



# CUSTOMER DRIVEN VALUE CREATION

FOR FULL SCENARIO ENERGY TRANSFORMATION

*The World Leading Solar Technology Company*

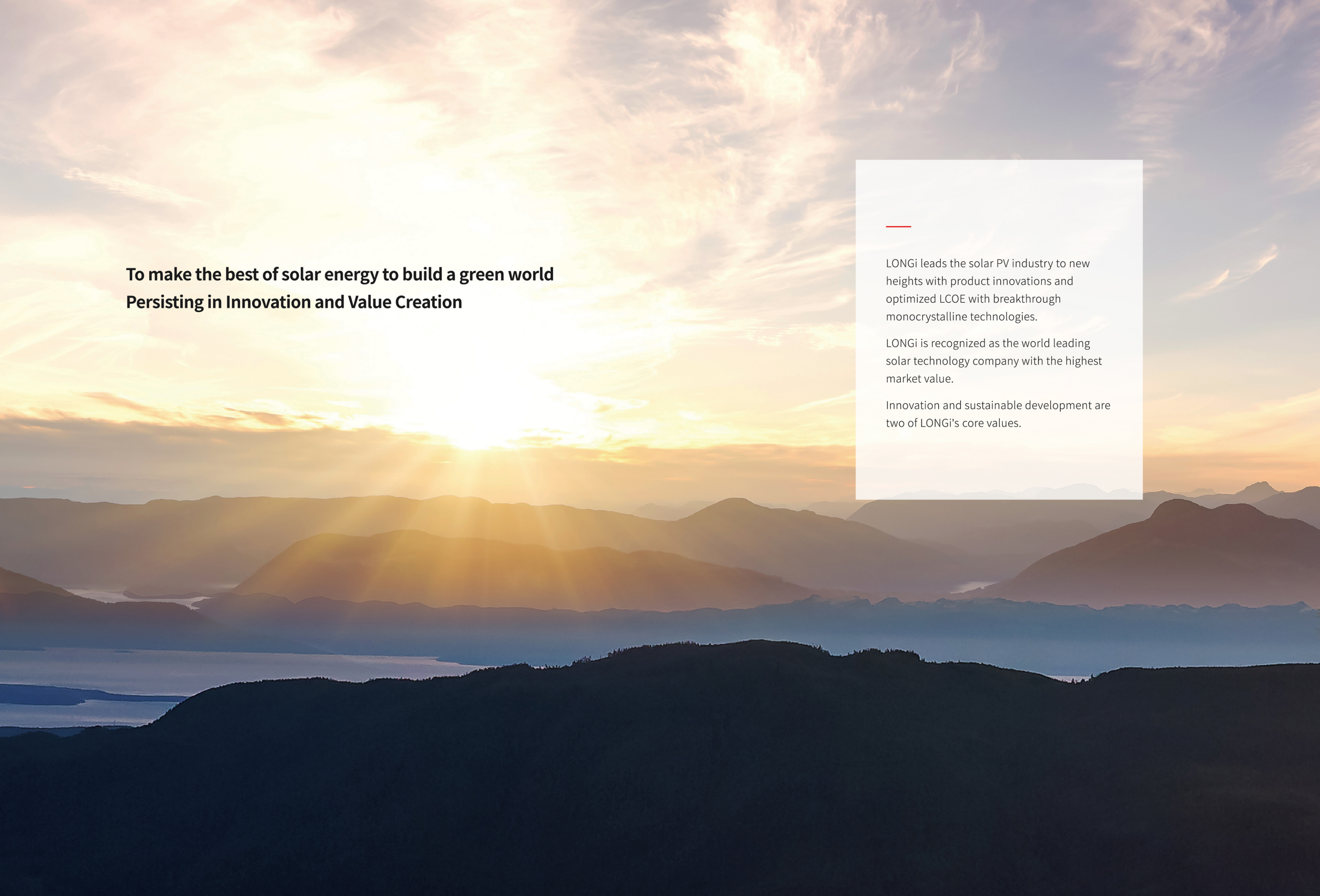
2022.08



LONGi Solar Technology Co., Ltd.

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





**To make the best of solar energy to build a green world  
Persisting in Innovation and Value Creation**

---

LONGi leads the solar PV industry to new heights with product innovations and optimized LCOE with breakthrough monocrystalline technologies.

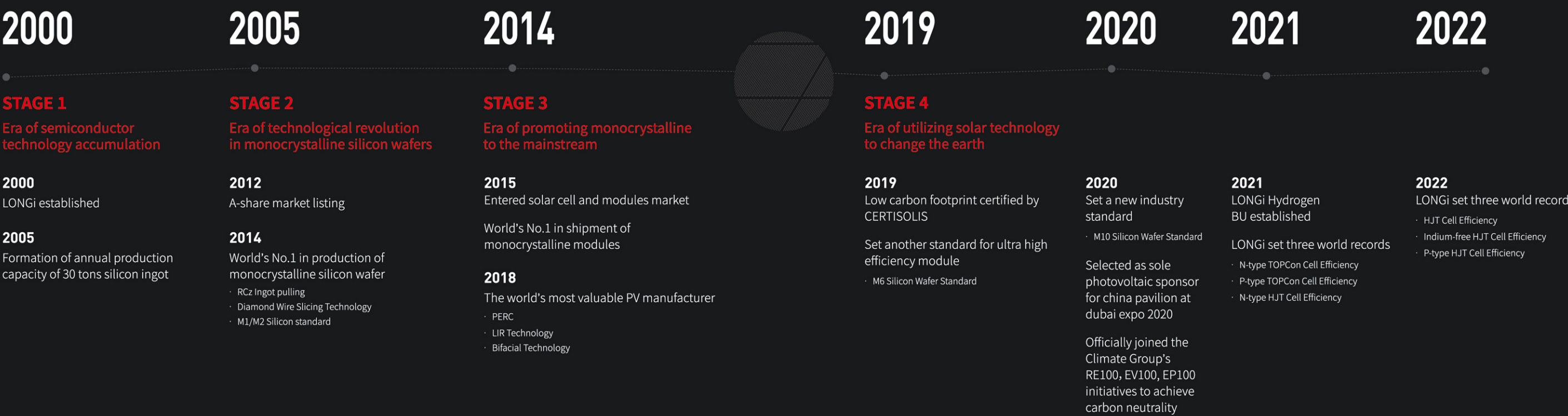
LONGi is recognized as the world leading solar technology company with the highest market value.

Innovation and sustainable development are two of LONGi's core values.



# Steadfast and Reliable

Each Milestone Has Become A Key Force  
to Promote the Development of the Industry



Y2021

Operating Income	Net Profit	R&D Investment	Total Asset	Global Employees
\$12.694B	\$1.425B	\$689.1M	\$15.329B	60000+

\*Notes: The financial figures are based on the exchange rate at the end of the reporting period.



50 Smartest Companies  
in China 2019



Forbes Global 2000

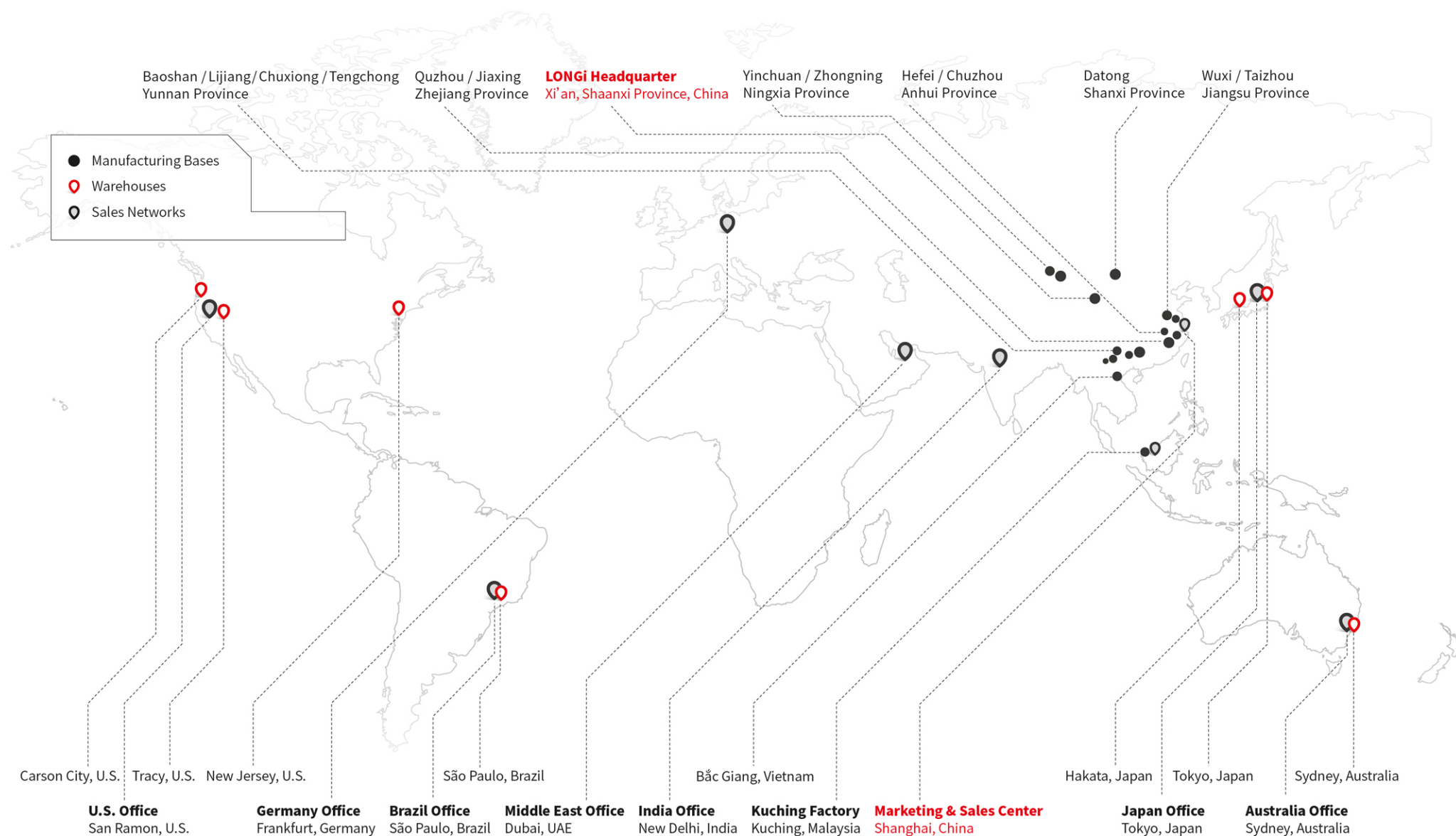


Fortune China 500



Goldman Sachs New China Nifty 50

## The World Leading Mono Silicon Wafer Manufacturer Leading Capacity and Shipment



**70.01**GW → Wafer Shipment  
(2021)

**105**GW → Wafer Capacity  
(2021)

\* LONGi took the industry lead  
in standardizing wafer size and achieving  
100% diamond wire cutting of mono silicon wafer.

**38.52**GW → Module Shipment  
(2021)

\* In 2021, the company's global sales performance,  
market share and brand influence ranked it 1<sup>st</sup> in the world,  
with its total shipment volume of domestic and  
exported modules exceeding 2<sup>nd</sup> place by more than 10GW.

**60**GW → Module Capacity  
(2021)



LONGi has consistently maintained industry leading ability to mitigate risk and adapt to market changes and, as part of operations, the company prioritizes corporate financial health and stability, with its asset-liability ratio at a low level compared to other global PV manufacturers.

**TIER 1**

### Tier 1 PV Module Manufacturer

*\*Source: BNEF 1Q 2022  
Global PV Market Outlook*

**100%**

### 100% Bankable PV Module Brand

*\*Source: BNEF PV Module  
& Inverter Bankability 2021*

**AAA**

### PV Module Tech Bankability Rating

*\*Source: PV Module Tech  
Bankability Quarterly Report*

## We Embrace Innovations with Our Global Customers

**85+** countries

Global Footprint



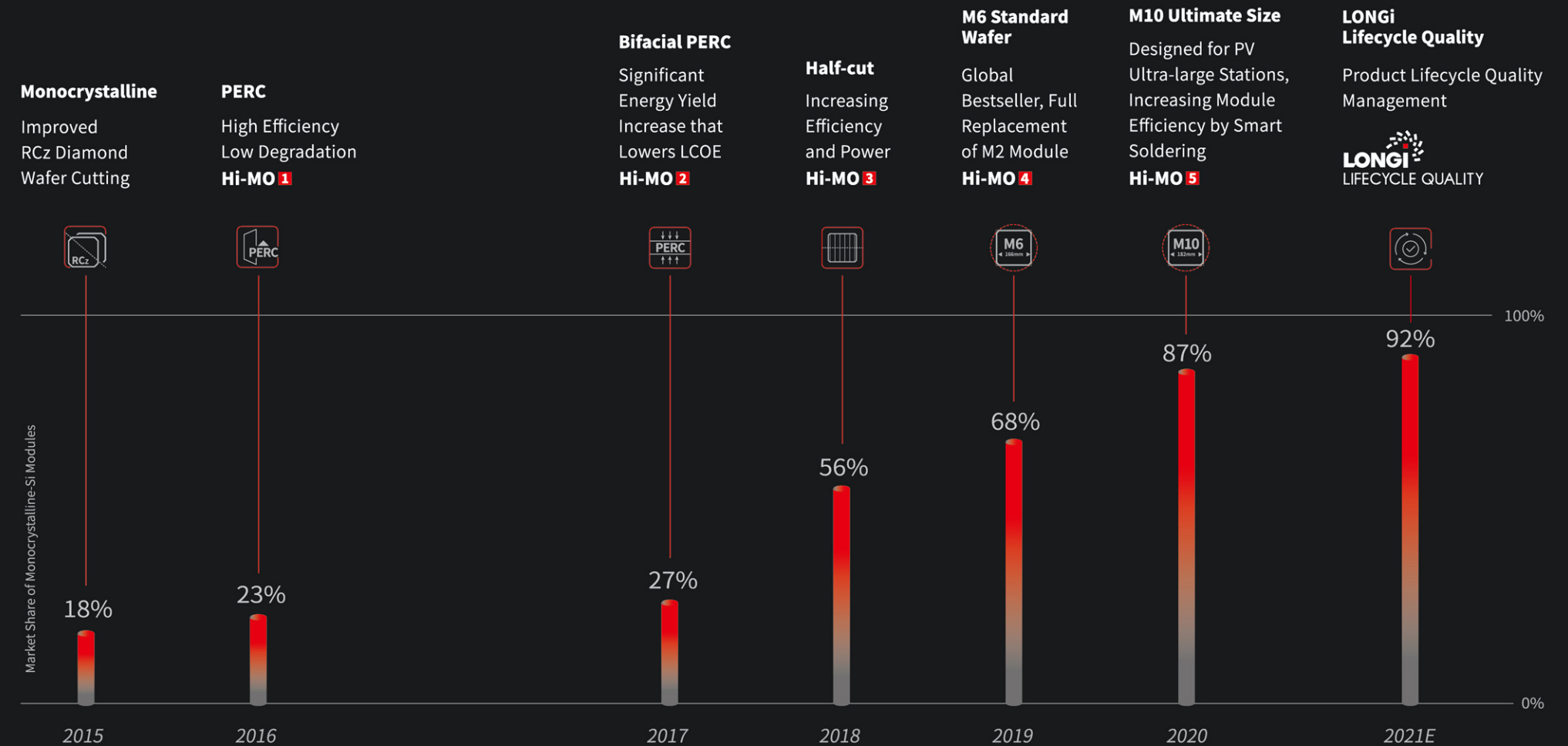
**5000+**

Global Customers



# Technology Leadership

## LONGi Innovation: The Benchmark For The Entire Industry



Continuous Technology Innovations  
on Open Platforms

**\$689.1M**

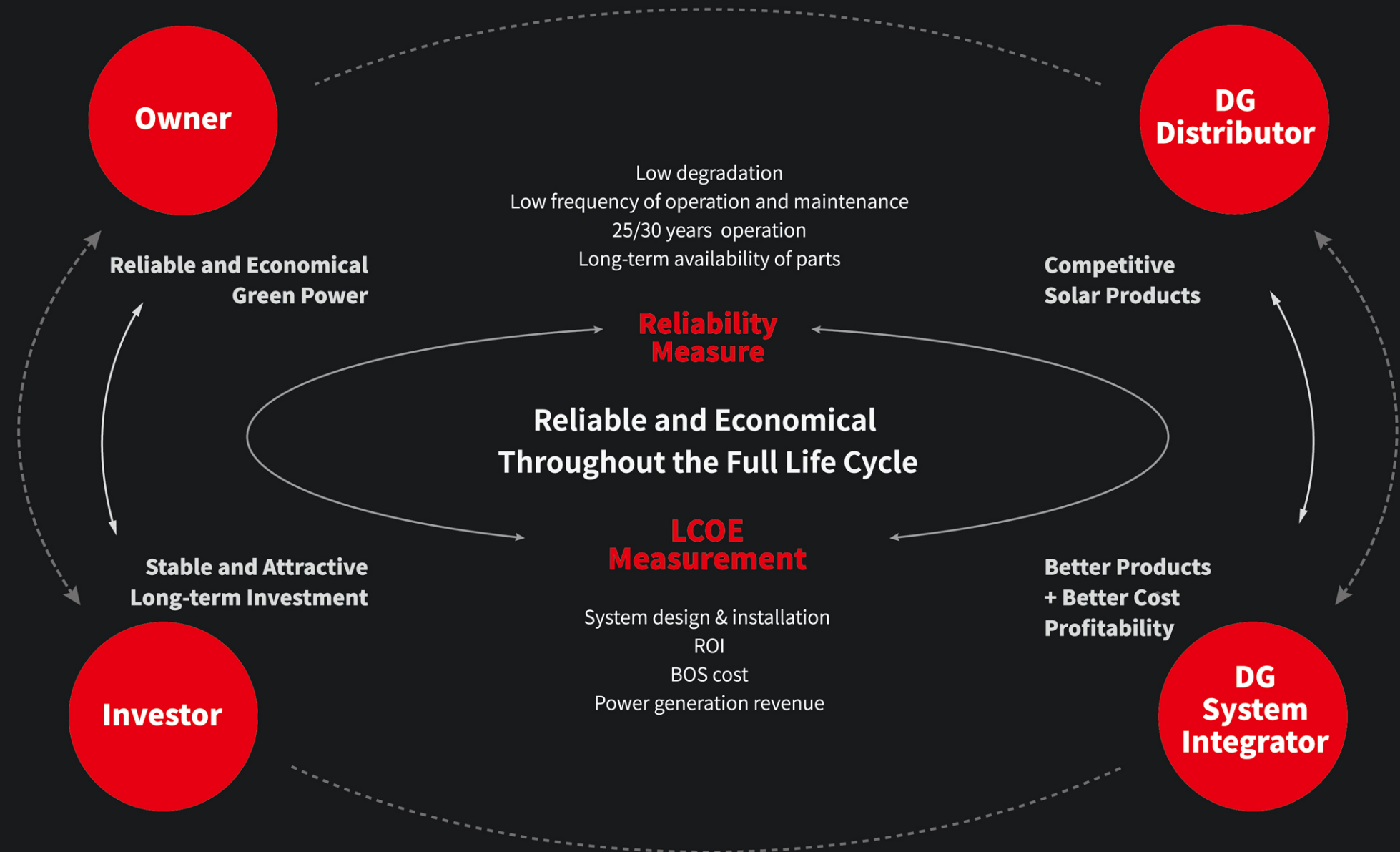
2021 R&D Investment

**5.43%**

Proportion of Operating Income Invested in R&D



## Customer Driven Value Creation



## LONGi Module Design and Planning

Production and Technology with Highest Customer Value

### High Optical Utilization

- Bifacial power generation
- Innovative optical structure interconnection materials

### Reasonable Electrical Design

- Current density and open circuit voltage

### High Encapsulation Density

- High power, high efficiency

### Low Degradation

- LID, LeTID
- PID

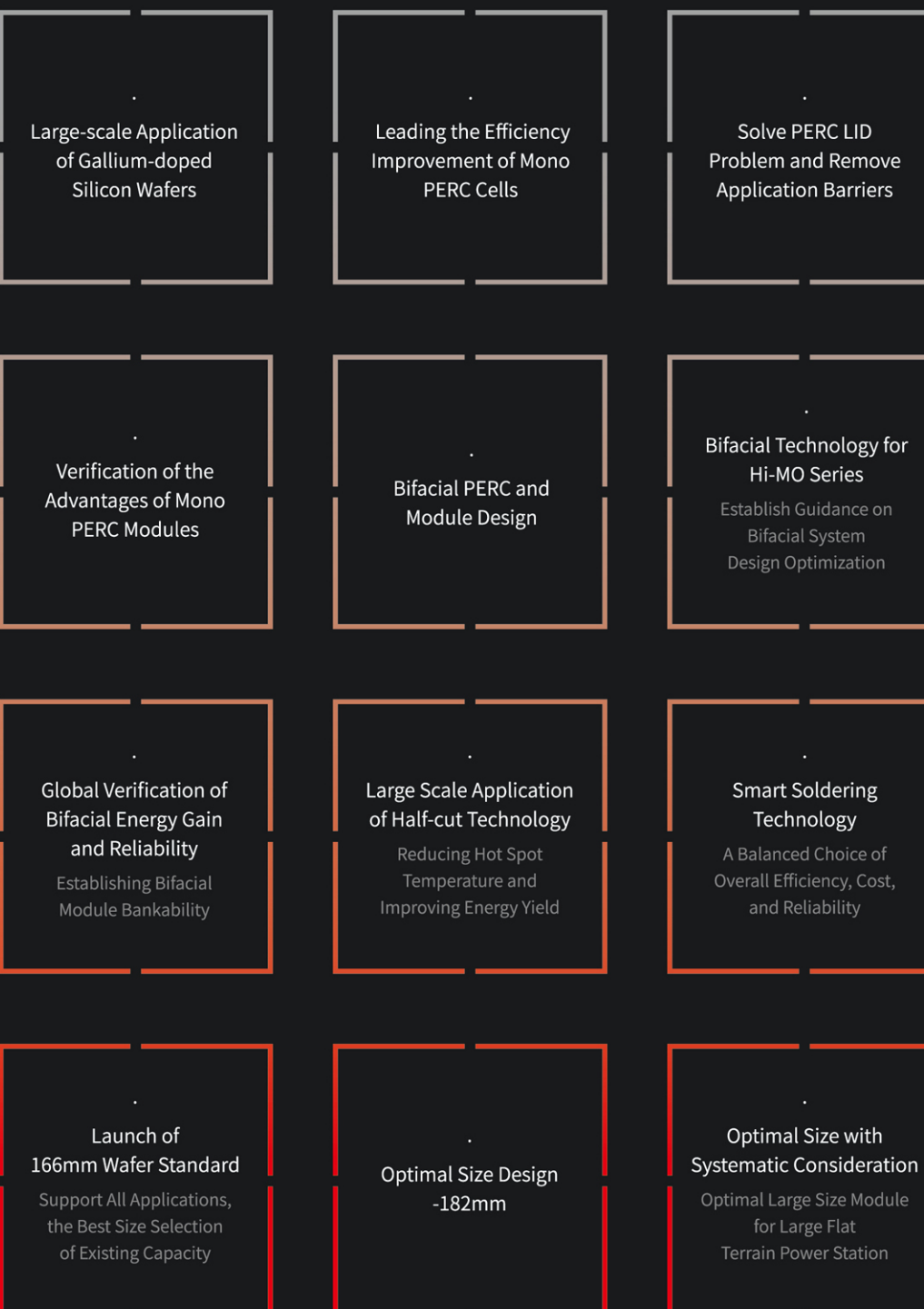
### Stable Supply Chain Guarantee

- Glass, wire box

### Transportation Compatibility

- Handling, packaging and transportation

## Design Consideration





## LONGi Hi-MO Series Unlock More Application Scenarios

### Hi-MO 4 Higher Power, Lower LCOE

- Backside power generation gain · Good electrical performance under shaded conditions
- Resistant to hot spots · Optimized for high temperature and high radiation environments

### Hi-MO 4m Maximize Power Density and Flexibility

- M6 gallium doped silicon wafer · Standard size, flexible applications
- Symmetric design, aesthetic outlook

### Hi-MO 5 Delivering True Value

- M10 wafer with gallium-doped technology · P-mono PERC cell technology
- Half-cut cell with multi-busbars

### Hi-MO 5m New Choice for Rooftop Solar System

- M10 gallium-doped wafer · Compatible with most standard mounting systems
- Excellent energy generation under low light

## Applications



### Residential

Suitable for Various Rooftops  
Maximize Installation Capacity

Hi-MO 4m 60c/66c Hi-MO 5m 54c



### C&I

For Whole Scenarios

Hi-MO 4 4m 66c/72c Hi-MO 5m 54c



### Ultra-large Power Plant

Best LCOE

Hi-MO 5

## Product Quality and Performance Guarantee

### Design

- Established models of optics, electricity, mechanics and heat
- Combines theories with experimental results and historical experience
- Comprehensive analysis of product value based on application scenarios

### Material

- Specific tests based on material properties
- Suppliers with high financial health
- Thresher reliability test

### Plan

- Product and Material Standard
- Ensure the continuity of production and the versatility of materials

### Quality Management

ISO 9001 IEC TS 6294  
MES System  
ERP System

### Reliability Tests

- Advanced lab recognized by the third party
- Passed the internal thresher reliability test
- Excellent performance in the test of third party organizations

### Manufacturing

- Highly automated production lines
- Quality assurance (Manufacturing bases, headquarters, marketing)

### Outdoor Power Generation

- The power generation performance and reliability are verified by theory and demonstration
- Joint demonstration with authoritative third party institutions and customers

## Professional Reliability Assessment Methods

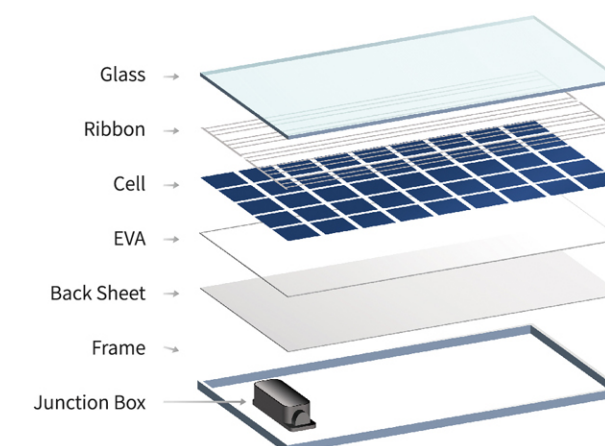
Based on the research results of well-known research agency standards and third-party institutions in the industry, LONGi has established a variety of differentiated reliability testing methods to evaluate product and material reliability more quickly and effectively.

- **Highly Accelerated Thermal Cycling (HATC)**
- **DH + UV Aging**
- **Cell Metal Corrosion Test**



## LONGi Standardized BOM

LONGi is committed to the standardization of materials. Materials meeting the high standards LONGi are unified as LONGi brand, which further improve the consistency of manufacturing process and product quality.





The Third-party Evaluation  
of Product Quality & Performance  
Efficiency Records and Awards

TÜV Rheinland  
All Quality Matters



2017, 2018  
Energy Yield Simulation Winner (Mono Group)

2019, 2020, 2021  
"PV Module Outdoor Power Generation" Winner

Low light power  
generation performance

Power temperature  
coefficient

Incident  
angle effect

RETc High Achiever for 4 Years

LONGi is recognized as a 2022 Top Performer, gaining the High Achiever status in RETc (Renewable Energy Test Center)'s PV Module Index Report for the fourth consecutive year.

Renewable Energy Test Center (RETc) is a leading engineering service and certification testing provider for photovoltaic & renewable energy, who broadly organize test protocols and reported data according to three interrelated and essential disciplines: module quality, performance, and reliability.



**Reliability**  
· DH2000 Test · DMLTest · PID-Free

**Performance**  
· Module Efficiency  
· PTC-to-STC Ratio  
· PAN File · LID · LeTID

**Quality**  
· Thresher Test (HF30, TC600, DH2000, DML, UVSoak)

**Highest Achiever**

Reliability Indicators  
Performance Indicators  
Quality Indicators

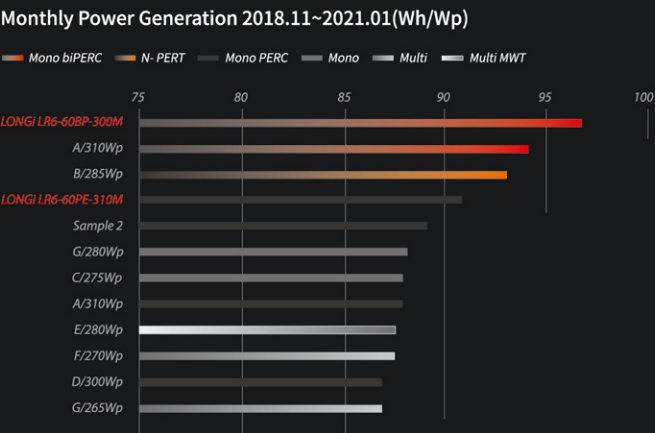
Top Performer in PVEL's PV  
Module Reliability  
Scorecard 6 Times



600cycles + 2000hours + 192hours  
Thermal Cycling    Damp Heat    PID Test

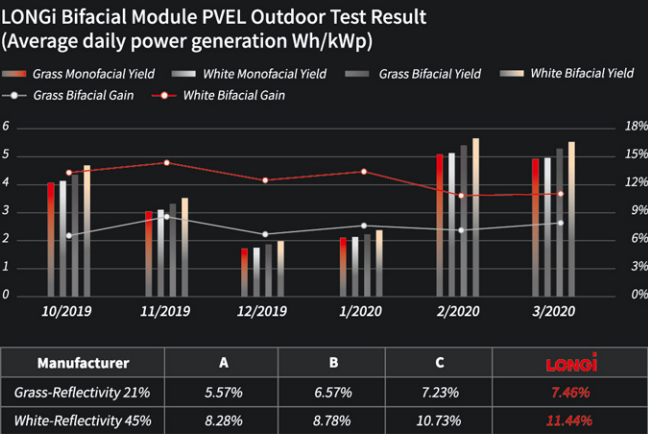
1000cycles + 50cycles + 30cycles  
Dynamic Mechanical Load    Thermal Cycling    Humidity Freeze

Excellent Performance in Energy  
Yield Test Conducted by pv magazine



- Organized by the German-based pv magazine Group, in cooperation with CEA in the United States and GSolar in China, sampled by CEA.
- LONGi modules were ranked top in the outdoor category.

PVEL Bifacial Module Outdoor Test



- PVEL laboratory, in Davis, California, studied the reliability and power generation of bifacial modules of different manufacturers, and found them to be significantly different.
- In fact, it shows that the power generation gain of LONGi bifacial modules is obviously better than others.

Source: Bifacial bake-off: comparing technologies and manufactures, July 2020

## The Future of LONGi Sustainable Development Roadmap

With “Solar for Solar”, LONGi officially joined the Global Initiatives RE100, EV100, EP100, and will keep building towards achieving 100% in clean energy consumption.

LONGi always had sustainable management as a core criteria for business decision-making, including continuous investments in innovation and research, advocating an open corporate culture and promoting scientific institutional research. At the same time, LONGi has been leading continuous changes in electric power and energy, promoting the sustainable development of the planet and mankind.

It is LONGi's vision and roadmap that Earth will be completely green and self-sustainable in the first half of this century.

**RE100** **EV100** **EP100**

