer passivation reduces impurity recombination and improves photoelectric conversion efficiency

Photoelectric conversion 



## Conductivity

Innovative all-back welding technology stabilizes the current transmission

Conductivity 

**PRO**  
Hydrogen  
Passivation

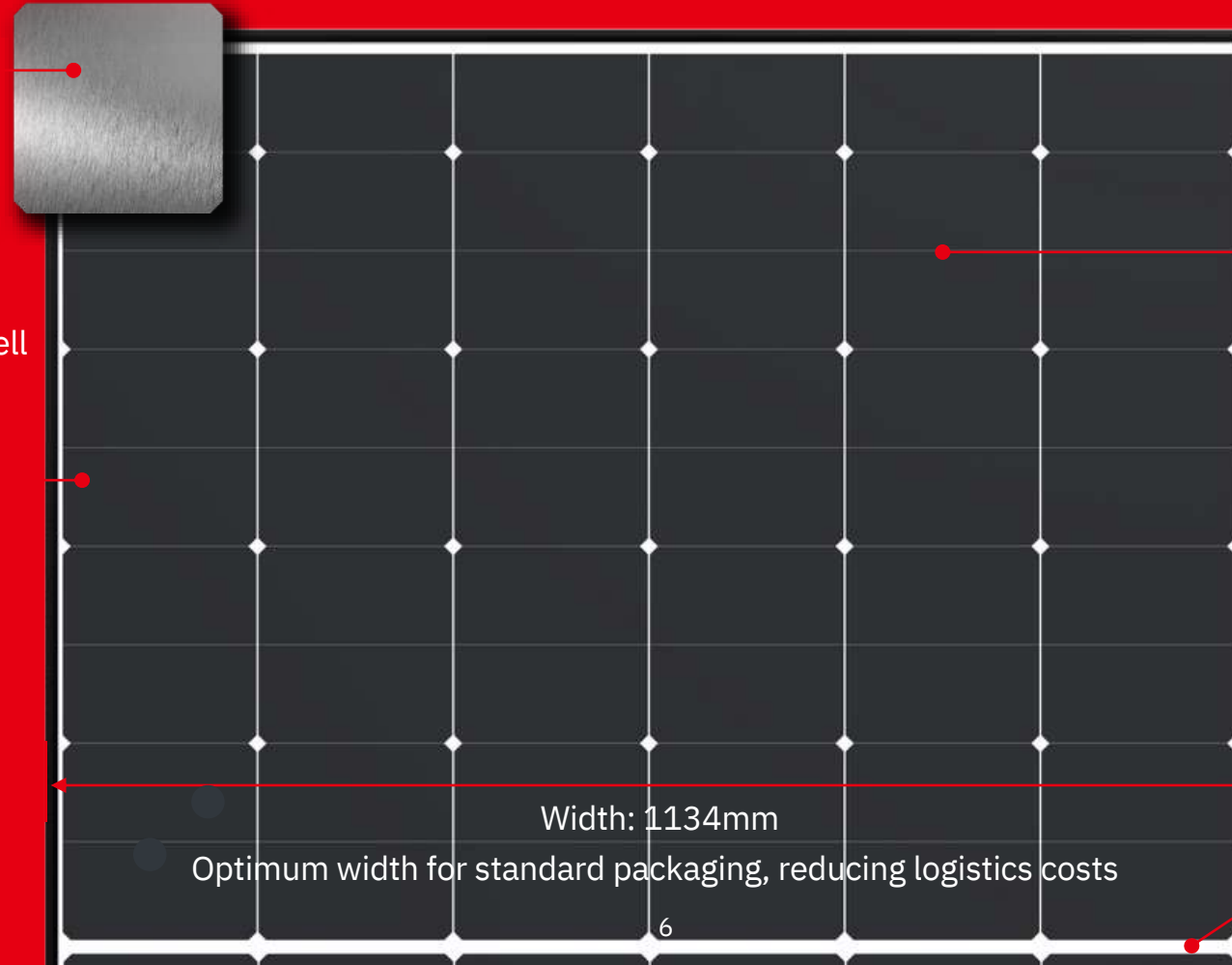


PRO Hydrogen passivation process repairs micro lattice defects and exceeds the efficiency limit

# Based on M10 standard size

- M10 mono wafer  
Mainstream choice  
High yield & high quality

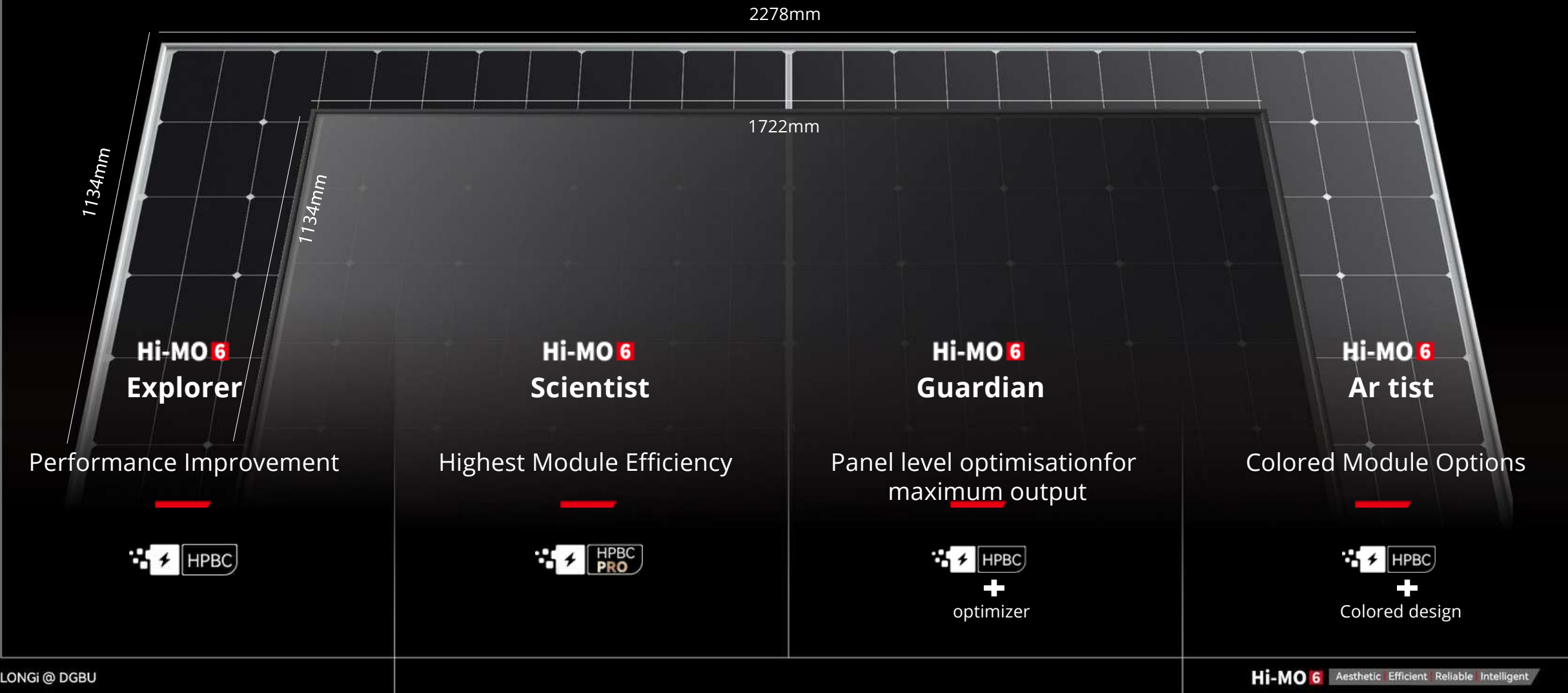
- HPBC Ultra high efficiency cell  
Aesthetic appearance  
Excellent performance



- Full back interconnect  
High reliability and stability
- Reasonable size and weight  
Suitable for single/double handling and installation
- Working current <15A  
Match for inverter, 4m<sup>2</sup> cable  
Reasonable operating temperature ensures power generation

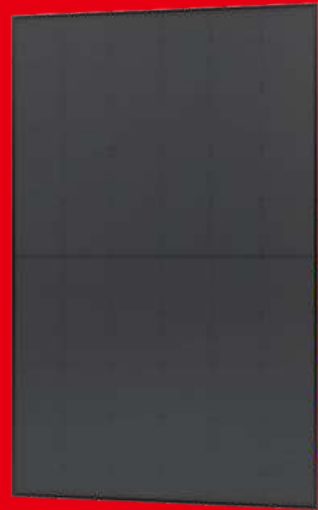
# Hi-MO 6 Product Family

Four product series, based on the 182mm standard



# Product Series

2 formats, 4 products



54c all black HTB



54c monofacial HTH



72c monofacial HTH



72c bifacial HTD

For utility project market

For DG market

Formats for other market segments will follow



# Typical parameters

25% cell efficiency about 22% module efficiency

	54cell back LR5-54HTB	54c monofacial LR5-54HTH	72c monofacial LR5-72HTH	72c bifacial LR5-72HTD
Power	410~440W	415~450W	560~600W	550~580W
Efficiency	21.0/22.5	21.3/23.0%	21.7/23.2%	21.3/22.5%
Main power	%	425/430W	570/590W	565/575W
Size	420/430W 1722×1134×30mm		2278×1134×35mm	
Weight			20.8kg 27.5kg 32.6kg	
Packaging (pcsper 40'HC)	936 620			
Degradation Warranty	1st year degradation below 1.5% linear annual degradation after year 1 is 0.4%			
Temperature coefficient of Pmax	0.29%/°C			

# One aesthetic, dual applications

**Hi-MO 6**  
Explorer

LR5-54HTB  
**410~425M**

- Suitable for distributed projects
- Excellent outdoor power generation performance
- Aesthetic appearance with all black module design

**15** 15-year Warranty for  
Materials and Processing

**25** 25-year Warranty for Extra  
Linear Power Output

**Hi-MO 6**  
Scientists

LR5-54HTB  
**430~440M**

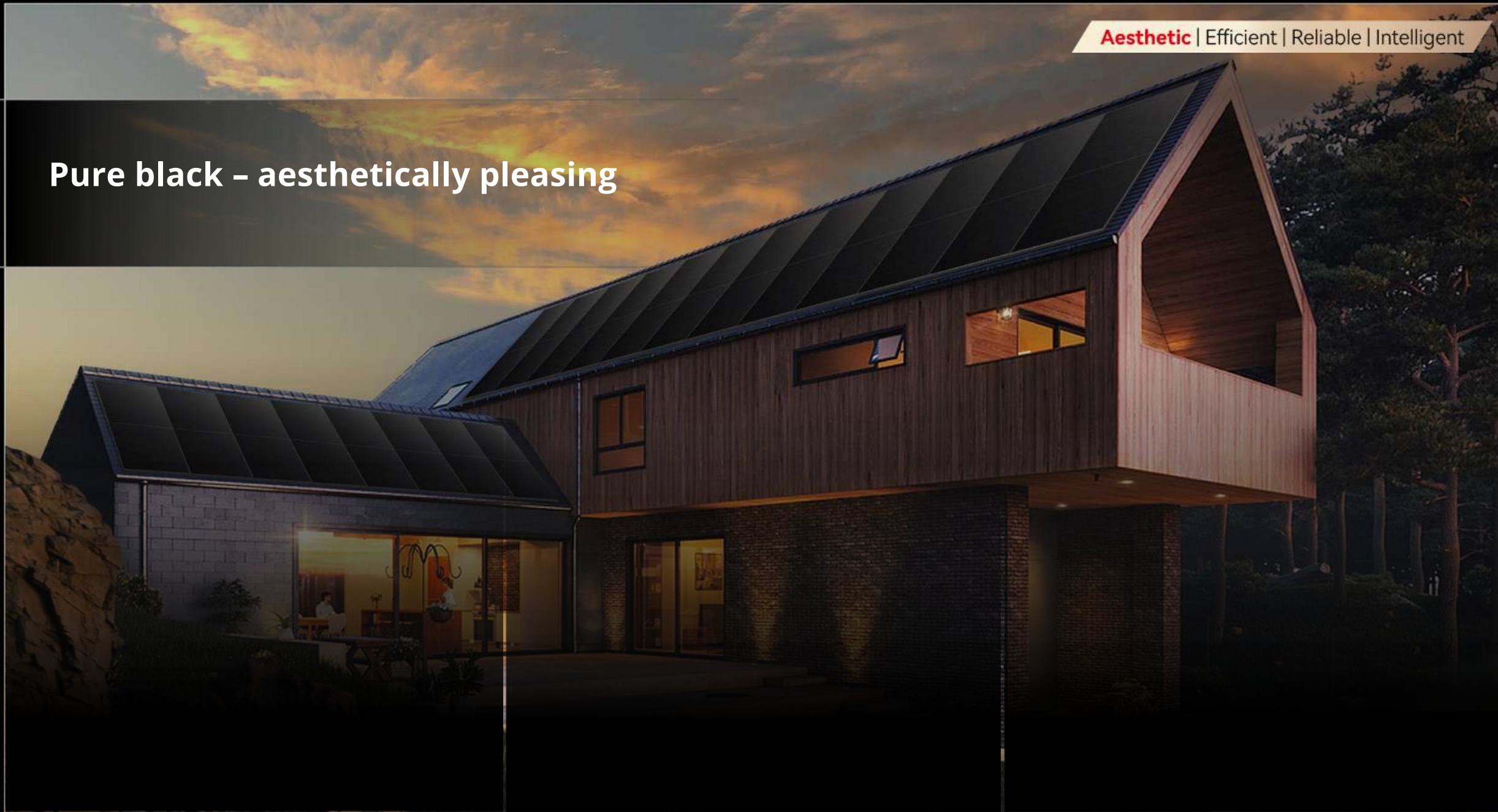
- Suitable for distributed projects
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**Aesthetic** | Efficient | Reliable | Intelligent

**Pure black – aesthetically pleasing**

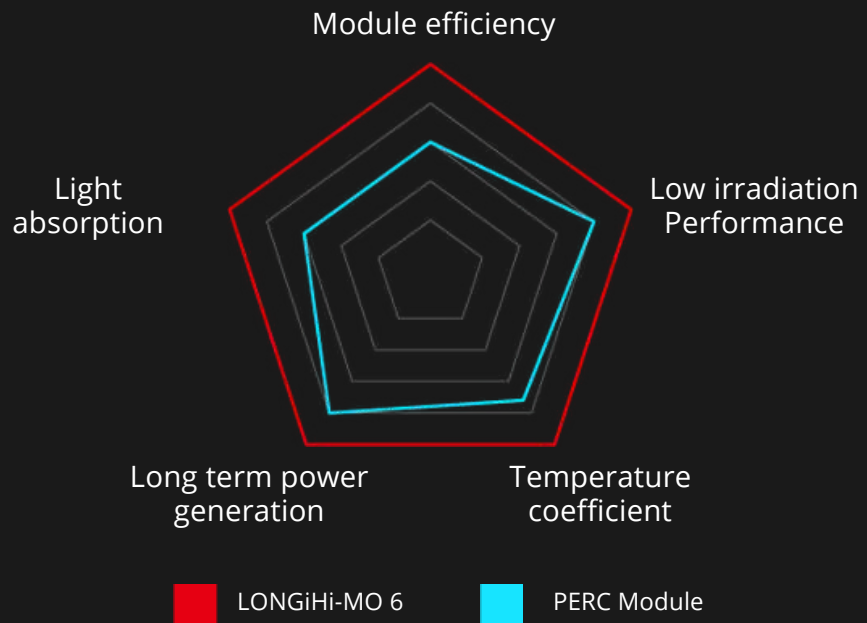


## Enhanced performance over PERC

72 cells monofacial comparison

	PERC Module	HiMO6 LONGi	Remarks
Power	550W	<b>575W</b>	+4,5% Pmax in the same area
Temperature Coefficient Pmax	-0.34%/°C	<b>-0.29%/°C</b>	Better performance in hot climates
1st Year Degr.	<2%	<b>&lt;1.5%</b>	
Yearly Degr.	<0.55%	<b>&lt;0.40%</b>	Improved stability
Power Output Warranty (25Y)	84.8%	<b>88.9%</b>	

### Comprehensive improvement of energy generation

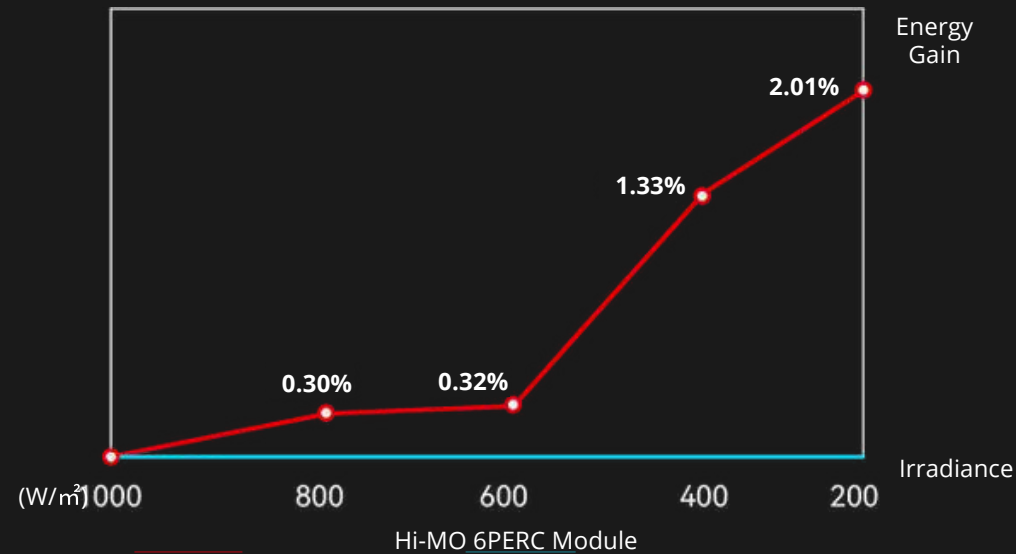


# Greater power generation under low irradiation conditions – more power at the start and end of the day

Longer power generation time

Better low irradiation performance

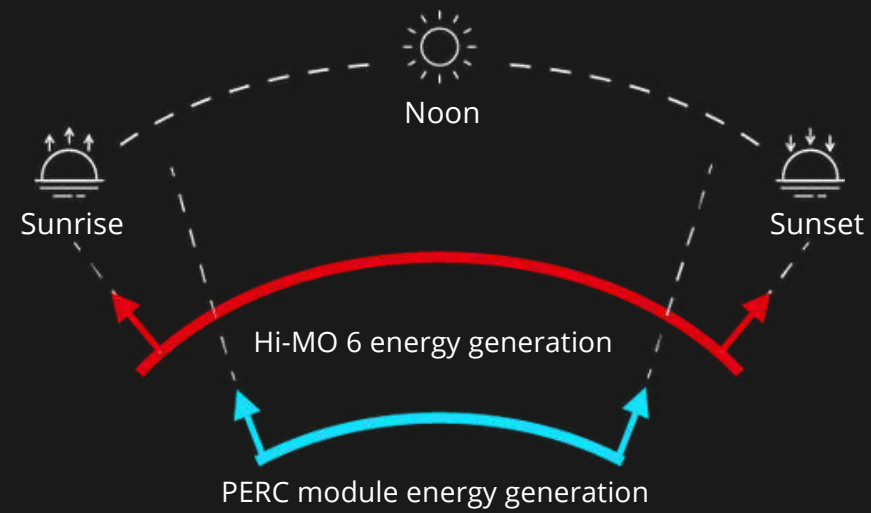
Sunny Noon    Cloudy morning or night



HPBC capabilities to produce energy under low irradiation are up to +2.01% better compared to standard product

\*Gain=HPBC normalization PR/PERC normalization PR-1 \*Data from TUV SUD

Longer power generation time



Higher module voltage ensures that the working voltage of the inverter can be reached faster in the morning and at night, effectively extending the power generation time

## Percentage performance increase over PERC

Energy generation simulation considering 16 modules M10 cell size

	Capacity Installed in the same area (kWp)	Annual Performance (kWh/kWp/Year) (MWh/year)	1st yearsimulated energy generation	Cumulative Degradation (25 years)	25th yearsimulated energy generation (MWh/25Y)
<b>STOCKHOLM, SWEDEN</b>					
PERC 550W	8,8	1092 9,6		9,41	219,
HiMO6 575W	9,2	1113 10,2		%	6
Gain	+4,5%		<b>+2% +6,6%</b>	6,72	<b>+9,3%</b>
				%	0
<b>MADRID, SPAIN</b>					
PERC 550W	8,	1651 14,5		9,41	332,
HiMO6 575W	8	1691 15,6		%	0
Gain	+4,5%	+2,4%	<b>+7,1%</b>	6,72	<b>+9,8%</b>
	2			2,7%	5
Tech Improvements	Efficiency	IAM + Low Irradiation + TempCoef	Extra Energy 1st year	1st yeardeg+ yearly degradation	Extra Energy 25Y

# Lower degradation – extended warranty over PERC

Lower power degradation ensure stable power generation over 30 years

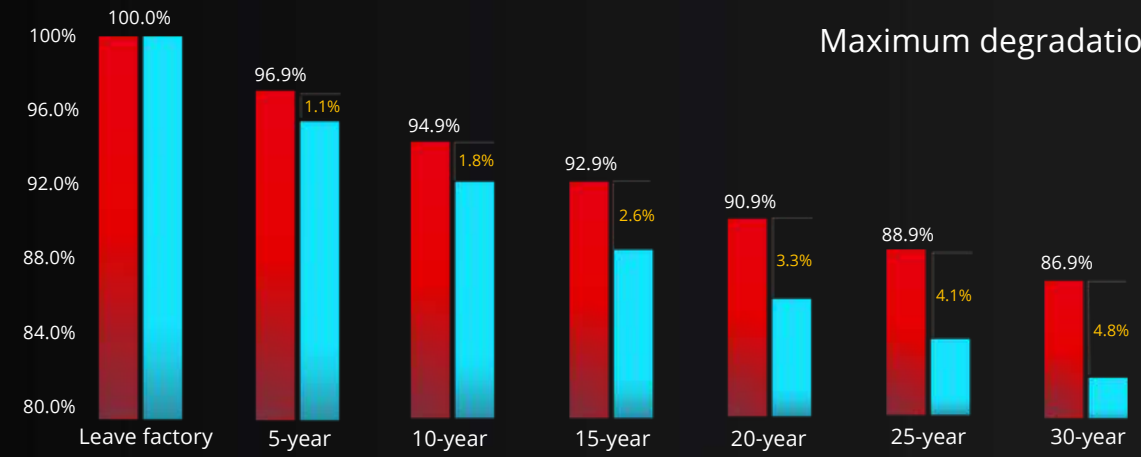
## Lower degradation

Max. first year degradation **1.5%**

Max. annual degradation **0.4%**

- LONGiHi-MO 6
- PERC Module

Power output %



Hi-MO 6  
Maximum degradation

Protecting investment with **your longer warranties**



Single glass module  
**25-years warranty**  
25th-year 88.9%  
power output warranty



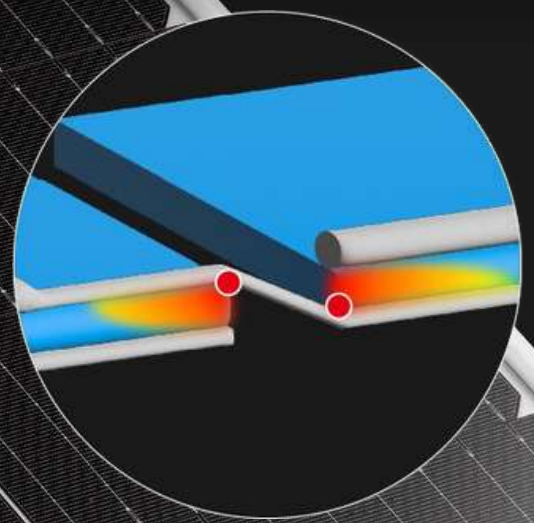
Dual glass module  
**30-years warranty**  
30th-year 86.9%  
power output warranty

\*Hi-MO 6 series have extended warranty service

# Innovative welding technology protects HPBC cells

Back contact welding structure

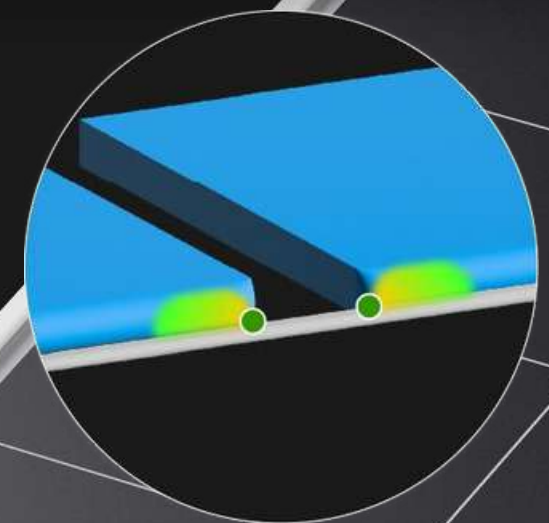
Lower cell stress



Cell edge stress **50Mpa**

Traditional Z-shaped welding structure

- Cell
- Ribbon
- Stress



Cell edge stress **26Mpa**

Hi-MO 6 uses back contact one-line welding structure



# Reliability Testing

Excellent performance and ultra-low degradation under severe test conditions

## Hail impact simulation

Hail weather simulation  
Diameter: 25, 35, 45mm  
Falling at 84-134km/h

## Thermal cycle test

High and low temperature environment simulation  
85°C to -45°C  
200 runs

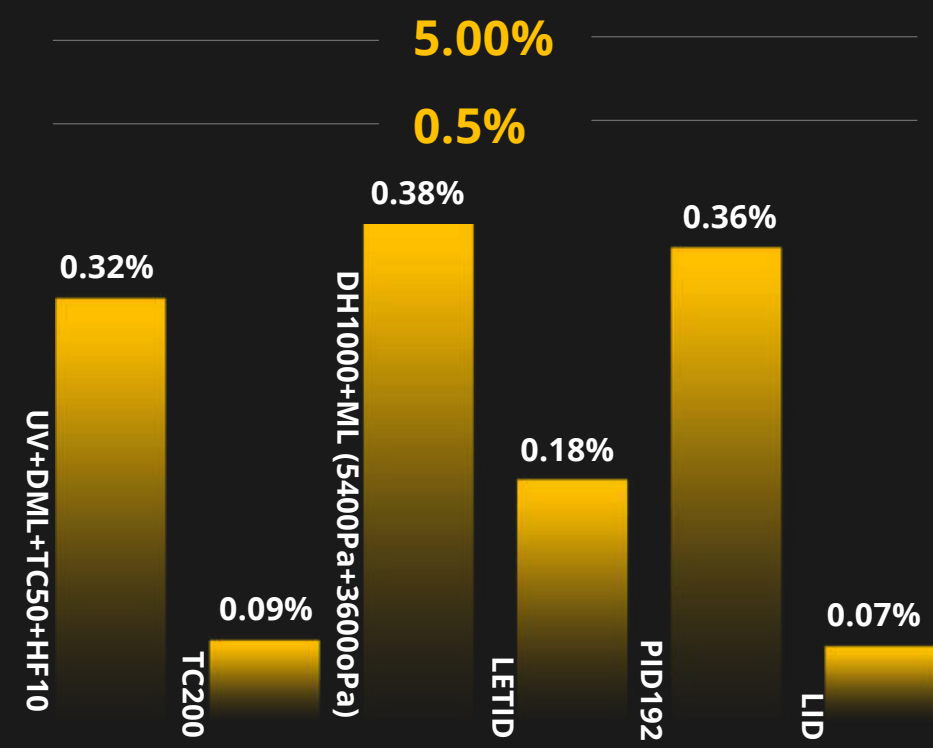
## Salt spray test

Coastal environment simulation  
5% saturation  
1000 hours of operation at 35°C

## Dynamic simulation

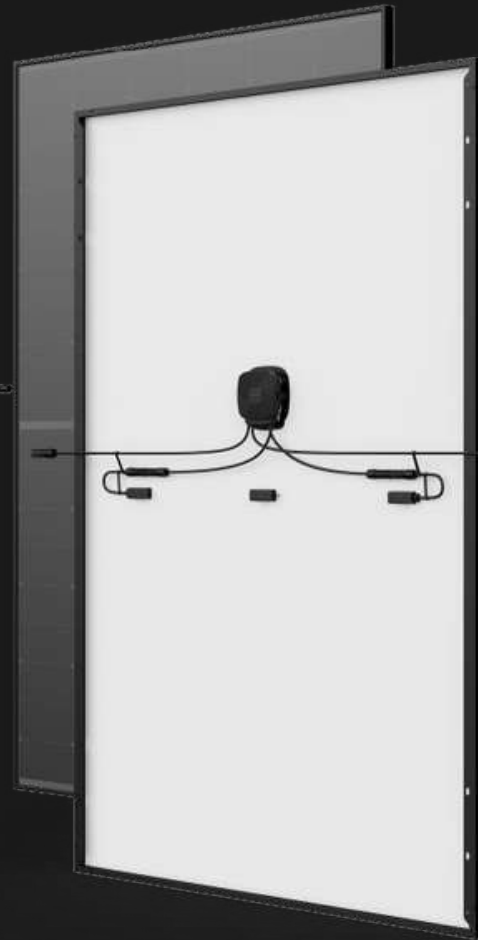
Storm simulation  
1000 cycles  
The maximum pressure is ±1000pa

IEC standard: Degradation less than 5% under extreme test conditions



# Intelligent power generation | Safe electricity

Module level optimizer enables module intelligence



Intelligent monitoring

Module monitoring and real-time data analysis



Rapid shutdown

Decreases output voltage to below 1V



Real-time optimization

Increases power generation by 5%-30%



Capability increase

One string for all modules in the system

LONGI

## Increased capacity -flexible design

Greater versatility in module orientation for all strings

Maximizes roof utilization

Increased flexibility

Reduces design limitations



**Normal PV layout**

Inverter with 2 MPPTs

Each MPPT can only support one module orientation



**IntelligentPV layout**

Each module generates electricity independently

Each string can support modules of different orientation

# Launch and Ramp-up

Mass production of high-efficiency photovoltaic modules

2022 Massproduction achieved

Q4

- Stable supply

- Efficient delivery

- Material guarantee

- Accelerated import

2023 Capacity Forecast

25GW+

- Extended quality certifications

- Seamless production scheduling

- Production process optimization

- Production efficiency improvement

# Product life-cycle management -ultimate service experience

Worldwide technical support coverage, logistics and warehousing

**121**  
Service Commitment

## Solid service commitment

Response within **1 day** | Solution within **2 days** | Return/Exchange within **1 week**

**10**  
Items

## Lifetime service support

**Pre-sales service** (New product introduction | Technical consulting | Sample support)

**In-sales service** (Order execution guarantee | installation training | Special management | Grid-connected acceptance)

**After-sales service** (After-sales processing | Operation & Maintenance support | Power station inspection)



## Value-added services including system technical training and O&M consultancy

**Module performance test** > PV plant design, installation & maintenance > Power generation analysis