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Make good use of the sun's radiance

Creating a Green Energy World

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Global climate change

In the past hundred years
With the excessive consumption offossilfuels
Carbon emissions have broughtthe conflictbetween huma ns and nature to the brink of danger, and deep decarbonization isurgently needed
From the 2015 ParisAgreementto the present, the global energy land scape

70% The country has announced its commitment to carbon neutrality

Surviving on Earth, carbon neutrality has become a global consensus. The task of carbon neutrality is arduous, and the energy revolution is an inevitable trend

"3060" target

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Vision

Become the world's most valuable solar technology company

mission

Utilizing the radiance of the sun to create a green energy world

Core values

Reliable value-added environmental protection

Providing affordable solutionsfor humanity worldwide

Sustainable clean energysupply

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HPBC battery specifications

182mm*183.75mm

Technology	HPBC
Thickness of cells	165μm ± 16.5μm
wafer thickness	150 μ m
Diagonal specifications	125.0mm ± 0.25mm
Front grid line	0
Mainstream efficiency	25.8%
	25.5%
Corresponding power	8.59W
	8.49W
Corresponding open circuit voltage	0.733V
	0.730V

BC technology: the pinnacle of silicon solar cell technology

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Platform based technology

BC batteries have excellent process compatibility and can be combined with efficient battery technologies such as TOPCon and HJT to continuously improve battery efficiency. It is a deterministic platform technology

High conversion efficiency

The theoretical conversion efficiency of BC technology is 29.1%, which is closest to the extreme value of silicon-based battery theoretical conversion

High reliability performance

Full back welding technology, with the lowest risk of hidden cracking in battery cells

Front unobstructed

Front without grid lines, which can maximize the utilization of incident light and achieve higher efficiency

Scene adaptability

More aesthetically pleasing components and higher adaptability to complex distributed scenarios

Industry consensus

As a leading manufacturer, Longi actively promotes the marketization of BC products, and other brands also actively engage in BC technology reserves

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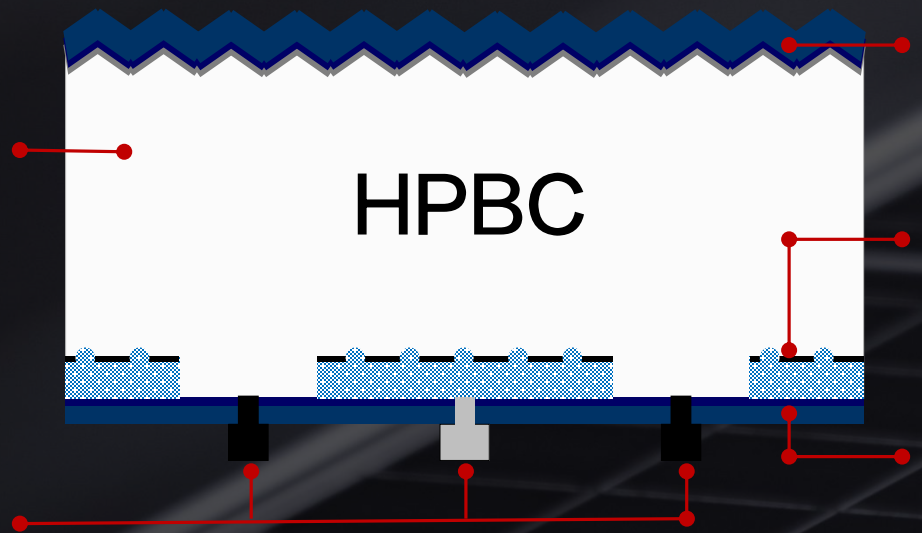
HPBC Core Features

On the basis of BC technology, combined with the advantages of TOPCon technology, P-type silicon wafers are utilized to achieve conversion efficiency beyond n-type

High quality silicon wafers



Positive and negative electrodes

Reduction passivation +alumina passivation

Tunnel oxidation passivation

Reduction passivation +alumina passivation

01 After years of large-scale production, the reliability of P-type silicon wafers has been fully verified, and the industrial chain is mature and stable;

02 The culmination of BC and TOPCon, the most advanced in the industry, with industry costs and The best combination of efficiency is the industry Iconic transformational products;

03 The future technological route of screen printing can use aluminum as a substitute for P-type printing

Silver has great potential for reducing the cost of electricity per kilowatt hour

04 **The back adopts a tunneling oxide layer The process characteristics of TOPCon improve battery efficiency**

feature 01

Front no grid line

HPBC Battery | Minimalist Aesthetic Design

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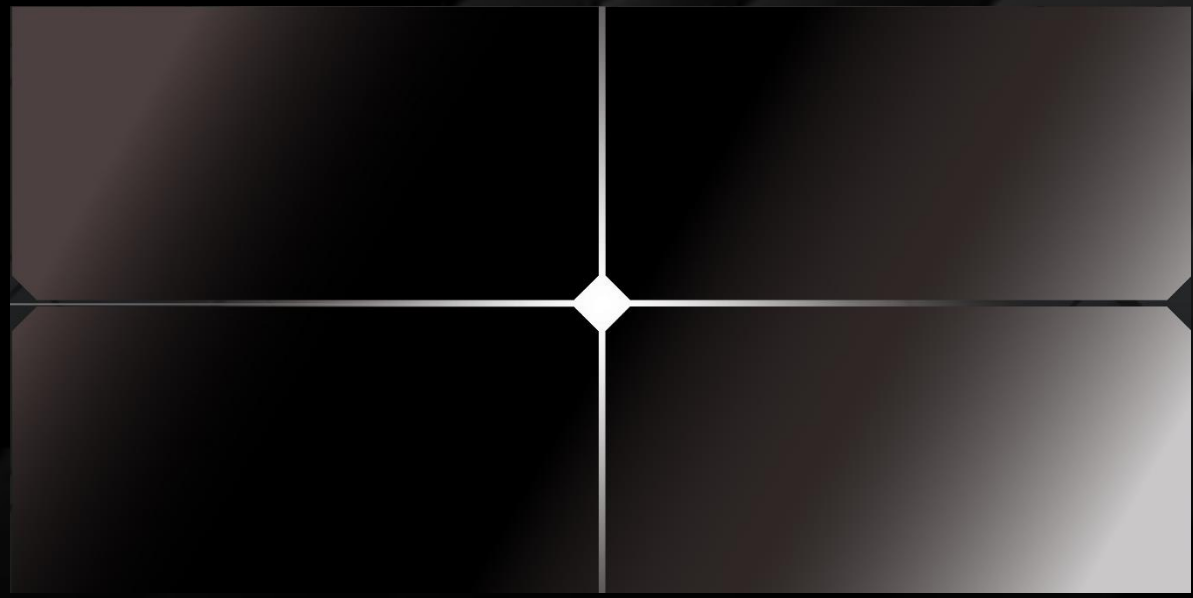
Adhering to the aesthetic concept of ' simplifying complexity', we continue the trend of minimalist design

Creating a pure and high-end appearance for components

Harmonious and harmonious "with diverse scenes to meet different design styles

The best perspective for presenting architecture



feature 02

High power generation per unit area

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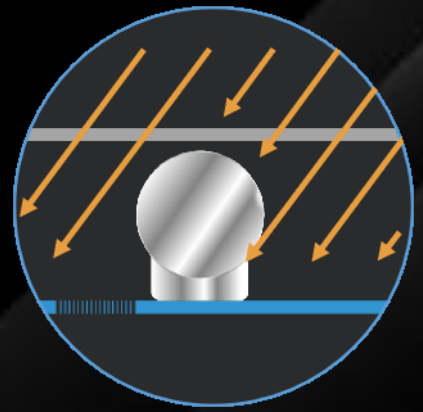
Improved compared to PERC **11.5%** Improved compared to TOPcon **4.5%**

The design of the front without grid lines has been enhanced **2.27%** The absorption of light

HPBC Product

No solder tape obstruction
to maximize light absorption



PERC、TOPCon Product

Welding strips block light and
create small shadow areas

feature 03

Weak light generates strong electricity

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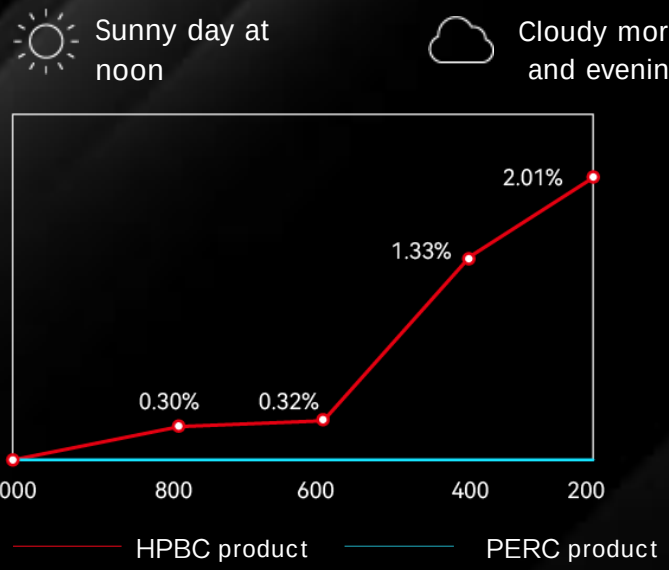
Generate electricity for an extra hour in the morning and evening

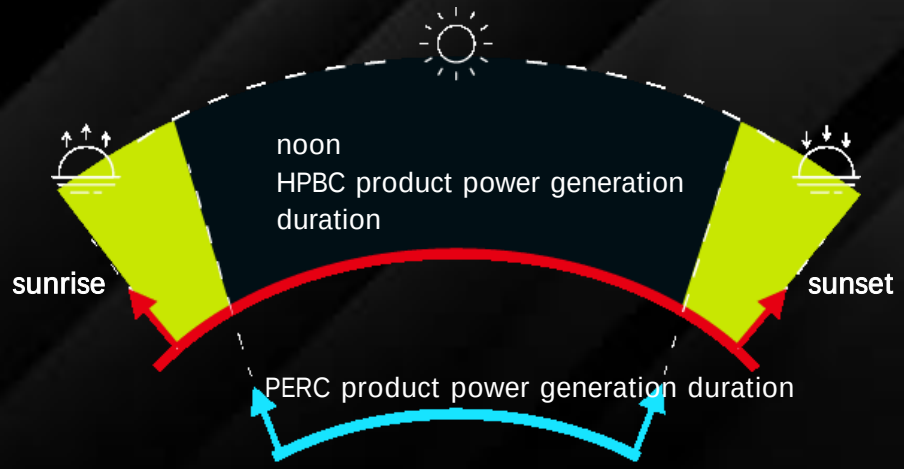
Enhance weak light power generation



HPBC battery products have fewer composite centers in their components, resulting in a significant increase in relative power generation efficiency under low light conditions, with a maximum of 2.01%

*Relative power generation gain=HPBC normalized PR/PERC normalized PR−1 *
Data source: TUV South Germany Certification Testing Center

Extend the duration of power generation



High open voltage characteristics ensure faster access to inverter operating voltage in the morning and evening, effectively extending power generation time

feature 04

“—” shaped welding strip reduces stress 48%

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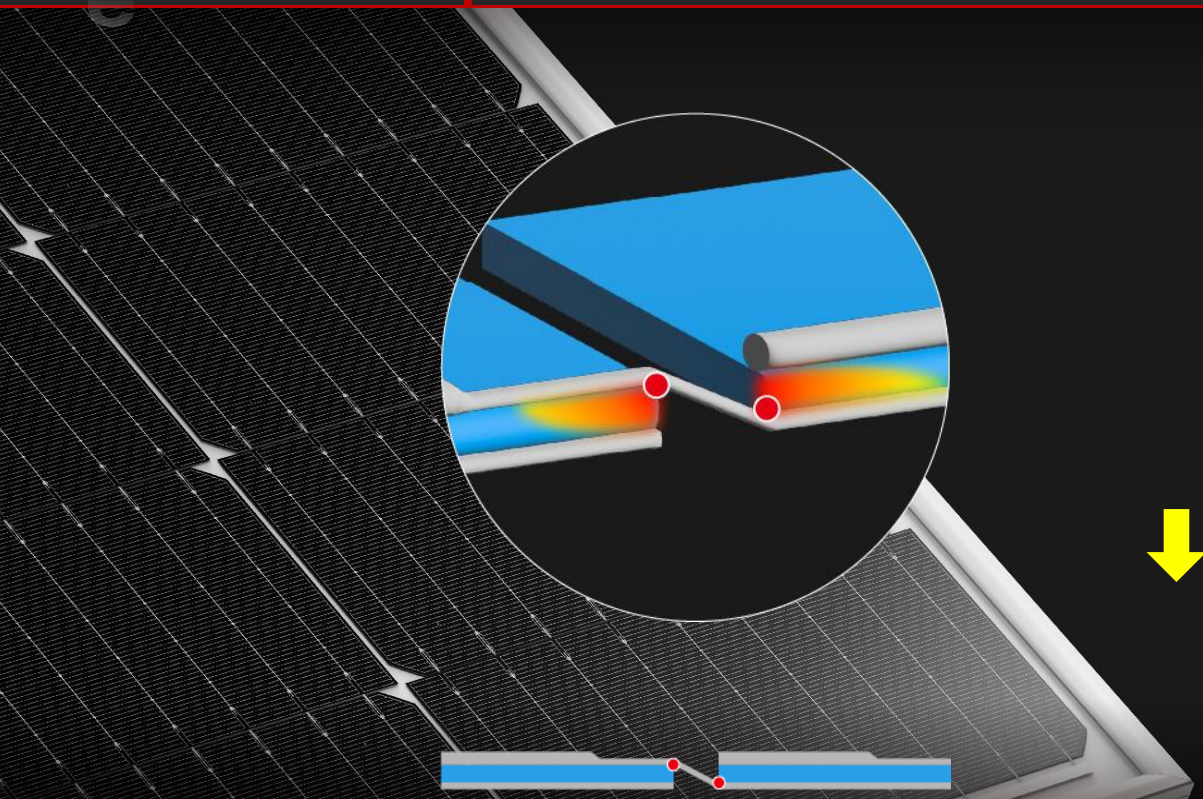
Silicon wafer thickness of 19%, significantly improved anti cracking ability

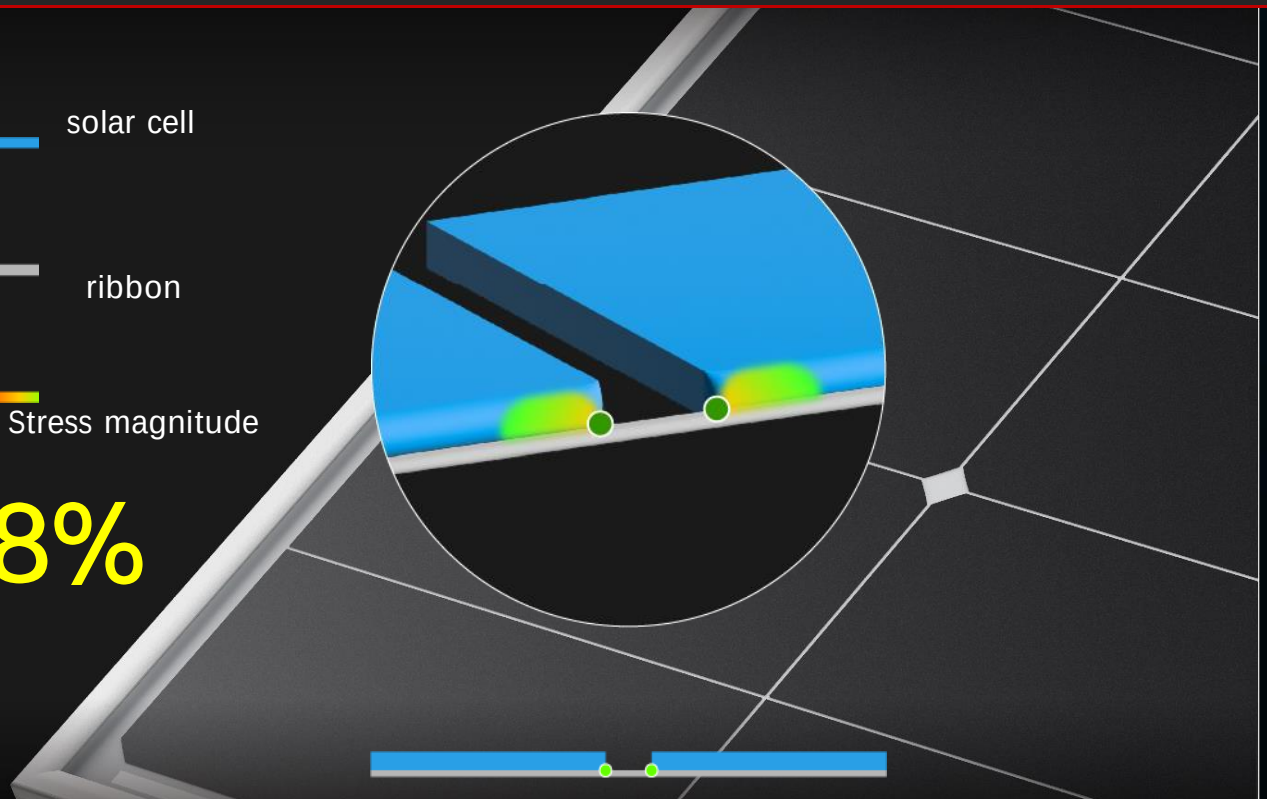


solar cell

ribbon

Stress magnitude

⬇48%



Edge stress of battery cell 50Mpa
Traditional components are welded using a "Z" - shaped structure

Edge stress of battery cell 26Mpa
The components of HPBC products are welded wi th a full back "—" - shaped structure

feature 05

Good performance of module products

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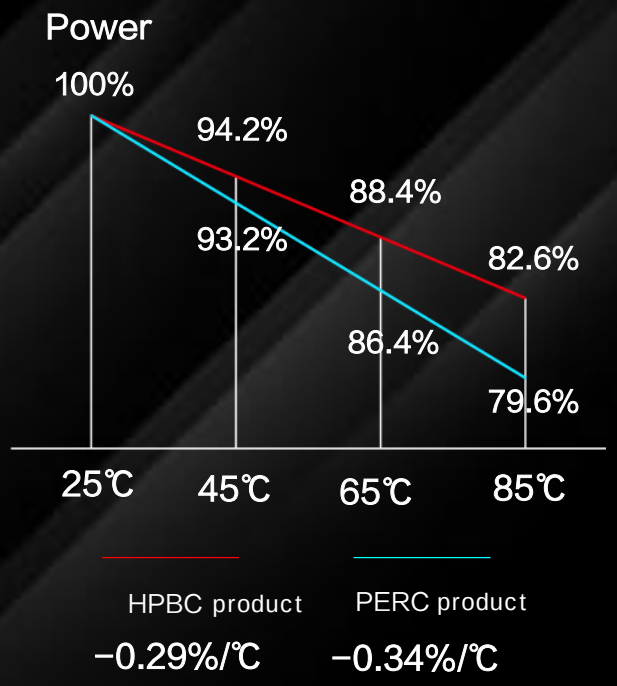
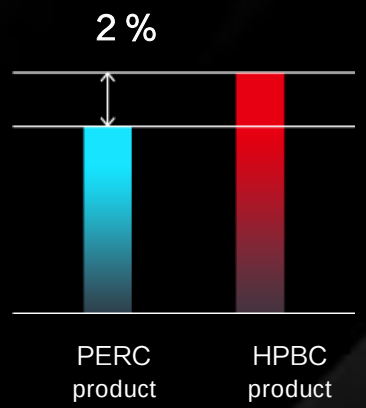
①The temperature coefficient has been increased to **−0.29%/℃**

Better power generation performance at high temperatures





Xi'an, Shaanxi, China

Temperate semi humid continental monsoon climate

Abundant lighting resources

Annual average temperature:
-4 ° C~32 ° C

Project Type: Warehouse and Factory Building
Module Type: 182-72c Single sided
Factory Area: 4650
Installation angle: 3 °

feature 06

Good performance of component products

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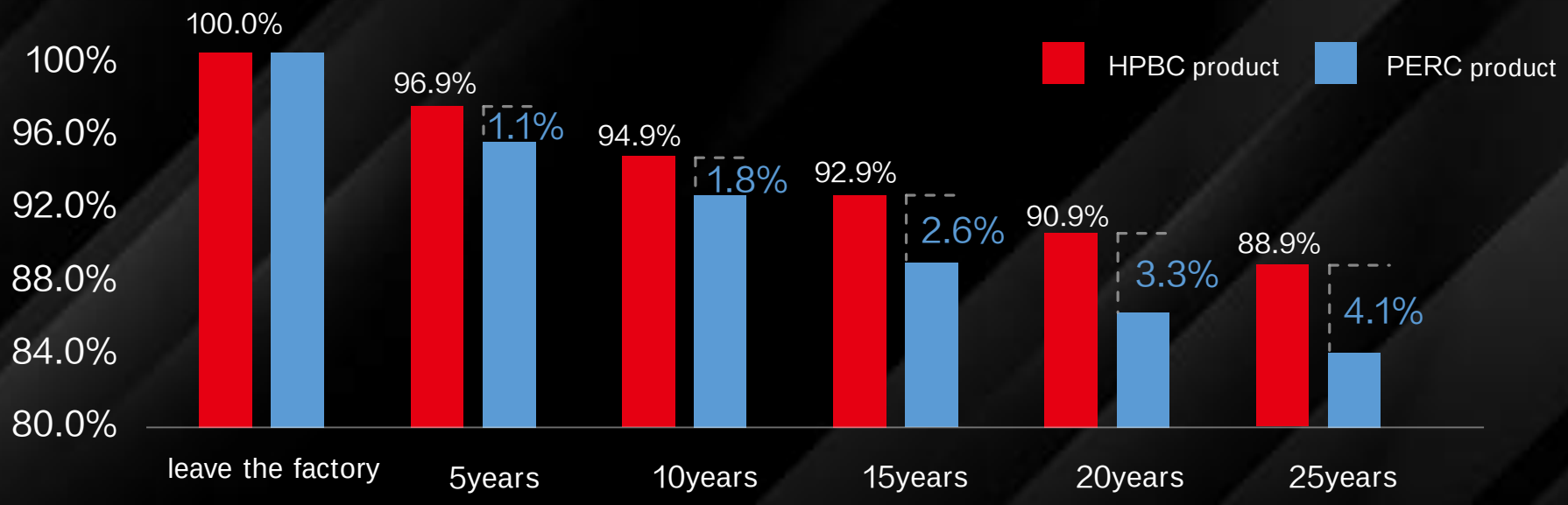
②First year attenuation **1.5%** Linear decay **0.4%**



Lower attenuation, higher power generation revenue throughout the entire lifecycle

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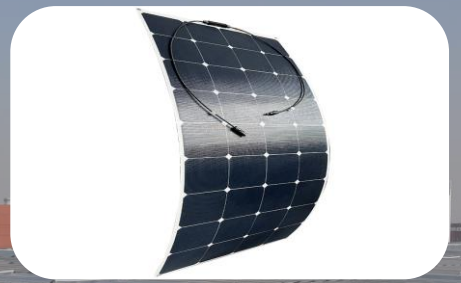
Application scenarios of HPBC cells



01

Non standard photovoltaic modules

Modules below 540W, mainly used for customized building rooftop power stations, as well as applications such as solar energy storage, RVs, yachts, etc

02

BIPV

Photovoltaic building integration, intervening in the design stage of building construction, realizing photovoltaic products as "building materials" “

03

security equipment

Provide daily electricity consumption for security products

04

Flexible Modules

Flexible components and lightweight modules are mainly used in scenarios where the weight is weak, such as houses, RVs, yachts, etc.

05

Personal application products

Including but not limited to outdoor photovoltaic folding panels, folding bags, photovoltaic backpacks, power banks, etc.

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THANKS

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