
山青股份有限公司
SHAN CING COMPANY LIMITED
GOOPV
光效建材玻璃
Building Integrated Energy Glass
讓建築從耗能體，進化為創能體。
Building the Future, Starting with Glass

# FROM A SINGLE PANE OF GLASS TO THE FUTURE OF SMART BUILDINGS

Founded in 2022, Shan-Cing Co., Ltd. develops next-generation energy-integrated architecture through advanced green building materials and smart building systems.

Our mission is simple: to transform buildings from energy consumers into energy producers.

Built on four pillars—energy efficiency, energy generation, smart systems, and energy storage—our technologies enable buildings that are both sustainable and self-sufficient.

We believe buildings are no longer passive structures, but active energy systems that shape the future of cities.

Our goal is to accelerate the global shift toward net-zero buildings through scalable, real-world solutions that combine engineering, design, and clean energy innovation.



## SHANCING CORE PHILOSOPHY
## OUR COMMITMENT

ARCHITECTURE AS THE FOUNDATION,

ENERGY AS THE FOCUS,

INNOVATION AS THE DRIVER,

TOWARD A NET-ZERO FUTURE.

**01**

### BUILDING
INTEGRATION

INTEGRATING ENERGY SYSTEMS, DESIGN, AND ENVIRONMENTAL VALUE INTO BUILDINGS.

**02**

### ENERGY
GENERATION

TRANSFORMING BUILDINGS FROM ENERGY CONSUMERS INTO ACTIVE ENERGY PRODUCERS.

**03**

### NET ZERO
FUTURE

ADVANCING NET-ZERO BUILDINGS THROUGH LOW-CARBON MATERIALS AND CLEAN ENERGY TECHNOLOGIES.

**04**

### MATERIAL
INNOVATION

CONTINUOUSLY DEVELOPING NEW MATERIALS AND TECHNOLOGIES TO ENHANCE BUILDING PERFORMANCE.

# A GLOBAL SHIFT

## FROM ENERGY CONSUMERS TO ENERGY PRODUCERS.

Driven by global decarbonization, buildings are becoming key drivers of the net-zero transition.

With new energy technologies, building surfaces can now generate energy while maintaining architectural design and function.

The future of buildings unites performance, sustainability, and design in one system.



**CONVENTIONAL BUILDING**

HIGH-ENERGY BUILDINGS PLACE A HEAVY BURDEN ON THE ENVIRONMENT AND CONTRIBUTE TO CARBON EMISSIONS.

**ENERGY-EFFICIENT BUILDING**

IMPROVED DESIGN AND EFFICIENT SYSTEMS REDUCE ENERGY CONSUMPTION AND IMPROVE OVERALL PERFORMANCE.

**ENERGY-GENERATING BUILDING**

BUILDINGS INTEGRATE RENEWABLE ENERGY TECHNOLOGIES TO GENERATE AND USE THEIR OWN ENERGY, MOVING TOWARD A NET-ZERO FUTURE.



ARCHITECTURE × ENERGY × SUSTAINABILITY
SETTING NEW STANDARDS FOR BUILDINGS

Shan-Cing integrates architecture and energy through innovative materials and technologies, creating efficient and sustainable environments.

# BUILDING-INTEGRATED ENERGY GLASS

## USING SUNLIGHT AS A SOURCE OF ENERGY AND NATURAL LIGHT.



GOOPV combines building materials with renewable energy technology to convert sunlight into clean energy while maintaining natural daylight. Through a semi-transparent photovoltaic design, the building envelope becomes an active energy interface, enabling power generation, daylighting, thermal insulation, and environmental performance. Compared to traditional solar panels, GOOPV integrates more seamlessly into façades, curtain walls, skylights, and sunspaces—balancing design and energy efficiency.

**Expected Certifications (by 2027)**

1. TÜV International Certification (BIPV)
2. Green Building Materials Certification (Façade Systems & Functional Glass)
3. CNS Certification (Insulated Glass Units)
4. Field Validation of Energy Saving and Power Generation (Tested and Verified by ITRI)

## SIX KEY BENEFITS OF GOOPV

### 01 POWER GENERATION

Converts sunlight into clean electricity.

### 02 LIGHT TRANSMISSION

Maintains natural light for bright indoor spaces.

### 03 THERMAL INSULATION

Provides UV protection, reduces heat transfer, and lowers energy consumption.

### 04 SOUND INSULATION

Reduces external noise for improved comfort.

### 05 WIND RESISTANCE

Withstands high wind loads (≥ Level 17 gusts) for façade and curtain wall safety.

### 06 LOW-CARBON MATERIALS

Eco-friendly, low-carbon materials enabling net-zero buildings.

# TECHNICAL STRUCTURE

## INTEGRATING ARCHITECTURE AND ENERGY

GOOPV is a building-integrated energy glass system that combines architectural materials with organic photovoltaic technology.

It transforms the building envelope into an active energy layer that generates electricity while maintaining daylighting, comfort, and façade performance.

Unlike conventional solar panels, GOOPV is fully integrated into the building structure—functioning as both a building material and an energy system.




## FUNCTIONAL PRINCIPLES

**Daylighting + Energy Generation**
Maintains natural light while producing renewable energy.

**Integrated Energy Material**
Energy generation is embedded directly into building glass, combining aesthetics and function.

**Thermal Performance System**
Reduces heat transfer, lowering cooling demand.

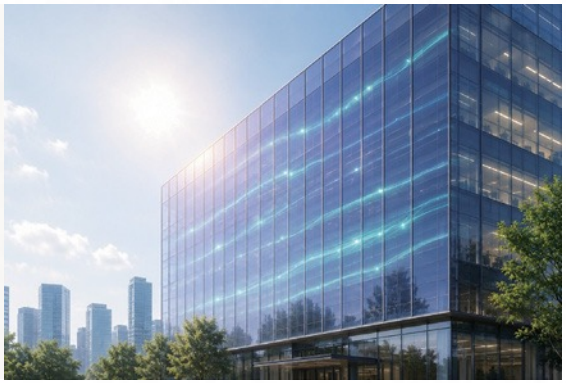
**Façade Safety System**
Double-tempered glass meets building façade and curtain wall requirements.

# WHY GOOPV

TURNING BUILDINGS FROM ENERGY CONSUMERS INTO ENERGY GENERATORS.

### BUILDING-INTEGRATED ENERGY

No additional solar panels required—the building façade generates clean energy.



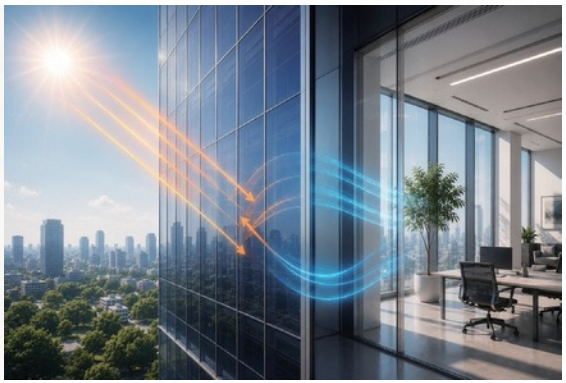


### NATURAL LIGHT & DESIGN

Preserves natural daylight and architectural transparency while improving energy performance.

### ENERGY GENERATION & EFFICIENCY

Generates electricity while reducing heat gain, improving overall building performance.





### ESG & NET ZERO

Supports sustainability goals with a low-carbon, recyclable solution for net-zero buildings.

GOOPV IS MORE THAN JUST GLASS—IT'S THE FUTURE ENERGY INTERFACE FOR BUILDINGS.

## FROM BUILDINGS TO URBAN INFRASTRUCTURE

GOOPV IS A BUILDING-INTEGRATED ENERGY GLASS SOLUTION THAT EXTENDS CLEAN ENERGY GENERATION FROM BUILDINGS TO URBAN ENVIRONMENTS.

# GOOPV APPLICATION ECOSYSTEM

## BUILDING APPLICATIONS

### SUNROOM

Delivers natural daylight, improves thermal comfort, and produces renewable energy.

### CURTAIN WALL

Turns façades into active energy surfaces while maintaining architectural design.

### BALUSTRADE

Combines safety function, design flexibility, and energy generation.

### SKYLIGHT

Brings in natural light while supporting on-site power generation.



















## URBAN APPLICATIONS

### NOISE BARRIER

Provides sound protection and renewable energy for infrastructure systems.

### SMART AGRICULTURAL GREENHOUSE

Integrates cultivation environments with clean energy production.

### GOOTREE

Smart Net-Zero Energy Tree. Integrates solar power, energy storage, lighting, and smart technologies for public spaces.

### GOOFLOWER

Solar Flower. Merges landscape design with renewable energy to create sustainable urban landmarks.

ONE TECHNOLOGY × MULTIPLE USES × SUSTAINABLE FUTURE

# GOOPV MODULE SERIES

## 6 STANDARD MODULE SIZES

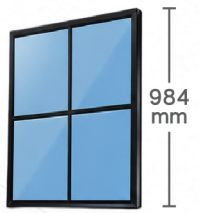
### 6 STANDARD MODULE SIZES

GOOPV features a modular sizing system with a range of width and height options. The appropriate module can be selected according to the building façade grid, installation location, and project requirements.

Six standard module sizes designed to accommodate diverse architectural dimensions and application requirements.

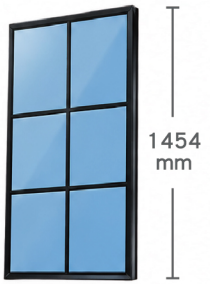
### 784 mm SERIES

**2 x 2**
GOOPV-O2X2A
-050BGM




4 Cells | 50 W

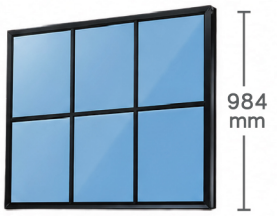
**2 x 3**
GOOPV-O2X3A
-080BGM




6 Cells | 80 W

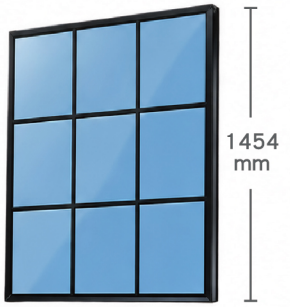
### 1154 mm SERIES

**3 x 2**
GOOPV-O3X2A
-080BGM



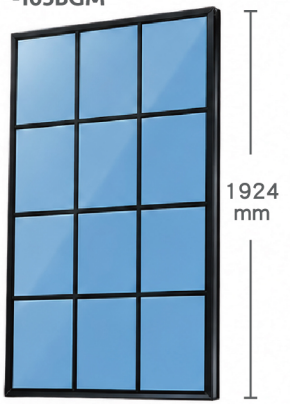

6 Cells | 80 W

**3 x 3**
GOOPV-O3X3A
-125BGM



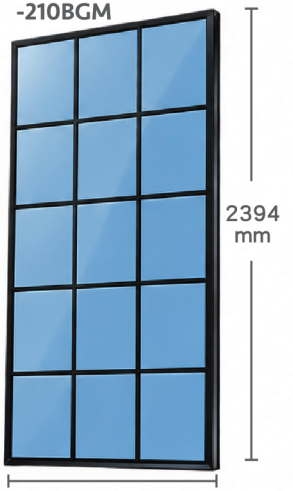

9 Cells | 125 W

**3 x 4**
GOOPV-O3X4A
-165BGM




12 Cells | 165 W

**3 x 5**
GOOPV-O3X5A
-210BGM




15 Cells | 210 W

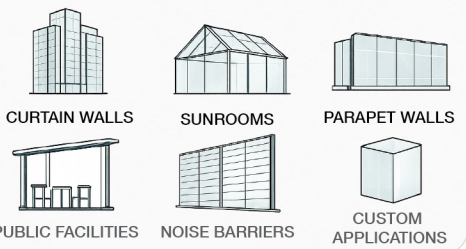
### COMMON PERFORMANCE (Applicable to All)

| VLT | VLR | SC | U-VALUE |
|---|---|---|---|
| VISIBLE LIGHT TRANSMITTANCE | VISIBLE LIGHT REFLECTANCE | SHADING COEFFICIENT | THERMAL TRANSMITTANCE |
| 10% ± 2% | < 5% | ≤ 0.13 | ≤ 1.2* W/m²·K |

Overall Thermal Insulation Rate ≥ 89%

The U-value may vary depending on the glass configuration, system design, and actual installation conditions. Product specifications are subject to change due to design optimization or technical updates. Please refer to the official SHAN-CING website and the latest product catalogue for the most current information.

### APPLICATIONS




Module sizes can be configured according to the architectural design, façade grid, and project-specific conditions.

### TECHNICAL DATA

Scan the QR code to view the latest version, including the complete dimensions, weight, electrical characteristics, optical performance, and other technical data for each model.

download

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https://www.shancing.com