bipv korea

Building Integrated Photovoltaic System

2026

www.bipvkorea.com

Best building solution for carbon reduction

Buildings Make Their Own Electricity!

"The outer wall of a building should not be ugly Because if it is it will be shunned by the market."

BIPVKOREA under the slogan "A building makes electricity on its own," continues to grow into a BIPV business with continuous R&D, and fulfillment of its corporate and social responsibilities. Along with becoming a BIPV specialized company, it is also developing by securing new global markets by making partnership agreements with domestic and foreign BIPV-related specialized industries and academic research institutes. In addition, through BIPV, a new paradigm of renewable energy, we will take the lead in developing various materials and designs that can harmonize with existing buildings and provide eco-friendly energy without worrying about carbon emissions.

HISTORY

2012

- Establishment of Sejong International Co.,Ltd.
- Import and Export of Interior and Exterior Materials in Building

2015

- China Double Star Group OVERSEAS DEALER AGREEMENT

2016

- Launching a New and Renewable Energy Business
- Philippine Pampanga State Business Agreement
- Singapore ISOTEC (AH BLOCK) Korean Distributor
- Korea Construction Technology Institute's Family Enterprise Selection
- Korea Energy Technology Assessment Service "Development of BIPV Integrated Solution System for Building Exterior Wall"

2019

- HANERGY Korea's official agency
- Participation in leading technology projects in response to the 4th Industrial Revolution in Chungcheongbuk-do
- Order for BIPV Solibro of Kyunghyun General Construction Co., Ltd BIPV Modular Housing Demonstration by the Institute of Construction Technology

2020

- BIPV51KW Construction of Youth Housing in Seoul Station Area
- A member of the BIPV Division of the Korean Solar Power Association
- Spain_Solar Innova Signs Official Partner in Korea 2020 Korean Electrical Society's "Study on Polycarbonate Solar Modules with Flexibility, Toughness and High Temperature" Paper Award

2021

- Seoul Bus Stop 'Future Bus Stop_BIPV'
- Roof-Integrated Solar Panel Selection
- Signed an MOU with Canada's Targray Group
- KEPCO International Invention and Patent Technology Competition
- Grand Prize Governor of Chungbuk-do Commendation for Energy Saving Merit Award

2022

- "Business cooperation agreement for commercialization and R&D cooperation of high-output shingled type BIPV technology" with KITECH (Korea Institute of Production Technology)
- Gimcheon City 2022 Regional Specialized Pilot Project - Solar Integrated Interworking Facility House Installation Construction
- Construction of BIPV orders for Hyangrin Church in Naesu-dong, Seoul
- Awarded the 11th Chungbuk Solar Festival for Distinguished Service

2023

- Construction of Officetel BIPV in Cheongna District, Incheon city
- India, Philippines, Romania Joint venture agreements
- Establishment of BIPVPhilippines Inc. (Philippines)
- Establishment of BIPV mockup system at Korea Institute of Industrial Technology (KITECH)

2024

- Philippine bipv production plant established (Angeles)
- bipv Joint Venture Agreement with the U.S. company Lumen Geo
- bipv Snap sliding system patent registration
- bipv-related watertightness, wind resistance, durability from KOLAS (KCL, TP) institutions testing
- The roof-integrated solar power (Soltile, cigs flexible) in the golf villa in Incheon Metropolitan City's Jack Nicklaus G.C Passing the landscape review, under construction

2025

- Curved SOLTILE_Terracotta installed at Sentosa G.C., Singapore
- Intersolar Germany participation — European market entry
- GIPV installation at Jeju Agricultural Research Institute (MONO FLEX Panel)Patent filed for GIPV structural installation system
- Megawide Project (Philippines) in progress — BIPV Canopy
- ECOBUILDER launched at 4 locations in the Philippines

AWARDS AND PATENTS

SOLTILE SERIES

Roof-Integrated BIPV Solutions

SOLTILE RAINY

Premium Roof-integrated Solar Tile

- Premium rainy pattern for architectural harmony
- Roof-integrated solar tile with stable output
- Ideal for luxury residential and landmark buildings

SOLTILE ECO

Standard / Value Roof Solar Tile

- Value-oriented roof-integrated PV tile
- Simple installation & cost-effective
- Suitable for public, commercial, and multi-unit projects

METASOL

Zinc Roof-integrated BIPV System

- Zinc standing-seam roof-integrated BIPV
- Excellent weather & drainage performance
- High resistance to wind and snow loads

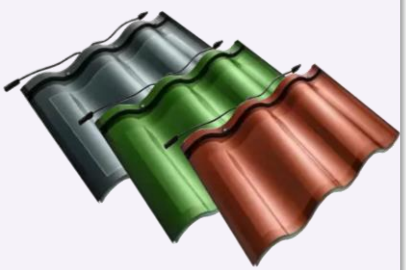
SOLTILE HANOK

Traditional Korean Roof-integrated Solar Tile

- Curved tile design for Hanok-style architecture
- Roof-integrated solar with cultural authenticity
- Ideal for heritage buildings & eco-cultural projects

Curved Soltile_Terracotta

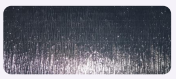
- **Security and Reliable**
  Fireproof class A | Same life as the building | Building grade material
- **Weatherproof Structure**
  Dual waterproof design
- **Installation Convenience**
  Buckle design | Positioning overlap | Quick fixation
- **High Efficiency**
  TOPCON Cells | More power generation
- **Unique and Beauty**
  Curve design | Colors can be customized



Technical Explanation

Pattern Glass Technology

Patterned glass reduces glare, enhances visual comfort, and delivers stable power in perfect architectural harmony.

Standard Module	Pattern Module
	
Smooth, highly reflective surface Potential glare	Patterned, glare-reducing surface Soft and stable aesthetics

SOLTILE RAINY

Roof-Integrated BIPV Solutions

Build Zero Energy House with Soltile

- ✓ Aesthetic Appeal
- ✓ High Durability
- ✓ Water Resistance
- ✓ High Efficiency
- ✓ Wind Load Resistance
- ✓ Easy of Installation
- ✓ Patent-Owned
- ✓ Integrated roofing solution
- ✓ Customizable to architectural designs
- ✓ Rainy pattern glass surface

POWERED BY THE SUN, DRIVEN BY INNOVATION

SOLTILE ECO

Roof-Integrated BIPV Solutions

SOLTILE ECO

Black TOPCon Cell

Presenting

N-TYPE TOPCon

BIFACIAL GLASS TO GLASS MODULE

- ✓ Lower Cost
- ✓ Bulk Supply
- ✓ Easy & Fast Installation
- ✓ Roof + Solar in One at a Lower Cost
- ✓ Reduced Labor Cost
- ✓ No Mounting System Needed

Exclusively Exceptional

100Wp Power

19% - 20% Efficiency

30 Years Power Warranty

CURVED SOLTILE

Roof-Integrated BIPV Solutions

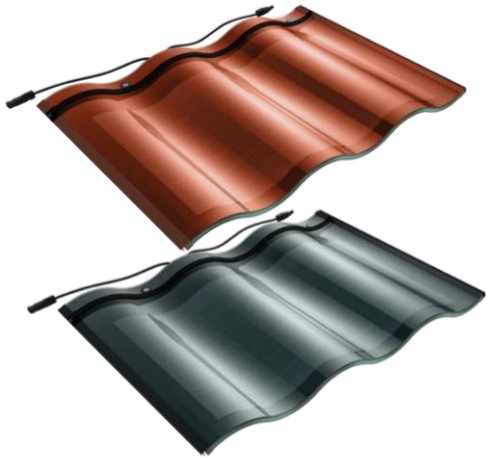
Security and Reliable
Fireproof class A | Same | Building grade material

Waterproof Structure
Dual waterproof design

Installation Convenience
Buckle design | Positioning overlap | Quick fixation

High Efficiency
TOPCON Cells | More power generation

Unique and Beauty
Curve design | Colors can be customized



ELECTRICAL PARAMETERS (STC)

Cell Type	TOPCON Monocrystalline silicon
Maximum Power(P_{max})	38±5%W
Operating Voltage(Vmp/V)	5.79V
Operating Current(Imp/A)	6.56A
Open-Circuit Voltage(Voc/V)	6.81V
Open-Circuit Current (Isc/A)	6.91A
Module efficiency (%)	11.0%

STC: 1000W/m^2 irradiance, 25 degree cell temperature, AM1.5g

Dimension (mm)	722 x 480 x 7 (with Frame)
Weight (kg)	5kg
Front glass material / thickness	Ultra-white tempered glass/3.2mm
Rear glass material / thickness	Tempered glass/3.2mm
Encapsulating material	PVB
Cell type	210 x 105mm (3x3)
Junction Box	⩾IP68

METASOL

Roof-Integrated BIPV Solutions

"Ordinary metal roof tiles (G.I roof tiles)" like Curved SOLTILE

The development goal is to 'metal and integrated photovoltaic power generation (BIPV) tiles'.

A successful design is not 'attaching solar cells to a curved surface',

It is to make "generator (module) + waterproof/combined structure + lower ventilation base" into one system.

Specifications

Product Type: Curved BIPV Metal Tile
Tile Size: 400 × 1400 mm
Back sheet: Nano Fiber Composite
Output: 70W
Structural Objectives: Roof Tiles + Waterproofing (Overlapping) + Maintenance (Replaceable) + Wiring Concealment

STRUCTURE

BASE PANEL + Lightweight Solar Panel

KEY FEATURE:

Class A Fire Rated
Dual-Layer Waterproof
Buckle-Lock Quick Fix
Curved Tile Aesthetics
TOPCon Cell

SOLWALL

Casting A New Landmark

Features

- Wall-integrated photovoltaic module
- Customized production based on design drawings
- Module surface pattern technology that solves light reflection (glare) pollution in the city center (patent registration)
- Improving power generation performance by scattering light due to patterning of module surfaces
- Easy construction, durability, earthquake resistance and easy maintenance

Specifications

Power Out	328W
Efficiency	19.4%
Length	1612mm
Width	1050mm
Thickness	6mm
Weight	28kg

Mono Lightweight Flexible Solar Panel(560W, 155W)

PVDF + Nano Fiber Composite Encapsulation & TOPCon Cell

Lightweight, Thin, Flexible, High-strength module for BIPV/GIPV and rapid installation.

PVDF Protective Skin
Superior weather and chemical resistance.

Nanofiber Composite Layer
Reinforced impact protection with enhanced flexibility.

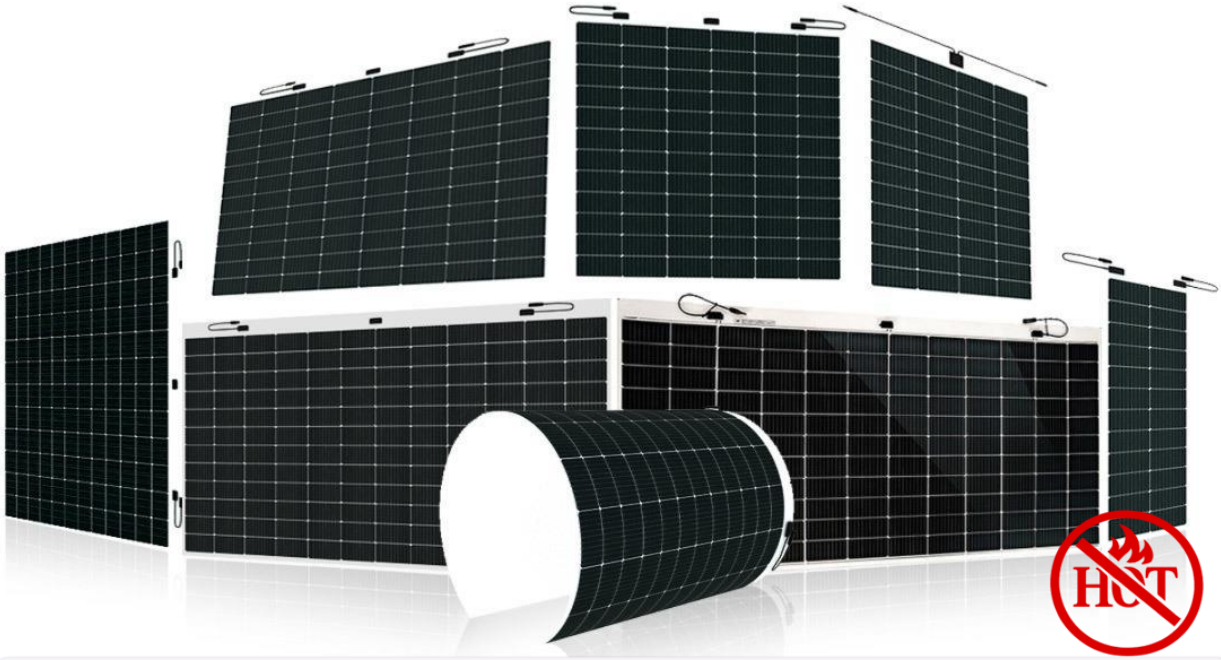
TOPCon High-Efficiency Cell
Advanced cell technology for higher energy yield.

Flexible Barrier / Back Layer
Reliable insulation and moisture protection.

KEY HIGHLIGHTS

- ✓ **Flexible** — PVDF + nanofiber encapsulation for reliable performance.
- ✓ **Step-Resistant Structure** — Built for durable on-site handling.
- ✓ **Lightweight** — Ideal for BIPV/GIPV retrofits and fast deployment.
- ✓ **Shadow Shading Resistance** —Hot Spot Prevention
- ✓ **Fast Installation** — Reduces system cost and labor time.

Over 30% Lower Temperature Than Conventional Modules in Shading Tests



APPLICATIONS


Greenhouse GIPV


Warehouse / Factory Retrofit

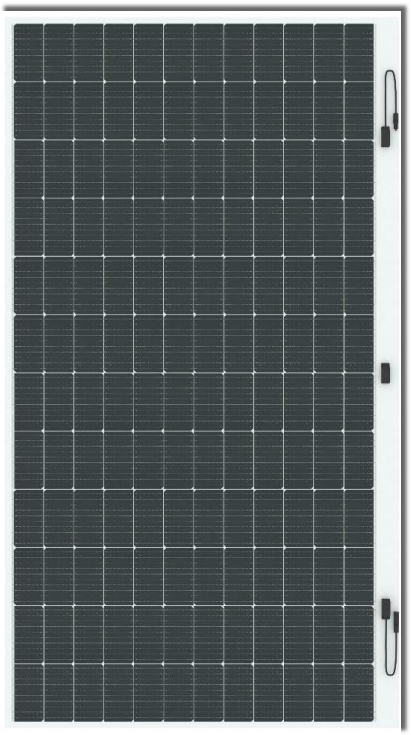

Livestock Facility


Curved Canopy


Rapid Installation

MONO FLEX MODULE

Lightweight Solar Module



TOPCON Flexible Module

Module type: ZKFN B1 010A Peak Power:550W~560W

560W	22.7%	0~+5W
Max-Power	Max-Efficiency	Power-tolerance

Reinsurance Coverage for 25Years

12 year Quality Warranty

25 year Performance Warranty

Quality Assurance

ISO Three-System Certification

Electrical performance parameters (STC *)			
Module Type			ZKFN B1 010A-560
Max-Power	P_{MPP}	[W]	560
Power Tolerance		[W]	0~5W
Max-Power Voltage	V_{MPP}	[V]	45.29
Max-Power Current	I_{MPP}	[A]	12.37
Open-Circuit Voltage	Voc	[V]	53.05
Short-Circuit Current	Isc	[A]	12.96
Max. series fuse rating		[A]	25
Max. system voltage	IEC/UL	[V]	1500V DC(IEC)

STC*: Irradiance=1000 W/m²,Module temperature=25℃,AM=1.5

Electrical performance parameters (NMOT *)			
Module Type			ZKFN B1 010A-560
Max-Power	P_{MPP}	[W]	421.68
Max-Power Voltage	V_{MPP}	[V]	42.44
Max-Power Current	I_{MPP}	[A]	9.95
Open-Circuit Voltage	Voc	[V]	50.40
Short-Circuit Current	Isc	[A]	10.46

NMOT*: Irradiance=800 W/m²,Ambient temperature=20℃, Wind speed=1 m/s

Mechanical parameters	
Cell Type	TOPCON 182.2 mm*183.75 mm
Size	2240*1190*1.8 mm
Thickness	1.8mm (junction box not included)
Weight	7.6 kg/module
Connector	MC4 Compatible
Junction-box	Triad Junction box IP68
Backboard color	White

Application parameters	
Max. system voltage	DC 1500V
Power Tolerance	0~+5 W
Operating temperature range	-40 ℃~+85℃
Max. series fuse rating	25 A
Mechanical Load	Front 5400Pa, Back 2400Pa

Temperature coefficient		
Temperature-coefficient of P_{MPP}	[%/℃]	-0.29
Temperature-coefficient of Voc	[%/℃]	-0.26
Temperature-coefficient of Isc	[%/℃]	+0.045
NOCT	℃	45±2℃

MONO FLEX MODULE

Lightweight Solar Module

Super-strength TOPCON Flexible Module

Module type: ZKFN K2 010A Peak Power:155W

155W	0~+5W
Max-Power	Power-tolerance

Reinsurance Coverage for 25Years

12year Quality Warranty

25year Performance Warranty

Quality Assurance

ISO Three-System Certification

Electrical performance parameters (STC *)

Module Type			ZKFN K2 010A-155
Max-Power	P_{MPP}	[W]	155
Power Tolerance		[W]	0~5W
Max-Power Voltage	V_{MPP}	[V]	12.58
Max-Power Current	I_{MPP}	[A]	12.37
Open-Circuit Voltage	Voc	[V]	14.74
Short-Circuit Current	Isc	[A]	12.96
Max. series fuse rating		[A]	25
Max. system voltage	IEC/UL	[V]	1500V DC(IEC)

STC*: Irradiance=1000 W/m²,Module temperature=25℃,AM=1.5

Electrical performance parameters (NMOT *)

Module Type			ZKFN K2 010A-155
Max-Power	P_{MPP}	[W]	119
Max-Power Voltage	V_{MPP}	[V]	10.09
Max-Power Current	I_{MPP}	[A]	11.62
Open-Circuit Voltage	Voc	[V]	11.94
Short-Circuit Current	Isc	[A]	12.31

NMOT*: Irradiance=800 W/m²,Ambient temperature=20℃, Wind speed=1 m/s

Temperature coefficient

Temperature-coefficient of P_{MPP}	[%/℃]	-0.29
Temperature-coefficient of Voc	[%/℃]	-0.26
Temperature-coefficient of Isc	[%/℃]	+0.045
NOCT	℃	45±2℃

Mechanical parameters

Cell Type	TOPCON 182.2 mm*183.75 mm
Size	1970*410*1.8 mm
Thickness	1.8mm (junction box not included)
Weight	3.0 kg/m²
Connector	MC4 Compatible
Junction-box	Triad Junction box IP68
Backboard color	Black

Application parameters

Max. system voltage	DC 1500V
Power Tolerance	0~+5 W
Operating temperature range	-40 ℃~+85℃
Max. series fuse rating	25 A
Mechanical Load	Front 5400Pa, Back 2400Pa

CIGS Flexible Module

Lightweight, Adoptable

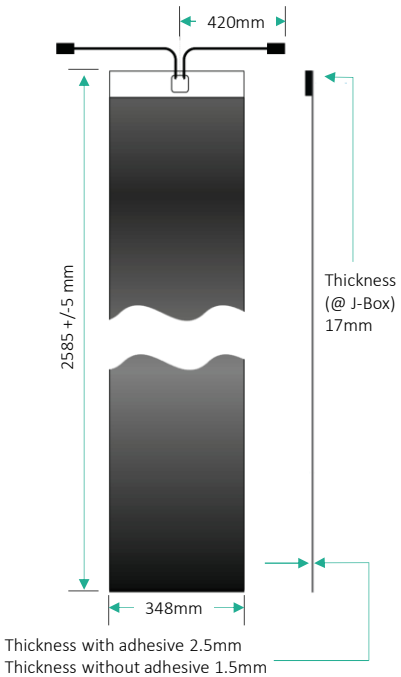
Features

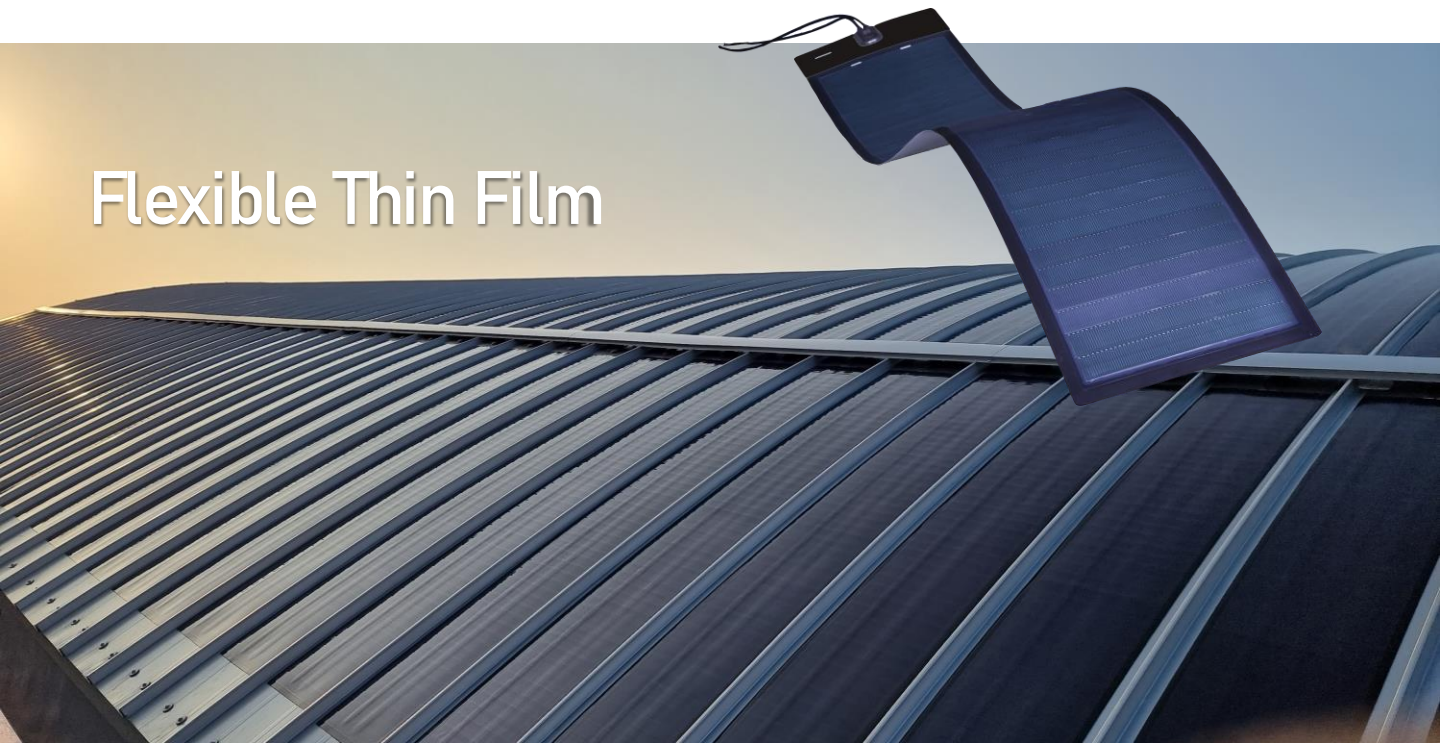
- Up to 16% cell efficiency
- Installation weight less than 2.4 kg/m2
- No extra structures required for construction
- High wind resistance, earthquake resistance, durability, and easy construction

Specifications

Power Out	125W
Cell	Copper, Indium, Gallium, Diselenide(CIGS)
Length	2585mm
Width	348mm
Thickness	2.5mm
Weight	1.9kg

Technical Drawing





SOLAR WINDOW

Transparency Module

Highly See-Through Transparent Solar Curtains

- Architecturally integrating solar panels into a building provides aesthetic and functional benefits.
  It becomes possible to create glass surfaces that generate electrical energy.
- Can be manufactured according to design, Flood function with blind function, Solar window features with high aesthetics , High wind load, high durability

Pattern Glass Tech

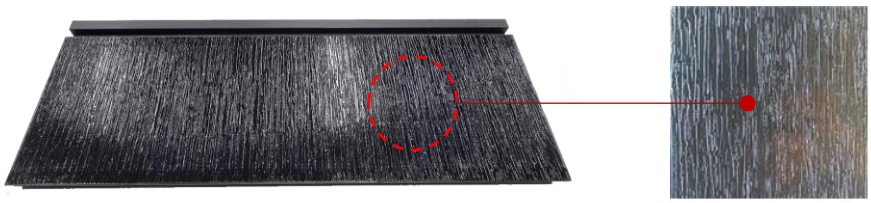
Technical Explanation

① There is an efficiency increase rate of 1-2% due to the difference in refractive index of the surface due to the low-light and scattered light absorption surface treatment methods with Rainy and Diamond design treatments on the tempered glass surface.

② To address light reflection, It is a technology that improves power generation performance in lowlight and scattered light environments, along with the application of light scattering to the surface of the module

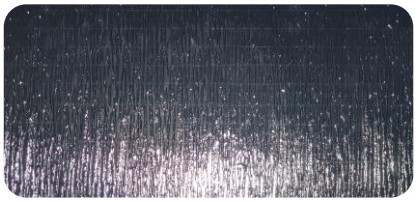
Patent registration number
30-1114798

It is a technology that integrates building materials and solar cells by enhancing aesthetics by implementing various pattern designs such as Rainy on the surface of tempered glass



It is a technology that solves light reflection by implementing various pattern designs on the surface of reinforced glass

(Conventional solar Module)



(Pattern Module)

Comparison of Reflectance

Conventional Solar Module

- Smooth, transparent glass
- Specular reflection causing glare

Rainy Pattern Module

- Textured, patterned glass
- Diffuse reflection

	Conventional Solar Module	Rainy Pattern Module
Reflectance	Approx. 7–9%	Below 4–5%
Reflected Light	Direct reflection	Scattered reflection
Output	-	**Increased**

Rainy Pattern Glass ***95.2% efficiency +1.1% performance gain*

Engineered to reduce reflection.
Designed to elevate architecture.

Rainy Pattern Glass minimizes solar glare while enhancing module efficiency—delivering performance that blends seamlessly with refined design.

Key Features

- Optimized energy performance
- Reduced glare
- Architectural integration

Benefits

- Higher efficiency, refined appearance
- Visual comfort through glare control
- Seamless harmony with modern architecture

Technical Benefits

- Building-integrated solar panel with glass surface technology of various patterns
- A technology that combines various patterns of design with durable tempered glass.

BIPV-Roof integrated PV system

Technical Explanation

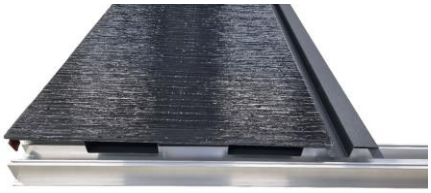
① Waterproof structural frame system and solar module integrated technology

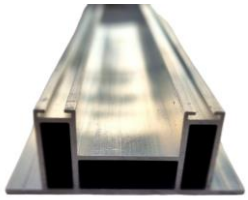
② Cooling function of ventilation prevents efficiency degradation due to temperature rise

③ Galva Zinc Steel Plate Bending Technology + Rainy Pattern Module

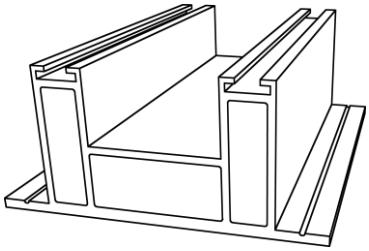
Patent registration number
30-1114797

Patent registration number
30-1114798





[Steel plate bending structure and PV module bonded together, aluminum fixed stud]



Technical Benefits

▫ BIPV Roofing System (Roof Integrated Photovoltaic System) that can be installed in a building without a separate support structure by integrating PV with existing building roofing materials.

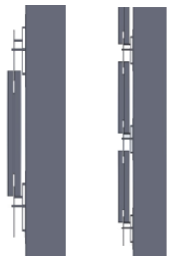
BIPV-Sash Sliding System

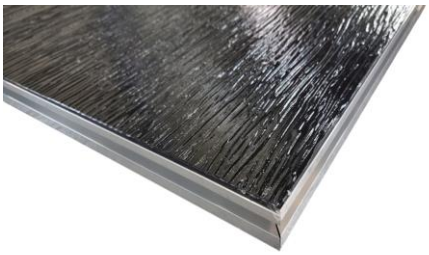
Technical Explanation

① It is a technology that allows the frame of a solar panel and the sash-type stud frame of a wall to be easily fastened, and it is easy to construct by manufacturing various module standards. This technology uses a sash-type stud frame on the wall, and the solar panel can be safely and easily installed on the wall.

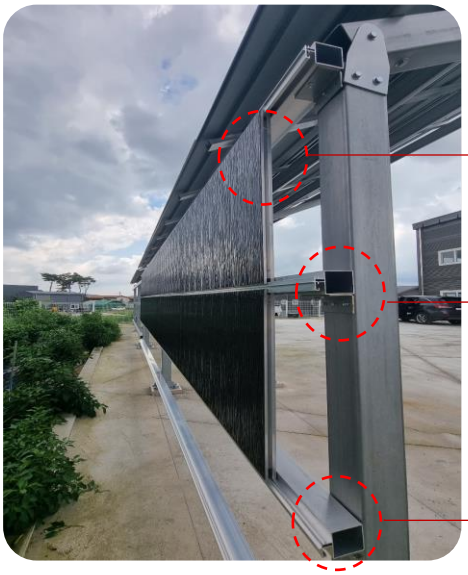
② It is a BIPV installation structure system that does not require existing Norton taping and additional stud structures. We can fasten the aluminum frame design of solar panels to the sash-type stud frame at the same time which reduces the construction period.

Patent registration number
30-1191272



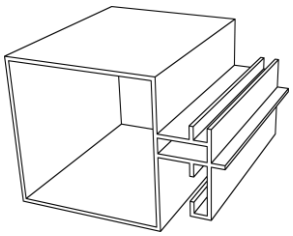


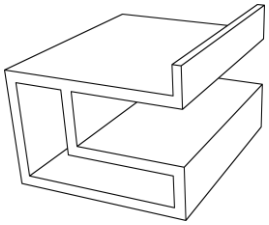
[Sash-type module frames and aluminum fixed studs]



Sash-type module frames

Fixed structure frame



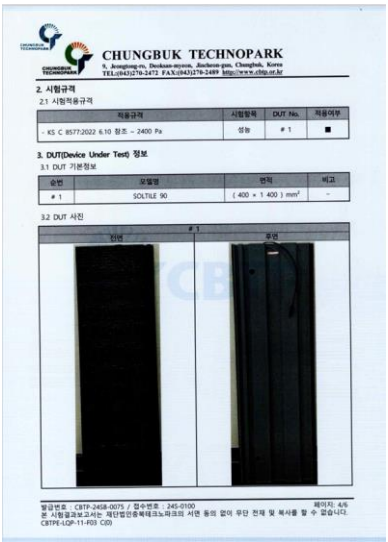


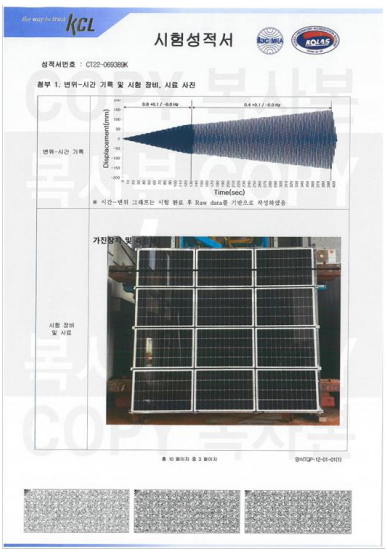
Technical Benefits

- Sash-type solar panel frame and installation structure system applied with easy construction and shortening of construction period.
- A sash-type stud frame system that innovatively improved the existing PV panel installation method.

Test Report / KCL, TP(KOLAS)

In order to construct the bipv product, a test report such as waterproofing, wind resistance, durability, seismic design, and output must be submitted from the National Accredited Certification Authority (KOLAS) prescribed by the Building Act.

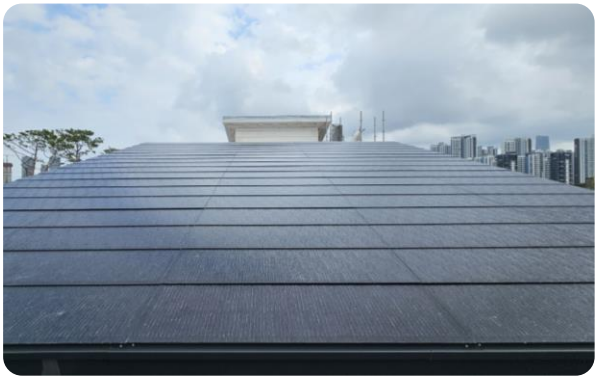




Electric Safety Corporation's prior safety certificate required report(BIPV) _ SOLTILE, SOLWALL, CIGS Flexible Module

KOLAS (Korea Laboratory Accreditation Scheme) is an evaluation organization that evaluates correctional institutions and testing institutions in accordance with the Framework Act on National Standards and ISO/IEC 17025, recognizes them as internationally recognized institutions, and recognizes that test reports issued by recognized institutions have international public confidence.

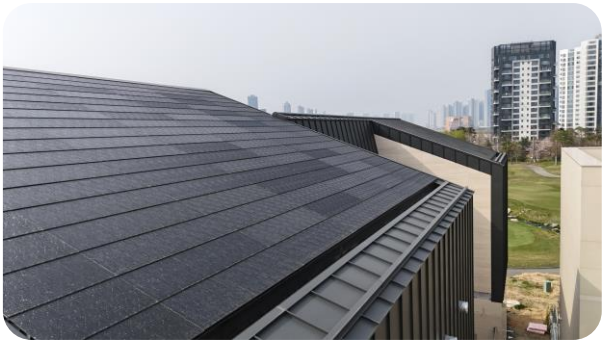
REFERENCE

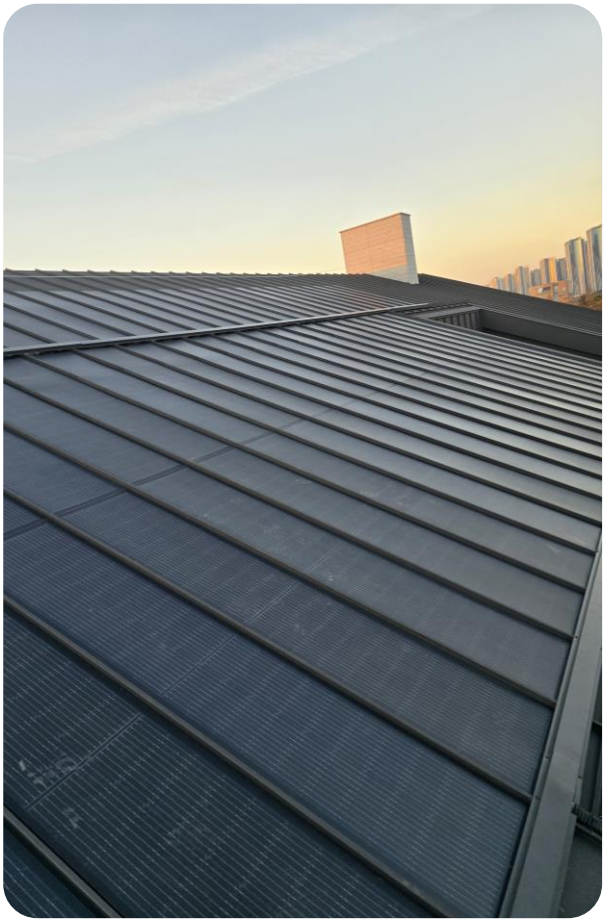


Jack Niclaus G.C. Golf Village, Incheon City _ Soltile 7Kw

REFERENCE






Songdo, Incheon City _ 155W Zinc Solar Panel

REFERENCE

Cheong-la, Incheon City _ CIGS Zinc Solar Panel

REFERENCE

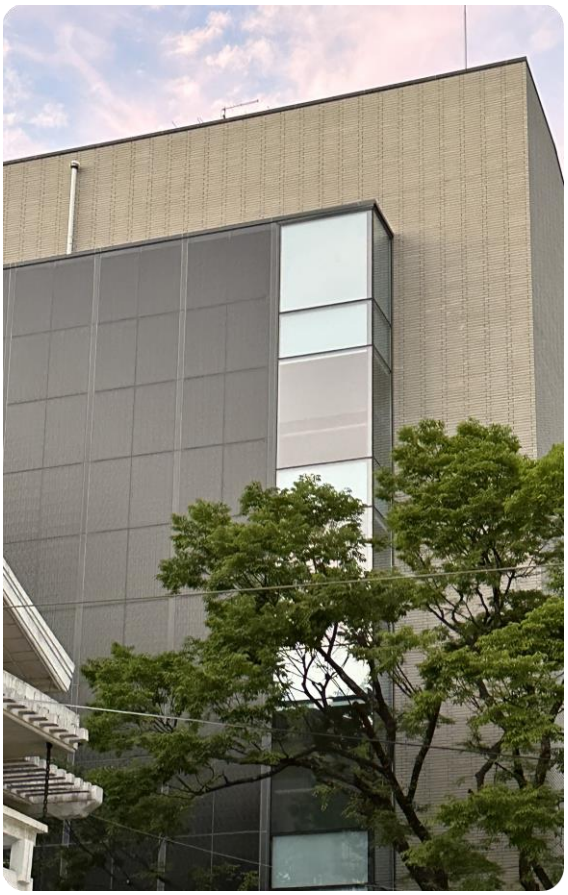
Greenhouse, Jeju Island _ 560W Mono Flex Module

REFERENCE

KITECH, Kwang-ju City _ Soltile / Tesla Building, Sehong City _ Solwall

REFERENCE

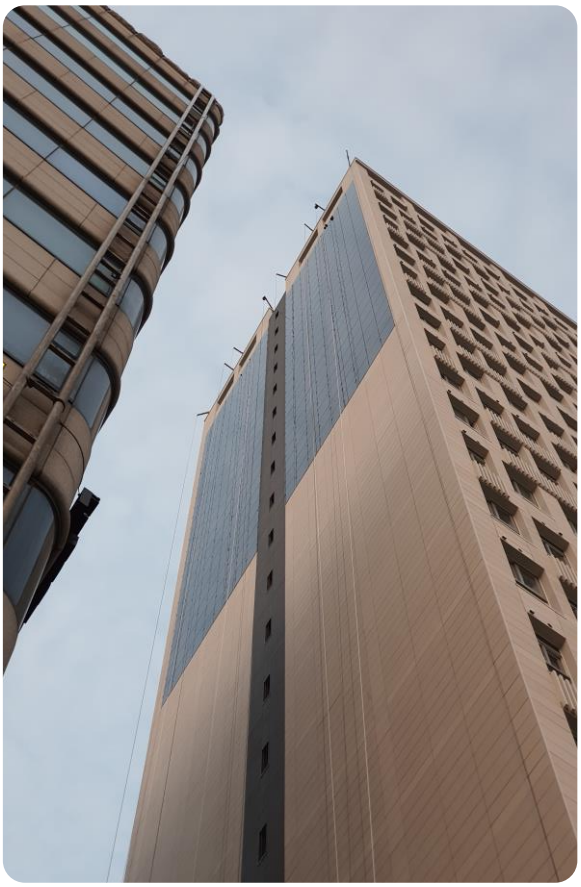
Yeomchang-dong, Seoul_Hanwall 51Kw



Naesu-dong, Seoul_Solwall 36Kw

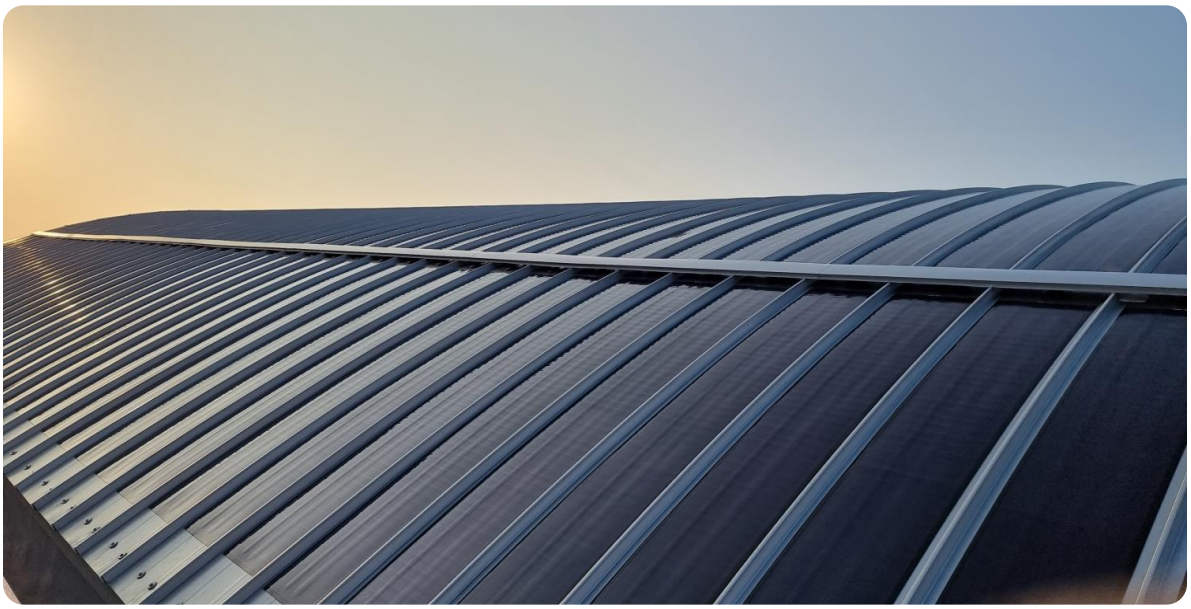
9 Smart Shelters in Seoul_Possolar 90Kw

REFERENCE



Seoul _ Hanwall 51Kw

Church in Seoul _ Sowall 30Kw



Sports stadium _ CIGS Flex 32Kw

REFERENCE

Suwon City _ Solwall

SOLUTIONS

1

Shade design installed in the upper facade of the building

2

Roof Integrated Form in Roof Daylighting Window

3

The form of a roof that is installed on a building's roof

4

Architectural finish form fitted and coupled to steel structures

5

Design installed in the parking lot of the building

6

Wall-integrated wall shape (translucent or opaque)

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