



**BIPV** Colored Future Infinite Power

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# Catalog

- ♦ BIPV-passive Buiding
- Product Features
- ♦ Color Series
- ♦ Applications









# ass olar Building

Passive solar buildings are designed to make full use of solar radiation heat for heating in winter, and minimize neat loss caused by maintenance of the structure and ventilation penetration; The premise of mechanical equipment, completely rely on strengthening the building's shading function, through architectural methods, to achieve the purpose of indoor environment comfortable environment friendly building

# **BIPV Passive Solar Building**

- Let the windows, walls and roofs are made able to collect solar energy
- Perform with existing building without additional machnical or electrical
- Excellent heat insulation
- Effectively block ultraviolet rays
- Cool and comfortable in summer and warm in winter with heat preservation capacity



### Sustainable Development

# **Product Features**

• High efficient cell type

PERC TOPCON IBC HJT



## • Highlights—Glass type



Satin glass



High transparent float glass



Custom made





Rain-shape glass





Rippled glass



# **Product Features**

• Encapsulant

POE PVB EVA



## • All-in-one and frame invisible installation

- We adopt Swiss professional curtain wall aluminum materials and structural adhesive to provide all-in-one curtain wall solutions.
- All-in-one and Quick-hanging system could reduce the installation cost and make the process simple and quick.
- Frame invisible design presents outstanding architectural aesthetics.





All-in-one



Frame invisible design

# **Technical Specifications**

The INVItaic photovoltaic curtain wall product is a dual glass frameless module, based on monocrystalline silicon cells, boasting the highest efficiency and long-lasting lifespan. They have an excellent anti-PID value, high salt mist resistance, and ammonia resistance, ensuring 25 years of stable performance. The futuristic glass surface texture allows for efficient power generation even under low light and diffused light conditions without producing any glare. BIPV standard modules can be installed as energy curtain walls at a cost-effective price, and if necessary, module sizes can be customized according to project requirements.

We provide customized dimensions and color options for our modules, complemented by facade designs that align with architectural aesthetics specific to the BIPV industry.



Module Type	S-182HC	H-182HC	V-182HC	Q-182HC
Maximum Power-Pmax [Wp]	265	130	130	65
Maximum Power Voltage-Vmp [V]	21.10	10.55	10.55	5.27
Maximum Power Current-Imp [A]	12.56	12.32	12.32	12.53
Open-circuit voltage-Voc [V]	24.73	12.37	12.37	6.18
Short-circuit Current-Isc [A]	13.28	13.28	13.28	13.28
Number of cells	72	36	36	18



Processing Dimensions: 2400\*1200 mm Processing Thickness: 3-19 mm Advantage:

Inorganic ink high-temperature sintering, high weather resistan

The front design has a clarity of up to 1410 ppi, ensuring high-definition images and flexible control

Excellent color reproduction software for ideal color representation



Texture









While Frost-clad exterior wall sights the silent azure sky, beams of soft sunlight are touching the texture peacefully, elegant gray glowing in a quiet manner. For a moment, it reminds you of walking barefoot on the beach, where sea and sky embrace in the distance; you unexpectedly feel a gray-white shell at your foot. It rings warmly with mysterious tranquility for which one's heart yearns for, and which the wall with Frost shares. Both under the blue dome of heaven are expecting a drizzle which Frost will dance with around the building, quiet and steady.





Inherent advantages of integration in module design, better appearance without metal wire exposition.

#### **Higher Power Efficiency**

Higher-density cell arrangement can put more cells per unit area and achieve higher moduleefficiency, meet the requirements for energy-saving buildings.

#### **Building Integrated Higher Safety**

Double layers of tempered glass to meet the requirements of building safety: with fireproofing, better wind load, heat resistance and frost resistance. Be used as building unit for integrated installation.



Heat Strengthened Glass
IP68 Rated
TÜV 1x4.0 mm <sup>2</sup> , Customized Length
1500 VDC (IEC)
30 A
0~±3 %
-0.35 %/°C
-0.29 %/°C
0.048 %/°C
45±2 ℃
64-86 %









Petroglyph catches whispers of time and engraves them on its body. Shallow and deep imprints of history in light or in dark that Petroglyph has rendered fills the building with charm, as humans, who once were clumsy but finally find their inner dexterity, weave with Petroglyph ancient and beautiful stories, leaving their traces you may notice in the silent and mysterious art that does not go astray over thousands of years. The building with Petroglyph is more than just a reinforced concrete structure, where, with a bit of patience, you can hear murmur of history echoes and notice how the trajectory of time reveals.



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perature Coefficients of Pmax	-0.35 %/°C
perature Coefficients of Voc	-0.29 %/°C
perature Coefficients of Isc	0.048 %/°C
inal Operating Cell Temperature (NOCT)	45±2 ℃
	63-68 %





#### 50% Increased High Mechanical Performance Modules



# EMERALD

Emerald thrives naturally in one gentle verdant spring after a long drought finally is quenched, vigorous and so alive. Architecture integrated with Emerald thus flourishes for nature and what is man-made combine within, and a soul is bestowed that resonates with our psyche, since Emerald gives us a chance to ponder the relationship between architecture and nature, and how important life and environment are. With Emerald, exuberant spring emerges. "Buildings are deeply emotive structures which form our psyche."







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	60-66 %





#### 0% Increased High Mechanica Performance Modules







Sahara, though a grand finale of everything, yet contains glitter of stars in countless universes, for in a grain of sand on the fingertip, there is a universe unfolding, and from sands buildings arise. Rays of sunlight travel one hundred fifty billion meters to meet architecture that stand fearlessly. Sahara, absorbing the strength of life and courage over time, embraces the building in serenity and calm. Life is seeking answers, so why not extend your imagination to Sahara, who may show you the way.





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	58-68 %





50% Increased High Mechanical Performance Modules





Deep and elegant blue of the building guides your spirit to a shore where tides ebb and flow only for you. Sunlight charges into the building but land softly on fingers dancing on a piano, unfettering notes that carry the melody of Blues that changes in rays freely. This is how Blues goes: the space within a building expands, as vast as oceans and sky; all of a sudden, a small stone is cast into a deep blue lake, with ripples one after another, spreading possibilities in the structure.



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	66-77 %





#### 50% Increased High Mechanical Performance Modules







High Impact Resistance

If buildings can take us to the past, Terracotta is the flexible and reliable clockwork that reverses time. Time flows in silence, but Terracotta on its way to seeking a balance between red brick and embroidered brown with gentleness and simplicity records human vicissitudes as well as architecture evolution, crystalized as human wisdom and the constant core of architecture. This historian still writes pages telling the stories of nature and human and the charm of the ancient past. In those standing buildings, it has lasted for ages.



Tempered Glass

Inherent advantages of integration in module design, better appearance without metal wire exposition.

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	60-65 %





#### nical Optimized Soundproofing Insulation

50% Increased High Mechanical Performance Modules







Buildings as the canvas, nature the paints, the wonder of life and secrets of nature are depicted by Time. In this work of architecture and nature, co-existence remains an eternal theme. Tree patterns or grass, waves or peaks, the diversity of nature and the inclusiveness of architecture are reflected in the passage of time. If you get closer to Time, the fragrance of nature in a variety of forms drifts. Architectural expression should not succumb to ancient glories; explore what lies ahead: an all-embracing future.



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0.048 %/°C
45±2 ℃
60-84 %





50% Increased High Mechanical Performance Modules



# GEOMETRY

When the subtlety of shapes was beyond explanation, God brought Euclid to the earth. In the world of Geometry, running lines and curves form the intangible configuration of ratios and symmetry. A small point, a subtle line, or an insignificant figure can construct something majestic with simple repetition. Geometry with unique texture, seemingly static, reflects the creative thinking and dynamic tension of future architecture.





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# INVITAIC

Module Model



Glass	Heat Strengthened Glass
Junction Box	IP68 Rated
Output Cables	TÜV 1x4.0 mm <sup>2</sup> , Customized Length
Maximum System Voltage	1500 VDC (IEC)
Maximum Series Fuse Rating	30 A
Power Tolerance	0~±3 %
Temperature Coefficients of Pmax	-0.35 %/°C
Temperature Coefficients of Voc	-0.29 %/°C
Temperature Coefficients of Isc	0.048 %/°C
Nominal Operating Cell Temperature (NOCT)	45±2 ℃
СТМ	60-75 %







- Flexible packing density of solar cells for customized transmittance
- Bifacial power generation
- High mechanical strength
- Tempered glass

## Special Balcony Module

Monocrystalline Acreage: 120 m<sup>2</sup>

Year: 2021 Menzingen, Switzerland



• Adopting modular assembly, the installation efficiency on-site is high. Tailored according to the architectural features, we provide a photovoltaic curtain wall product that is safe, reliable, integrates natural lighting, and photovoltaic power generation.





- Busbar invisible
- Matte mirror
- Anti-glare
- Efficient power generation



- Follow local building codes. •
- Understand the concepts of architects and designers.
- Work closely with construction companies. ٠



**BIPV** Facade Acreage: 450 m<sup>2</sup>

Module Type: 107

Year: 2021 Zurich, Switzerland

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• Make photovoltaic curtain walls an emerging eco-friendly building material.

- Understand the original intent of the project design.
- Consider the integration of different building materials.
- Offer a variety of colors.
- Provide a product that blends curtain wall aesthetics with light.
- Introduce a new type of product that integrates power generation.



Design and manufacture photovoltaic module appearances based on architectural features, optimizing processes and parameters to achieve the most ideal target effect.



Integrate and optimize the art and functionality of photovoltaic curtain wall glass, perfecting the craftsmanship and implementation plan of the architectural Solar curtain wall

In April 2023, INVITAIC's products exhibited at the Munich Building Exhibition in Germany received unanimous acclaim from customers.



- Exclusive custom patterns. ٠
- Architectural-grade tempered glass.
- Anti-reflection.
- Integrated photovoltaic technology.



![](_page_22_Picture_5.jpeg)

![](_page_22_Picture_6.jpeg)

![](_page_22_Picture_7.jpeg)

**BIPV Facade** Glass Glass Module Customised Image

Year: 2021 Emetten, Switzerland

![](_page_23_Picture_2.jpeg)

 $\rightarrow$ 

![](_page_23_Picture_3.jpeg)

Sketch

![](_page_23_Picture_5.jpeg)

Structural design

![](_page_23_Picture_7.jpeg)

Production and shipping

![](_page_23_Picture_9.jpeg)

Installation

![](_page_23_Picture_11.jpeg)

![](_page_23_Picture_12.jpeg)

Samping

- Natural architectural landscape
- Realistic image
- Flawless stitching
- Flexible installation scenario

![](_page_23_Picture_18.jpeg)

## Client's illustrating

## Design in real

## Typical Workflow of a BIPV Project

- Visual, structural and performance requirements of the BIPV elements conceived by the Client.
- Initial specifications provided and pre-approved by the Client.
- Samples made and confirmed by the Clients.
- Mass production.
- Installation and implementation.

![](_page_24_Picture_6.jpeg)

![](_page_24_Picture_7.jpeg)

![](_page_24_Picture_8.jpeg)

## Sample Confirmed

![](_page_25_Picture_0.jpeg)

![](_page_25_Picture_1.jpeg)

Fire Proof

IEC 61215 Photovoltaic (PV) modules -Design qualification and type approval
IEC 61730 Photovoltaic (PV) module safety qualification
IEC 61701 Salt mist corrosion testing of photovoltaic (PV) modules
IEC 62716 Photovoltaic (PV) modules -Ammonia corrosion testing
EN 13501: Fire Resistant Ability, Class A2
ROHS
REACH
ISO9001:2015 Quality management systems

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