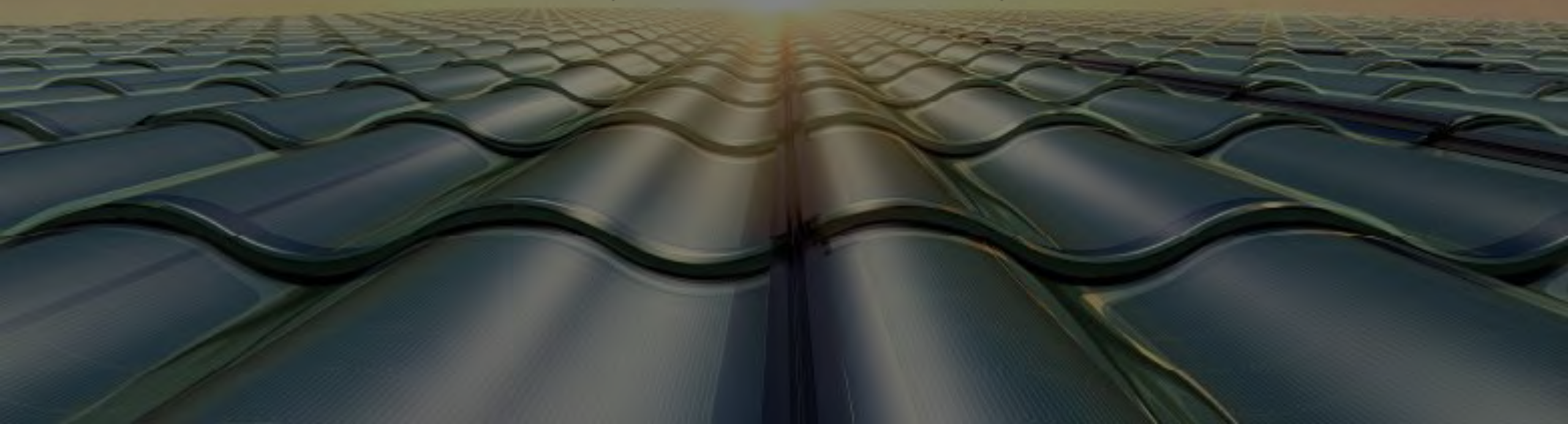


ENERGY INDEPENDENCE SOLUTIONS FOR HIGH-END VILLAS

FREEDOM OF ELECTRICITY | ENERGY INDEPENDENCE | ZERO CARBON LIFE



What is freedom of electricity?



Households are 100% self-sufficient in electricity

Can meet all the household electricity demand, including fresh air system, security system, central air conditioning and so on



Say goodbye to paying your electricity bill forever

No more worrying about forgetting to pay the electricity bill again this month!

Why energy independence?

EMERGENCY SITUATION, EMERGENCY POWER FAILURE

Planned/temporary power outage was caused by equipment maintenance, power grid upgrading, municipal construction, external damage and other factors, which brought troubles to daily life.

EXTREME WEATHER, POWER GRID DISRUPTIONS

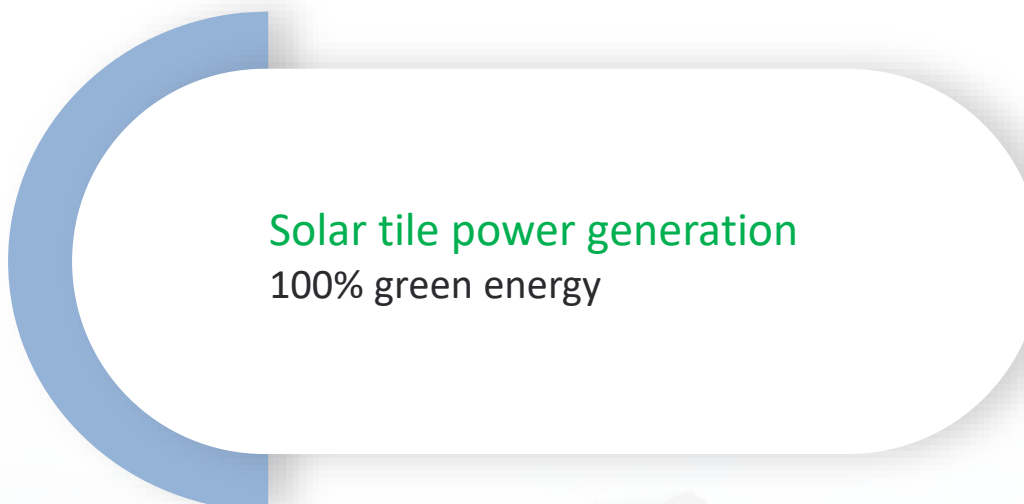
Force majeure factors such as floods, earthquakes, large hail, typhoons and so on cause power outages and urgent energy use.



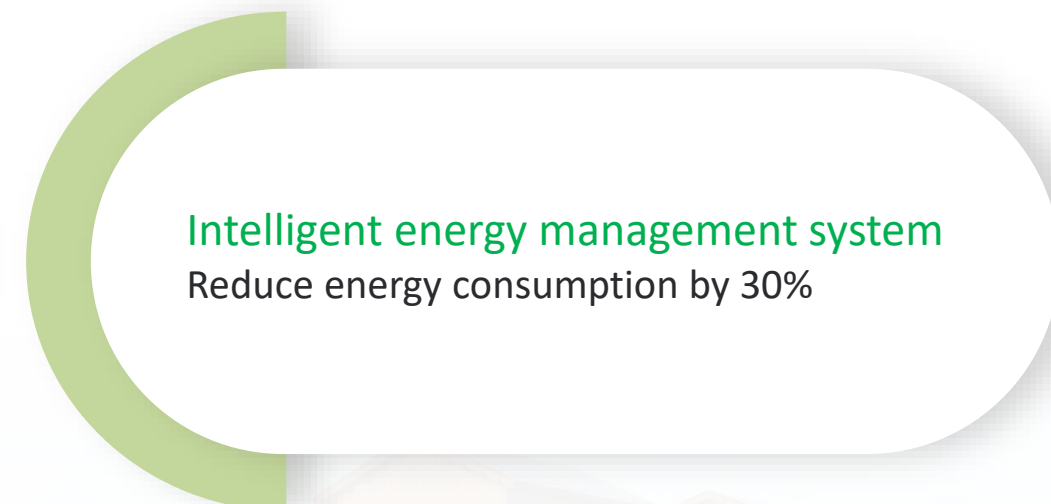


HOW TO ACHIEVE A ZERO-CARBON LIFE?

Families heal themselves | Zero carbon to heal the Earth



Solar tile power generation
100% green energy



Intelligent energy management system
Reduce energy consumption by 30%



CONTENTS

1

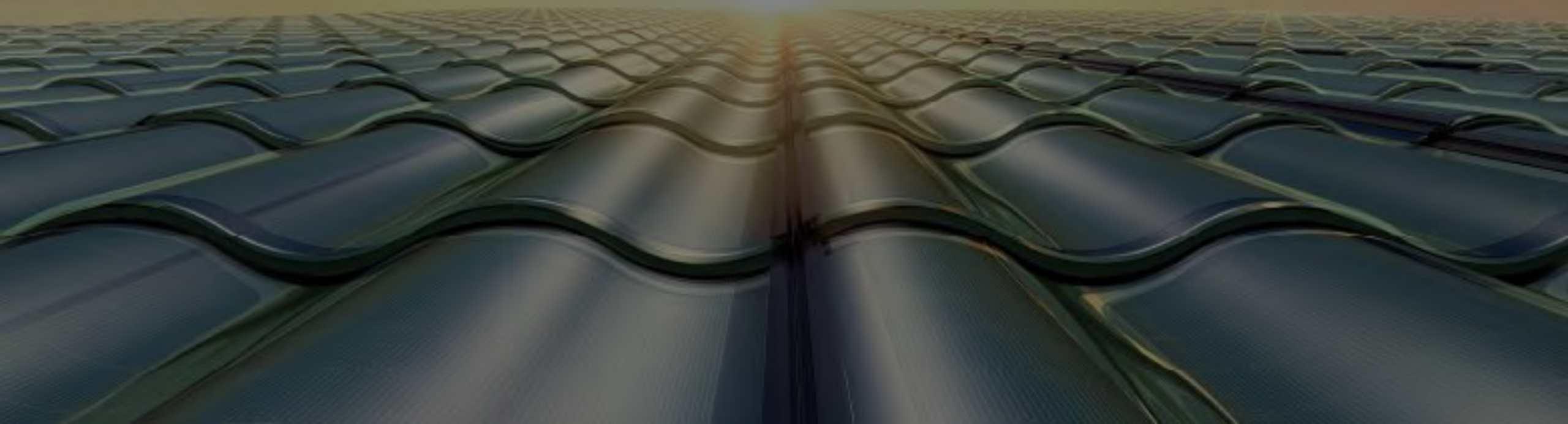
SOLUTION

Flow chart, three-curve Hanwa, flat Hanwa, cylindrical Hanwa, product advantage comparison

2

APPLICATION CASE

Application scenarios and cases



PART ONE SOLUTION

A 3D rendering of a vast field of solar panels stretching to the horizon under a blue sky. The panels are arranged in a grid pattern, and the perspective is from a low angle, looking down the center of the field. The sky is a gradient of blue, and the overall scene is brightly lit.

SCHEMATIC DIAGRAM OF THE HOME ENERGY INDEPENDENCE SOLUTION PROCESS

Solar radiation



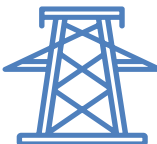
Rooftop photovoltaic modules generate electricity



The inverter switches to AC



The storage box stores electrical energy



The surplus electricity is connected to the grid to obtain profits

Check the power output on the mobile phone



THIN FILM TECHNOLOGY SUBVERSIVE INNOVATION

Three curved panels of solar tiles power new energy



Super light weight
6.5kg



Ultrathin
8mm



Super strong
Super white
tempered glass



Super safe
Multiple
certifications



Diversity
Multiple
styles and colors

THREE CURVED SOLAR TILE PRODUCT PARAMETERS

Long degree: 721(\pm 1)mm

Wide degree: 500(\pm 1)mm

Profile arch height: 33(\pm 1)mm

Thickness of assembly: 8(\pm 1)mm

Weight of single item: 6.5 (\pm 0.5) Kg

Weight per square meter: 22 (\pm 0.5) Kg

Maximum power of a single product: 32W (Black) /25W (Red) (\pm 7%)

Maximum power per square meter: 110W (Black) /86W (Red) (\pm 7%)

Waterproofing grade : IP67

Fire rating : A

Wind resistance rating: 15

Class of loading : 5400Pa

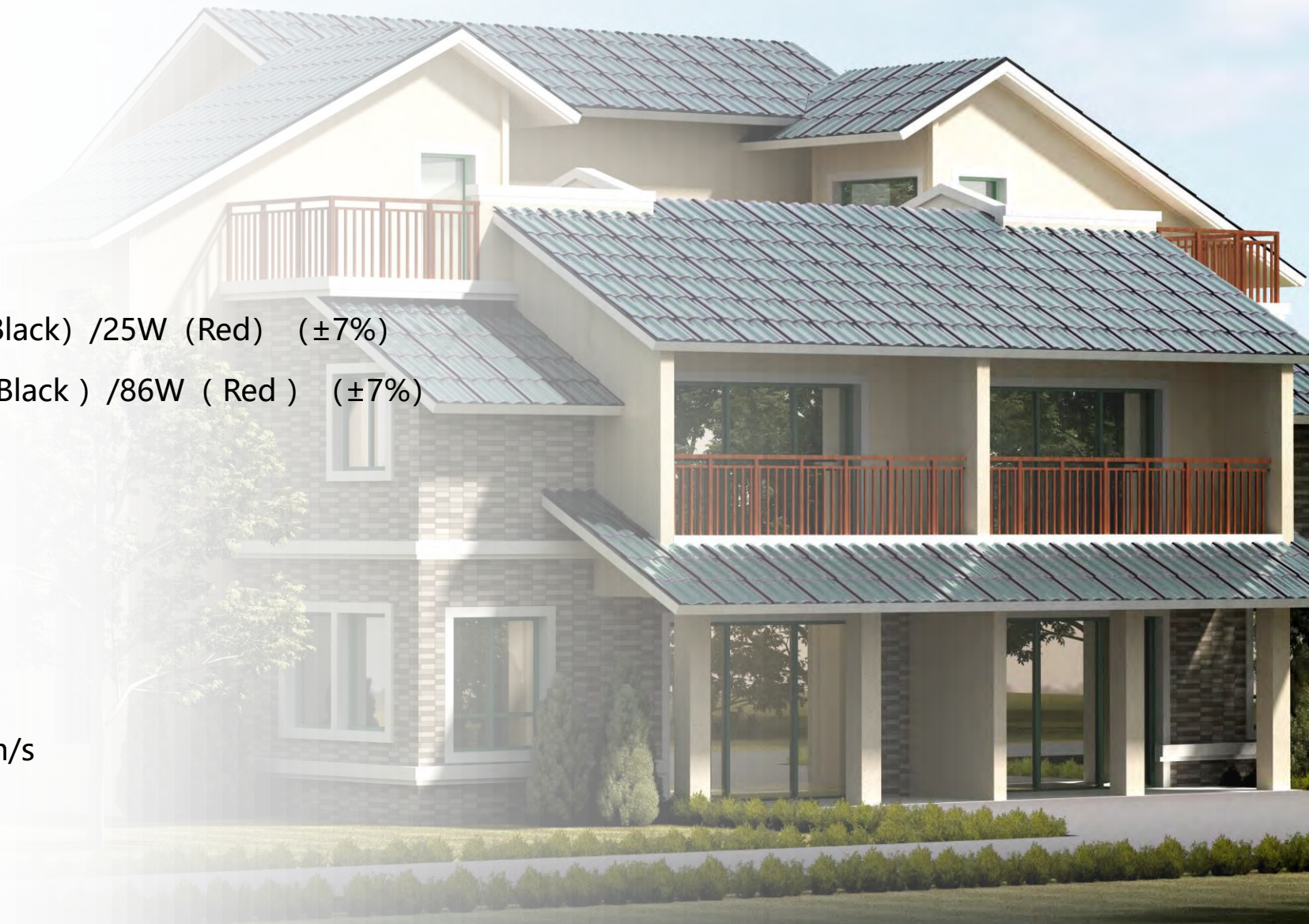
Hail test (hail diameter/impact velocity):

Maximum diameter 25mm, impact speed 23m/s

Operating temperature: -40°C to +85°C

Linear power guarantee: 25 years

Product color matching : Black/Red



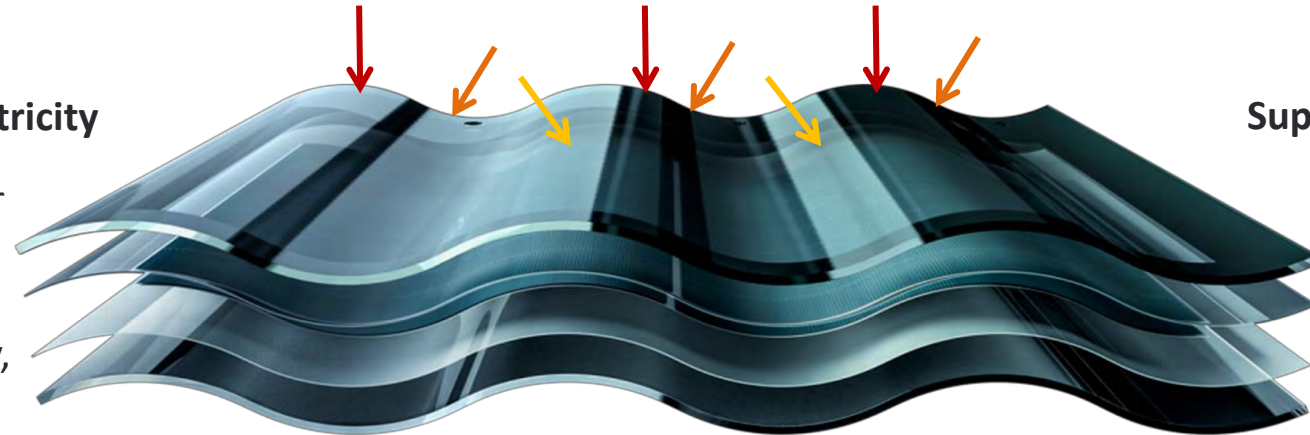
IT CAN GENERATE ELECTRICITY FOR UP TO 12 HOURS A DAY

(Twice as much as traditional products)



Low light also generates electricity

Thin film chip low-light power generation performance is excellent, not afraid of cloudy, overcast weather.



Super long power generation time

The thin film chip generates electricity from dawn to dusk, and works the longest.

→ The direction of the morning sun

→ The direction of the midday sun

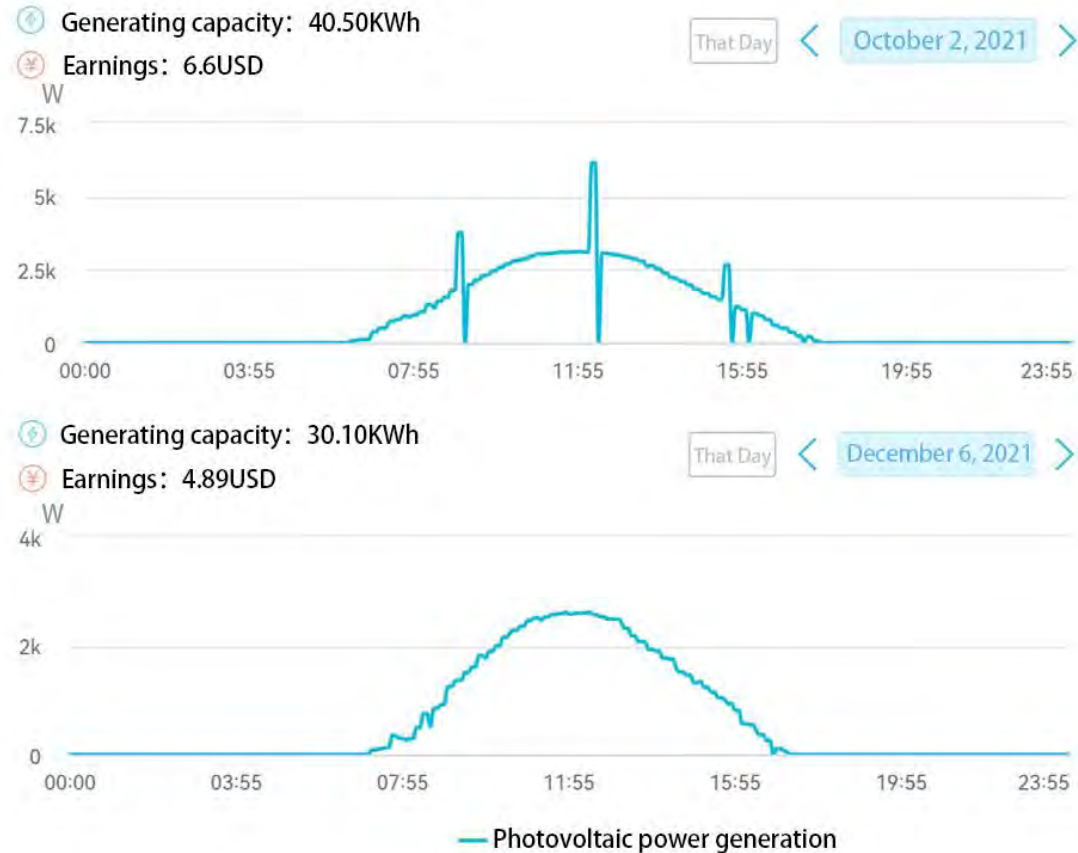
→ The direction of the afternoon sun

IT CAN GENERATE ELECTRICITY FOR UP TO 12 HOURS A DAY

(Twice as much as traditional products)

Electricity is also generated at dawn and dusk

As you can see, the product also works in light conditions such as early morning and dusk.



It can be up to 12 hours

In terms of the actual power generation of the two randomly selected days, nearly half of the whole day was working.

SINGLE CRYSTAL PERC ENABLES TO REDUCE THE COST OF FLAT TILES



Super light
12kg



Super thin
7.5mm



Super strong
Stalinite



Super safe
Multiple
certifications



Diversity
Multiple styles
and colors

FLAT TILE PRODUCT PARAMETERS

Long degree : 1460(±1)mm

Wide degree : 435(±1)mm

Thickness of frame: 21(±1)mm

Solar module thickness: 7.5(±1)mm

Weight of single item: 12 (±0.5) Kg

Weight per square meter: 24 (±0.5) Kg

Maximum power of a single product: 100W (Black) /85W (Red) (±7%)

Maximum power per square meter: 200W (Black) /170W (Red) (±7%)

Waterproofing grade : IP67

Fireproofing grade : A

Wind resistance rating: 15

Css of lolaading : 5400Pa

Hail test (hail diameter/impact velocity):

Maximum diameter 25mm, impact speed 23m/s

Operating temperature : -40°C to +85°C

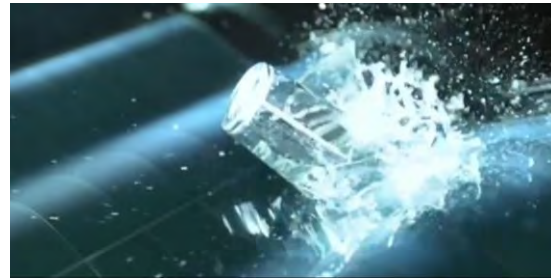
Linear power guarantee: 25years

Product color matching: Black/Red

* The above parameters are for reference only



SEVEN ENVIRONMENTS, THREE TO PREVENT FOUR RESISTANCE COMPREHENSIVE APPLICATION, NOT CRACK NOT BAD



Fireproofing:

Fire Rating A

Waterproof:

Double waterproofing system,
Waterproof layer of roof building +
product waterproof grade IP67

Lightning-proof:

insulated durable polymer
composite material

Heat and freeze resistance:

(-40°C to +85°C)

Wind pressure resistance:

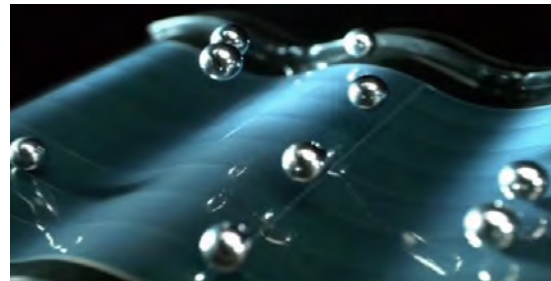
Wind protection level 15

Hail Resistance:

Level 4 (ANSI FM 4473)

Pressure resistance:

5400Pa



FIVE ADVANTAGES OF BIPV SOLAR SHINGLES OVER TRADITIONAL CURVED TILE ROOFS

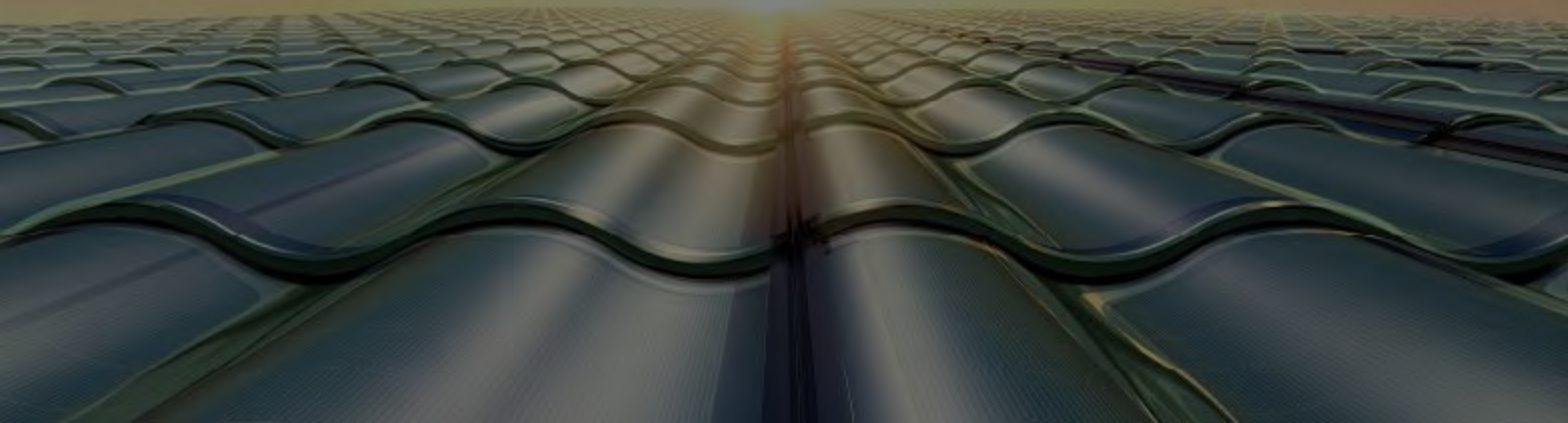
| Product function Comparison | Function point | Solar energy tile | Color steel tile | Brick and ceramic tile | Resin tile | Solar tile Advantage |
|-----------------------------|-------------------------------|---|---|------------------------|--|--|
| | Lifetime | 30 Years | 8 Years | 8 Years | 10 Years | The life span is 3~4 times that of the ordinary roof |
| | Performance | Three to prevent four resistance | No resistance to wind and no protection from fire | No resistance to hail | Not fire resistant, not hail resistant | Super high quality, three anti and four anti |
| | | Glazed tile design | General, industrial | Many shapes, civilian | Many shapes, industrial | |
| | Aesthetic measure | 71.8301 million | 0 | 0 | 0 | More beautiful, more technological sense |
| | Revenue from power generation | 69,000 tons of CO ₂ ≈\$550,000 | 0 | 0 | 0 | Generate electricity for your own use and connect the rest to the grid |
| | Amount of carbon reduction | | 0 | 0 | 0 | Better green building materials |

FIVE ADVANTAGES OF BIPV SOLAR SHINGLES OVER REGULAR PV ROOFS

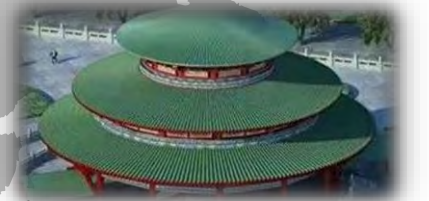
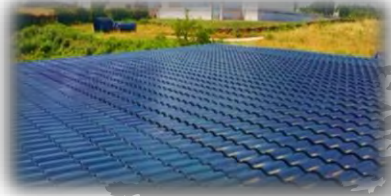
| | Function point | Solar energy tile | Ordinary photovoltaic roof | Solar tile Advantage |
|-----------------------------|--------------------------|--|--|--|
| Product function Comparison | Facade | Glazed tile is beautiful and harmonious in shape | No beauty, not harmonious | Appearance high-end atmosphere |
| | Cost of cleaning | \$13,235 | \$160,000 (Calculated in 30 years) | Solar tile can not be cleaned, but also can be cleaned once a year according to the actual situation |
| | Performance | Three to prevent four resistance, self-cleaning | Easy to produce hot spot effect | Super strong self cleaning |
| | Environmental protection | Green building materials | High energy consumption of industrial chain | Green energy building materials, environmental protection and carbon reduction |
| | Roof structure | Install directly into the roof | Photovoltaic panels need to be installed on a common tile roof | Solar tiles have a higher degree of integration with the building |

PART TWO

APPLICATION CASE



BIPV PV TILE CASES ARE FOUND ALL OVER THE WORLD



USA

Mexico

Cayman Islands

Brazil

Peru

Uruguay

Algeria

Ghana

Madagascar

Finland
Denmark

Sweden

Germany

Egypt

China

Thailand

Cambodia

Hong Kong

Singapore

Japan

Australia

URBAN PUBLIC BUILDINGS



VILLA



HIGH-END VILLA



JAPANESE STYLE ARCHITECTURE



PSEUDO-CLASSIC ARCHITECTURE



CHARACTERISTIC TOWN



TOURISM LANDSCAPE



COOPERATIVE PARTNER



钱学森空间技术实验室
Qian Xuesen Laboratory of Space Technology



APEC
CHINA 2014



福耀集团
FUYAO GROUP



福耀集团
FUYAO GROUP





Changxing Island, Shanghai



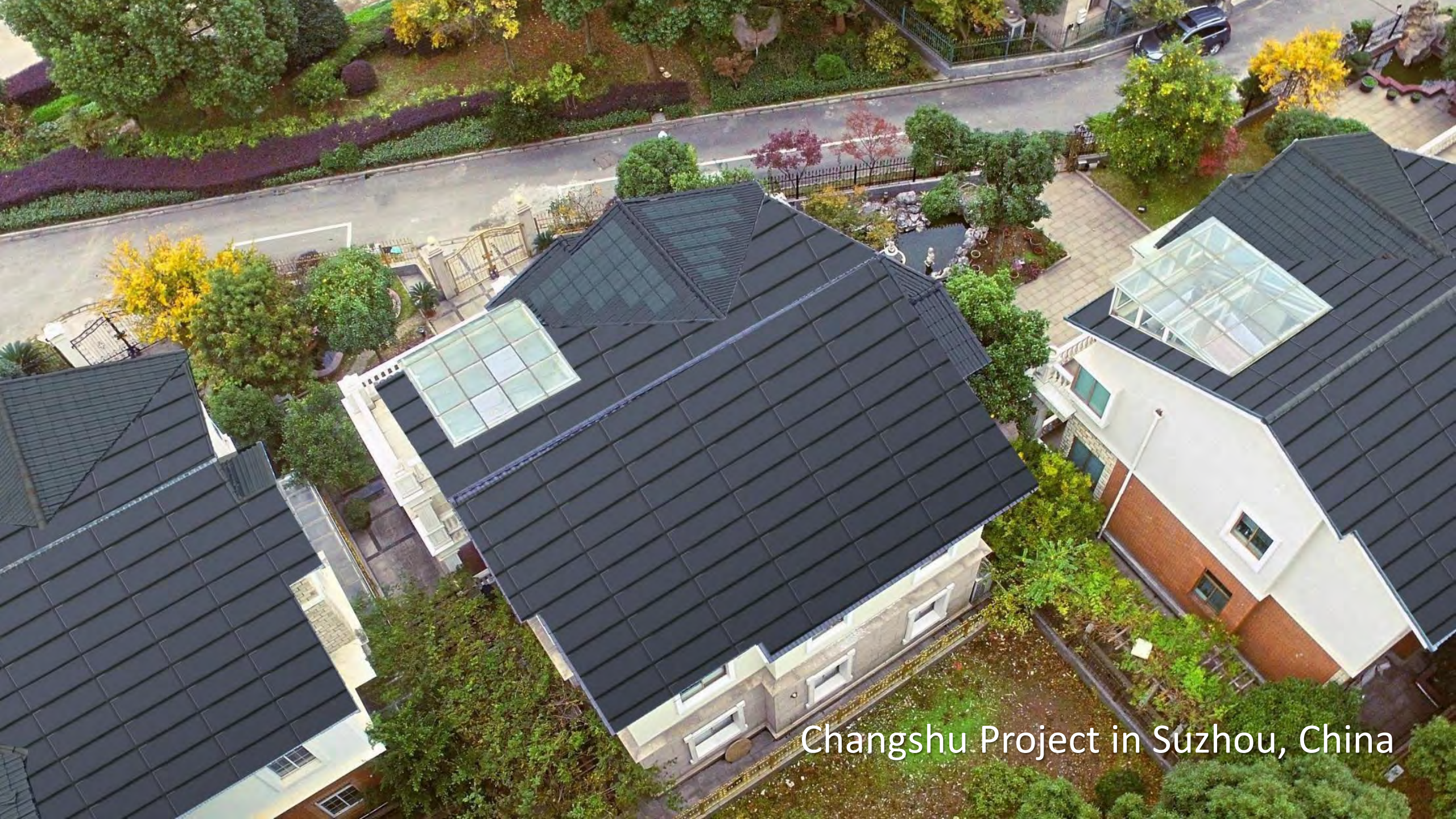
Guangyuan TCM Base



Villa project



Shanghai Qingpu Project



Changshu Project in Suzhou, China



sea-view room



Residential villa

Japanese Villa Project

