

GLOBAL PARTNERS
CATALOG OF
PRODUCTS

BIPV LumenGeo

System

Photovoltaic

Integrated into

Buildings



SCAN TO LEARN MORE

Best building solution for carbon reduction

Buildings Generate Their Own Electricity!

At BIPV Lumengeo, we are redefining the future of sustainable architecture through cutting-edge Building-Integrated Photovoltaics (BIPV). We integrate energy generation directly into the very fabric of your building.

Our innovative solar solutions seamlessly blend energy efficiency with aesthetics, empowering buildings to generate clean energy without compromise.

Whether for commercial, residential, or industrial applications, BIPV Lumengeo transforms roofs, facades, walls, windows, balconies, and skylights into energy-producing masterpieces. We merge beauty, technology, and sustainability into a cohesive design, paving the way for a greener future.



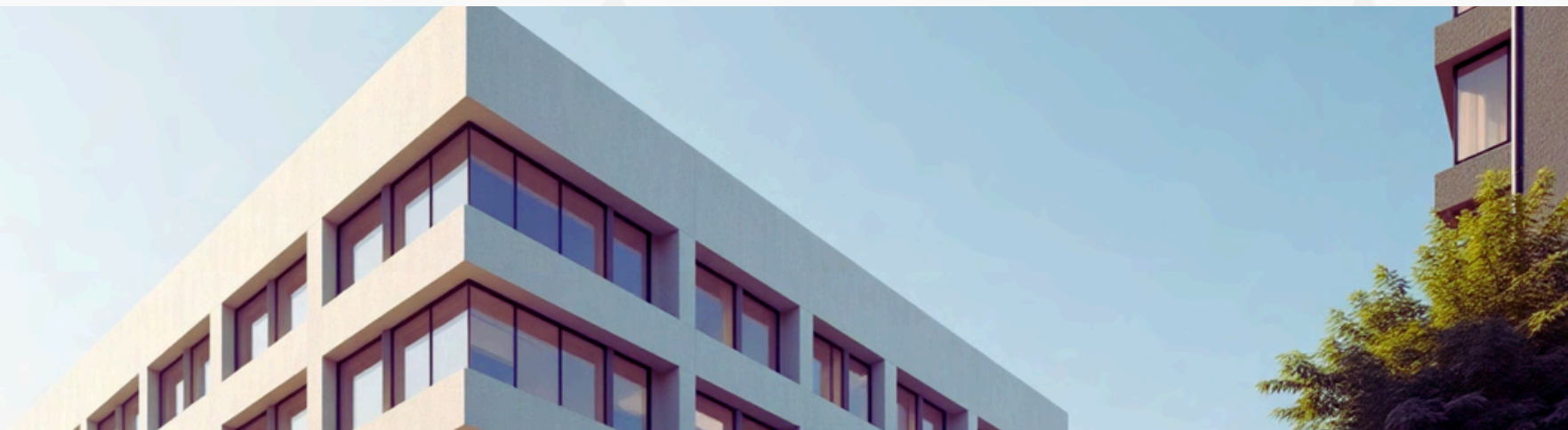
Energy Generation Converts buildings into power-producing assets.



Architectural Integration Replaces traditional building materials with PV technology.



Carbon Reduction Lowers emissions, supports sustainability.



It's not just solar power; it's solar by design.

BIPV **LumenGeo**

TOPCon Technology for BIPV

TOPCon Technology

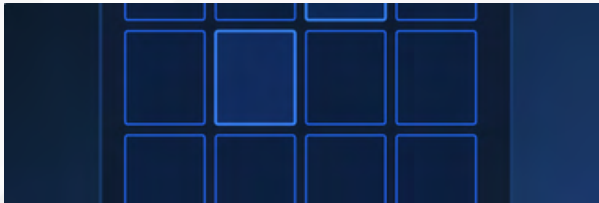
TOPCon (Tunnel Oxide Passivated Contact) is an advanced evolution of crystalline silicon solar cell technology. It enhances energy efficiency while improving the durability of photovoltaic modules.

This technology uses an ultra-thin oxide layer combined with a passivated contact. It reduces internal electrical losses and improves charge transport, resulting in higher overall cell efficiency.

Integrate TOPCon technology into your next project

Integration formats

TOPCon across all building surfaces



Solar façade

Replaces curtain wall cladding or rainscreen. Optimised for south exposure, available in custom dimensions and tints.

Curtain wall

Rainscreen

Custom size



Integrated roofing

Replaces conventional tiles or metal sheets. Single installation for weatherproofing and power generation, cutting overall envelope cost.

Solar tile

Flat roof

Shingle



Photovoltaic glazing

Configurable transparency 10–40% for skylights, atriums and curtain walls. Natural daylighting and power production coexist.

Atrium

Skylight

Semi-transparent

Higher efficiency

Long service life

Increased production

BIPV **LumenGeo**



SOLWALL

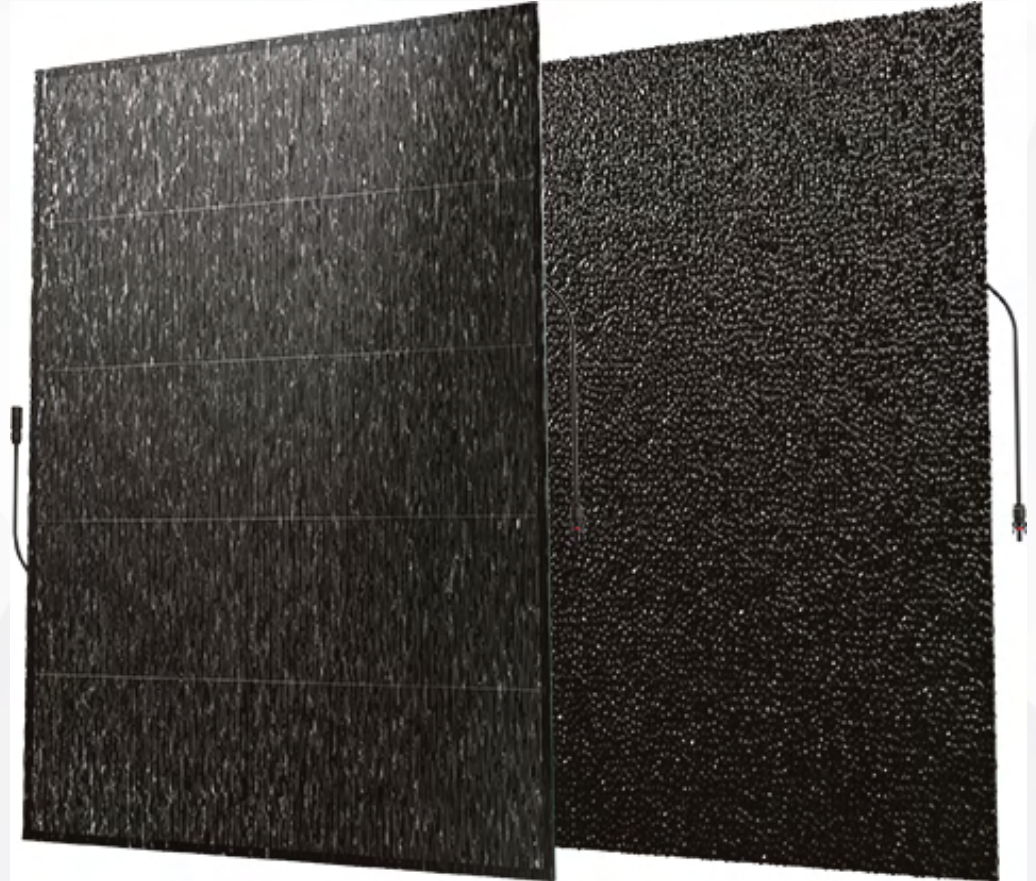
Smart Facades. Clean Energy.

TOPCon Technology

Integrated facade panels for an active, aesthetic and high-performance envelope.

SPECIFICATION

Power	253 W (custom)
Technology	TOPCon
Applications	Facade
Efficiency	16.90%
Dimensions	1480 mm × 1015 mm × 9.52 mm
Weight	36 kg
Product warranty	10 years
Performance Guarantee	25 years

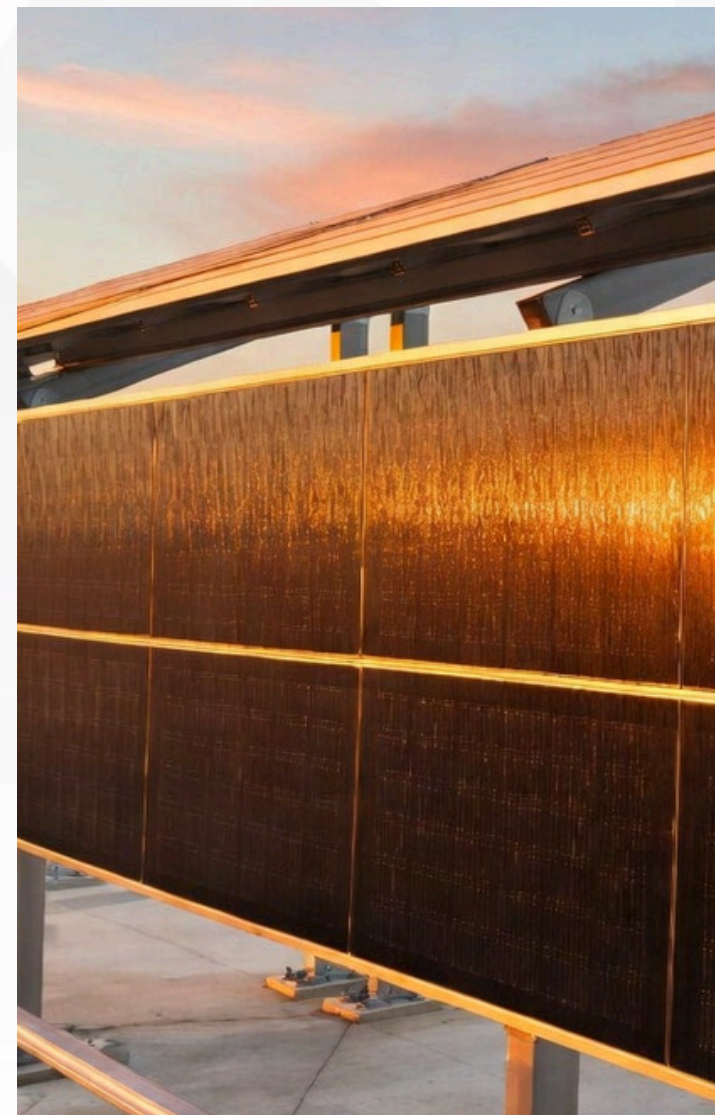




SOLWALL

Smart Facades. Clean Energy.

Operation parameters	
Parameter	Value
Maximum System Voltage	1000V
Reverse current withstand threshold	4.0A
Operation temperature	-40°C~+85°C
Maximum static load	3600Pa
Hail test	2400
Maximum System Voltage (IP)	IP67
Mechanical parameters	
Parameter	Details
Size	1480mm*1015mm
Thickness	9.52mm
Cells	182 Topcon Mono/Cell half
Square Measure	1.5m ²
Weight	36kg
Junction box type	Rear * 3PCS
Structure	4mm Ultra-clear tempered glass+PVB(0.76mm)+4mm Ultra clear tempered glass
Can choose color	transparency



Soltile Eco

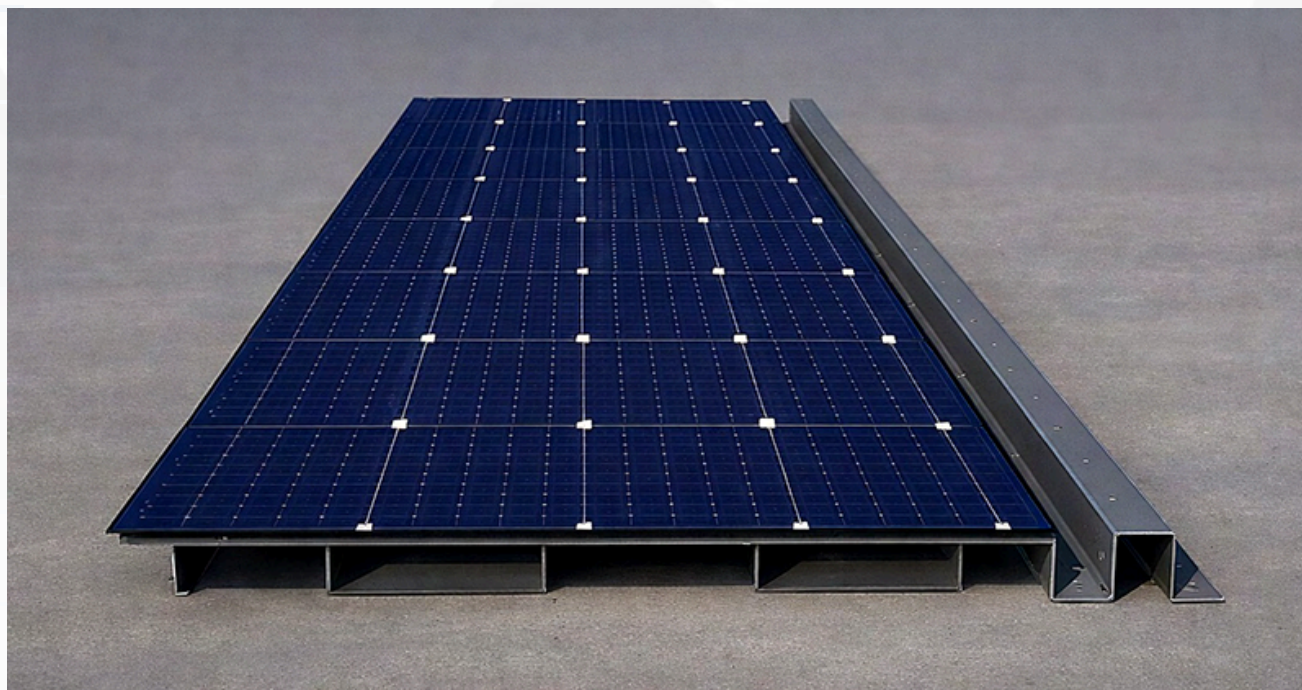
Simplicity. Efficiency. Solar.

TOPCon Technology

Integrated solar roofing tiles,
with aesthetic variations adapted to architectural styles

SPECIFICATION

Power	98 W
Technology	TOPCon
Applications	Roof
Efficiency	17.50%
Dimensions	11400 × 400 mm × 34.5 mm (with zinc support)
Weight	18 kg (with zinc support)
Product warranty	10 years
Performance Guarantee	25 years



Curved Soltile

Elegance in Every Curve, Power in Every Tile.

TOPCon Technology

Integrated solar roof tiles, with aesthetic variations adapted to different styles architectural.

SPECIFICATION

Power	50 W
Technology	TOPCon
Applications	Roof
Efficiency	14.40%
Dimensions	722mm × 480mm × 7mm (with frame)
Weight	5.0 kg
Product warranty	10 years
Performance Guarantee	25 years



Curved Soltile

Integrated BIPV Roof Solutions

OPERATING CONDITIONS	
Paramètre	Valeur
Max. system voltage	1500VDC
Max. series fuse rating	16A
Operating temperature range	-40°C~+85°C
Max. static load, front (e.g., snow)	5400Pa
Max. static load, back (e.g., wind)	2400Pa
Max. hailstone impact (diameter/velocity)	25mm / 23m/s



Soltile Hanok

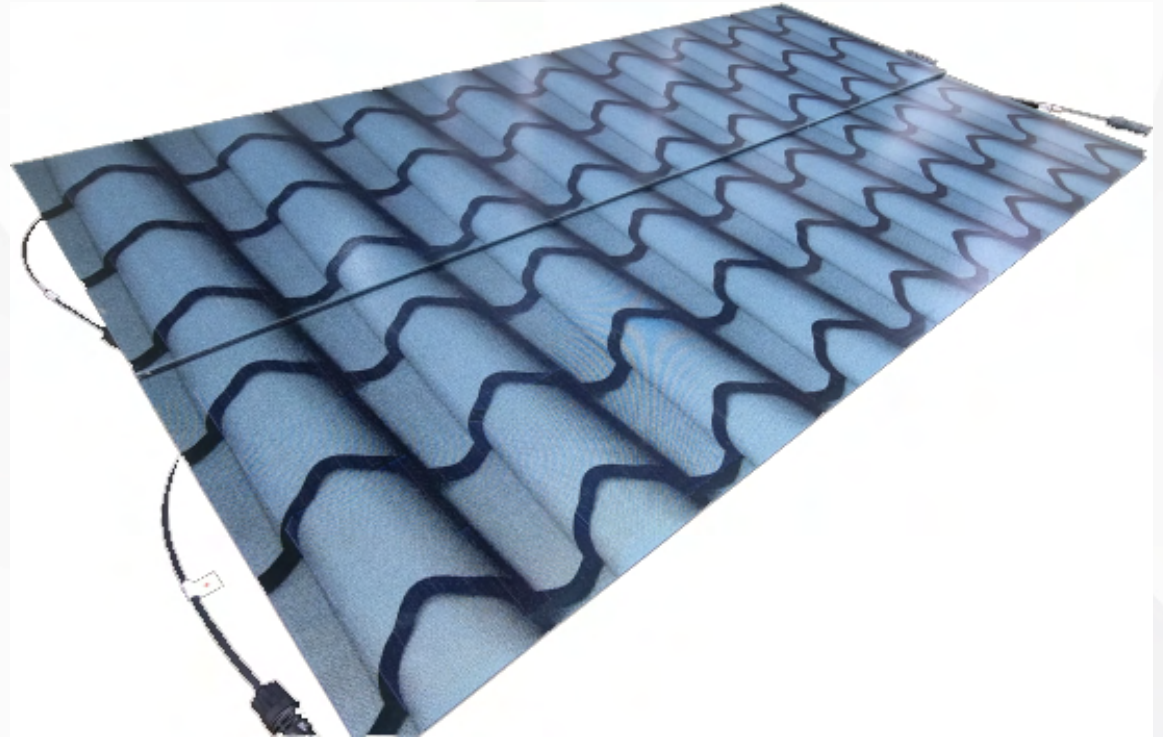
Premium Solar Tile Integrated into the Roof

TOPCon Technology

Integrated solar roofing tiles, with aesthetic variations adapted to different styles architectural.

SPECIFICATION

Power	76 W
Technology	TOPCon
Applications	Roof
Efficiency	13.60%
Dimensions	1400 × 400 mm × 34.5 mm (with zinc support)
Weight	18 kg (with zinc support)
Product warranty	10 years
Performance Guarantee	25 years



Possolar

Power Anywhere, Anytime.

TOPCon Technology

Integrated photovoltaic tile, roof finish without additional structure.

SPECIFICATION

Power	100 W
Technology	TOPCon
Applications	Integrated roof finishing function, without additional structure
Efficiency	19.4%
Dimensions	1646 × 350 × 6 mm
Weight	9 kg
Product warranty	10 years
Performance Guarantee	25 years



MonoFlex 560W

Flexible Design, Uncompromising Power.

TOPCon Technology

High-power TOPCon monocrystalline flexible module. Available with or without zinc support.

SPECIFICATION

Power	560 W
Technology	TOPCon
Applications	Flexible with or without zinc support
Efficiency	22.70%
Dimensions	2240 × 1190 × 1.8 mm
Weight	7.6 kg/module
Product warranty	10 years
Performance Guarantee	25 years



••••• MonoFlex 560W

New roof design

Electrical Performance Parameters (STC*)			
Parameter	Symbol	Unit	Value
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	V_{OC}	[V]	53.05
Short-Circuit Current	I_{SC}	[A]	12.96
Max. series fuse rating		[A]	25
Max. system voltage	IEC/UL	[V]	1500V DC(IEC)

Temperature Coefficient		
Parameter	Unit	Value
Temperature-coefficient of P_{mpp}	[%/°C]	-0.29
Temperature-coefficient of V_{oc}	[%/°C]	-0.26
Temperature-coefficient of I_{dc}	[%/°C]	0.045
NOCT	°C	45±2°C

Electrical Performance Parameters (NMOT*)			
Parameter	Symbol	Unit	Value
Module Type			ZKFN B1 010A-560
Max-Power	P_{MPP}	P_{mpp}	421.68
Max-Power Voltage	V_{MPP}	V_{mpp}	42.44
Max-Power Current	I_{MPP}	I_{mpp}	9.95
Open-Circuit Voltage	V_{OC}	V_{oc}	50.40
Short-Circuit Current	I_{SC}	I_{sc}	10.46

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



MonoFlex 155W

Maximum Power. Ultimate Flexibility.

TOPCon Technology

TOPCon ultralight monocrystalline flexible module for roofing and facades.
Available with or without zinc support.

SPECIFICATION

Power	155 W
Technology	TOPCon
Applications	Flexible with or without zinc support
Efficiency	22.70%
Dimensions	1970 × 400 × 1.8 mm
Weight	2.4 kg
Product warranty	10 years
Performance Guarantee	25 years



MonoFlex 155W

New roof design

Electrical performance parameters (STC *)			
Parameter	Symbol	Unit	Value
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	V_{OC}	[V]	14.74
Short-Circuit Current	I_{SC}	[A]	12.96
Max. series fuse rating		[A]	25
Max. system voltage	IEC/UL	[V]	1500V DC(IEC)

Temperature coefficient		
Parameter	Unit	Value
Temperature-coefficient of P_{MPP}	[%/°C]	-0.29
Temperature-coefficient of V_{OC}	[%/°C]	-0.26
Temperature-coefficient of I_{SC}	[%/°C]	+0.045
NOCT	°C	45±2°C

Electrical performance parameters (NMOT *)			
Parameter	Symbol	Unit	Value
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	V_{OC}	[V]	11.94
Short-Circuit Current	I_{SC}	[A]	12.31

Mechanical parameters	
Parameter	Value
Cell Type	TOPCON 182.2 mm * 183.75 mm
Size	1970 * 410 * 1.8 mm
Thickness	1.8 mm (junction box not included)
Weight	3.0 kg/m ²
Connector	MC4 Compatible
Junction-box	Triad Junction box IP68
Backboard color	Black

TOPCon Technology for BIPV

CIGS Technology

CIGS modules adapt to complex geometries, including curved and irregular surfaces.

Depending on the substrate, they can be directly integrated onto compatible surfaces — roofs, façades, or metal structures — reducing or eliminating the need for conventional mounting systems.

Integrate TOPCon technology into your next project

Integration formats

CIGS across all building surfaces



Curved & flexible roofing

CIGS conforms to curved, barrel-vault and irregular roof geometries. No racking needed — modules bond directly to the membrane or metal substrate.

Barrel vault

Membrane

No racking



Curtain wall & rainscreen

CIGS uniform dark appearance (no visible silver busbars) blends seamlessly with architectural cladding. Anti-glare surface standard on all Hanwall and CIGS Power Glass modules.

Anti-glare

No busbars

RAL colours



Semi-transparent glazing

CIGS density is adjusted at deposition to achieve 0–60% transparency. A single glass unit provides daylighting, solar shading and power generation simultaneously.

Atrium

Skylight

Canopy

Miasolé (CIGS flexible)

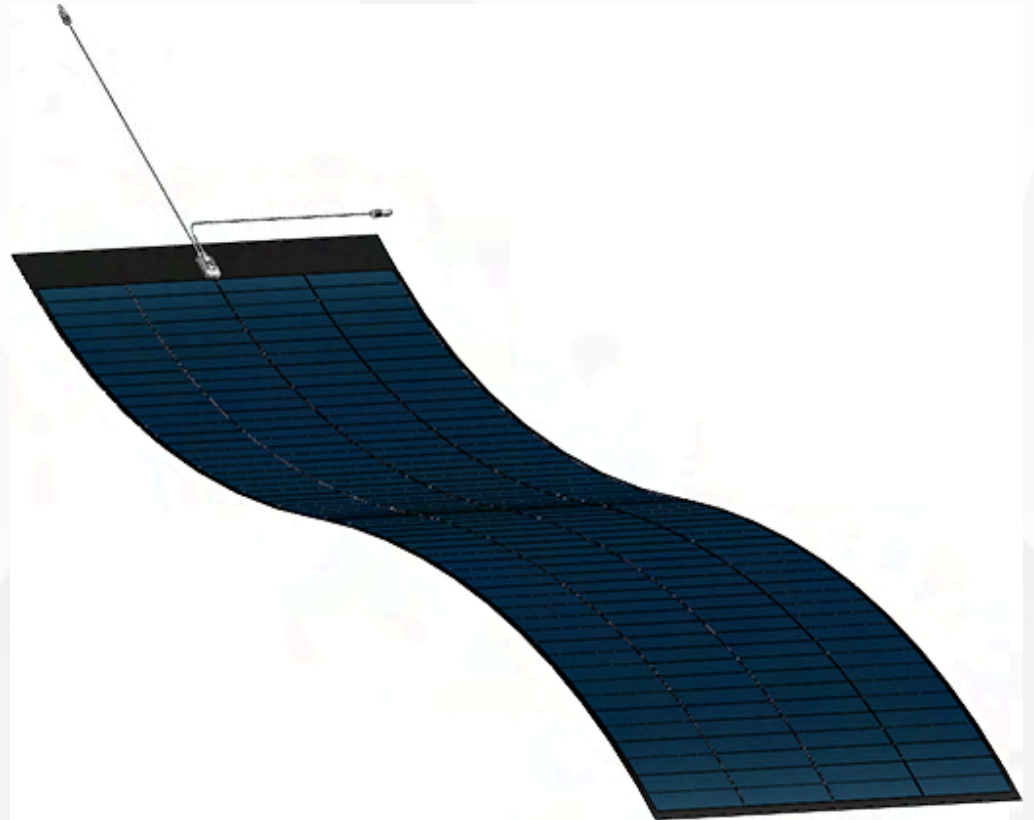
Bend the Surface, Not the Performance.

CIGS Technology

Ultra-lightweight flexible CIGS module for curved surfaces and discreet integration.

SPECIFICATION CIGS Flexible Module

Power	125 W
Technology	CIGS
Applications	Flexible
Efficiency	13.90%
Dimensions	2585 mm × 348 mm × 2.5 mm
Weight	1.9 kg (with adhesive)
Product warranty	10 years
Performance Guarantee	25 years



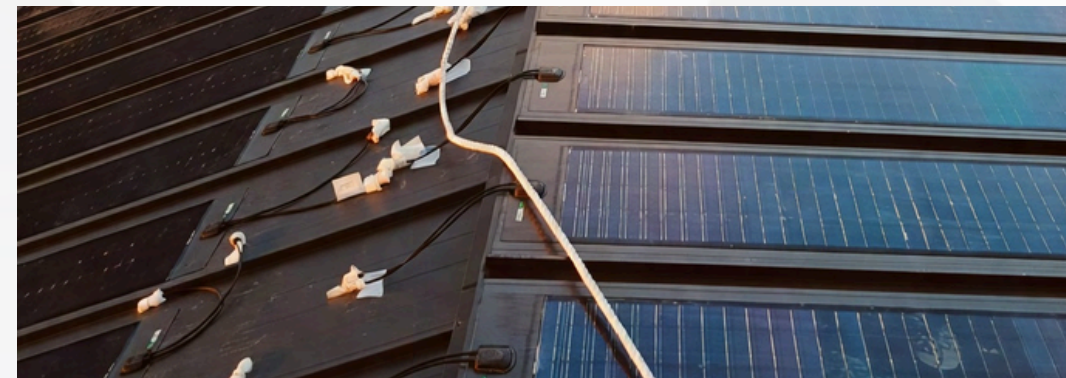
Miasolé (CIGS flexible)

Bend the Surface, Not the Performance.

Electrical Performance at STC		
Paramètre	Unité	Valeur
Nominal Power PMPP	W	125
Power Output Tolerance	W	5/0
Maximum Power Voltage VMPP	V	29,3
Maximum Power Current IMPP	A	4.27
Open Circuit Voltage VOC	V	37
Short Circuit Current ISC	A	4.75
Maximum Series Fuse Rating	A	25
Maximum System Voltage	V	1000

Thermal Characteristics		
Paramètre	Unité	Valeur
NOCT	C	48
Temperature Coefficient of Pmpp	%/C	-0.40
Temperature Coefficient of VOC	%/C	-0.36
Temperature Coefficient of ISC	%/C	0.003

Physical and Mechanical Specifications	
Paramètre	Valeur
Length	2585 mm
Width	348 mm
Thickness Maximum at J-Box	17 mm
Thickness Module	2.5 mm
Weight (without adhesive)	1.6 kg
Weight (with adhesive)	1.9 kg
Weight per Area (without adhesive)	1.8 kg/m ²
Junction Box Type	IP68
Cable Connections	Amphenol H4
Cell Type	Copper Indium Gallium Diselenide (CIGS)



Hanwall (Curtain Wall)

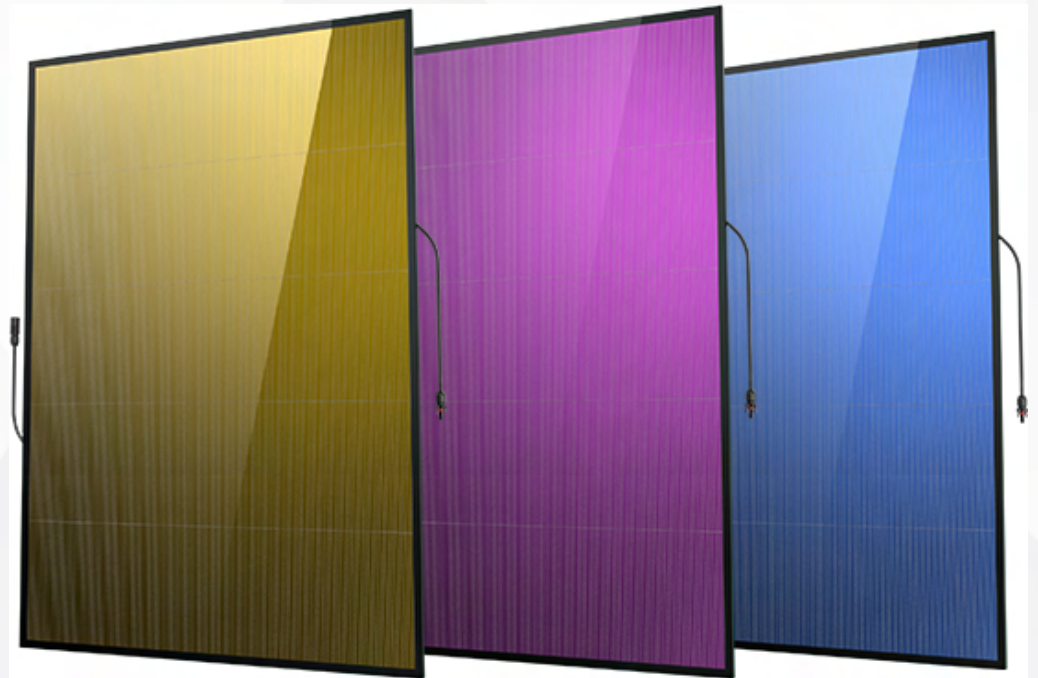
Elegance in Glass, Strength in Energy.

CIGS Technology

Active and aesthetic facade, compatible with curtain walls with refined finishes.

SPECIFICATION

Power	140 W
Technology	CIGS
Applications	Facade
Efficiency	14.90%
Dimensions	1192 mm × 792 mm × 15 mm
Weight	33 kg
Product warranty	10 years
Performance Guarantee	25 years



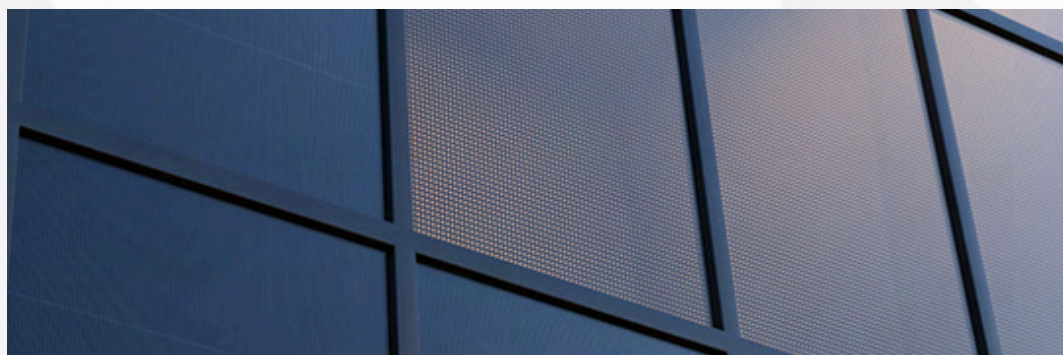
Hanwall (Curtain Wall)

Elegance in Glass, Strength in Energy.

Parameter of electrical characteristics			
Parameter	Symbol	Unit	Value
Power(+5/-0W)	P	[W]	140
Short Circuit Current	I_{SC}	[A]	1.72
Open Circuit Voltage	V_{OC}	[V]	108.90
Current at PMPP	I_{MPP}	[A]	1.63
Voltage at PMPP	V_{MPP}	[V]	86.10
Rated conversion efficiency		[%]	15

Characteristic parameters of system integration		
Parameter	Unit	Value
Max. system voltage VSYS	[V]	1000(IEC)
Max. reverse current IR	[A]	4
Snow/Wind load (IEC 61646)	[Pa]	6000
Hail resistance grade		Grade IV
Protection grade		IP67
Combustion performance rating		A(GB8624)
Under continuous operation from		-40°C to +85°C

Mechanical Specifications	
Parameter	Value
Length	1192(+1/-1) mm
Width	792(+1/-1) mm
Thickness	15 mm(± 0.2mm)
Weight	33 kg
Front plate	5mm ultra white tempered glass
Back plate	5mm ultra white tempered glass(punching)
Chip type	Cuprum, Indium, Gallium, Selenium CIGS(Cu(In, Ga)Se1
Junction Box	IP67(66mmX60mmX12.5mm)/Integrated junction box with a bypass diode
Cable type	2.5mm ² solar cable
Connector	MC4



CIGS Power Glass

Next-Gen Glass, Built for Energy.

CIGS Technology

CIGS photovoltaic glass, adjustable transparency for facades and canopies.

SPECIFICATION

Power 90 W / 100 W / 110 W / 120 W

Technology CIGS

Applications Glass

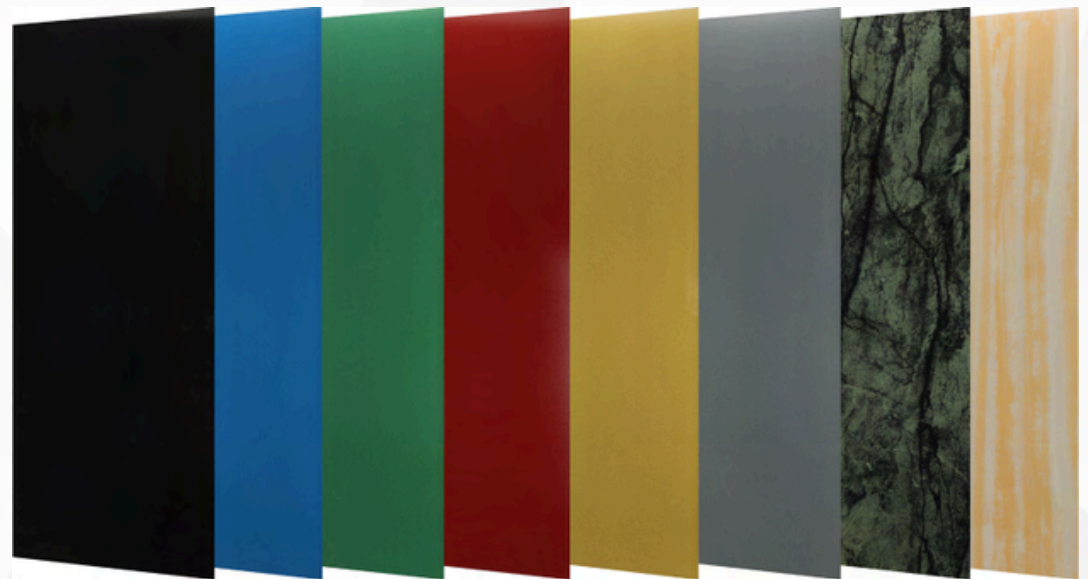
Efficiency 8.6% / 9.5% / 10.5% / 11.4%

Dimensions 1587 mm × 664 mm × 5.8 mm

Weight 17 kg

Product warranty 10 years

Performance Guarantee 25 years



CIGS Power Glass

Next-Gen Glass, Built for Energy.

Signal-to-transmission coefficient					
Parameter	Unit	China red	Sunshine gold	Forest green	Sky blue
Pmax	[W]	90	100	110	120
Power tolerance	[%]	-5/+5	-5/+5	-5/+5	-5/+5
Efficiency	[%]	8,6	9,5	10,5	11,4
Vmpp	[V]	60	60	60	60
Imp	[A]	1.582	1.761	1.941	2.064
Voc	[V]	76.50	76.7	76.9	77.5
Isc	[A]	1.820	2.006	2.192	2.310

Operation parameters	
Parameter	Value
Maximum System Voltage	1000V
Reverse current withstand threshold	4.0A
Operation temperature	-40°C~+85°C
Maximum static load	3600Pa (Including snow load)
Hail test	2400 (Excluding snow load)
Protection grade	pass
Maximum System Voltage (IP)	IP67



Hantile (tile)

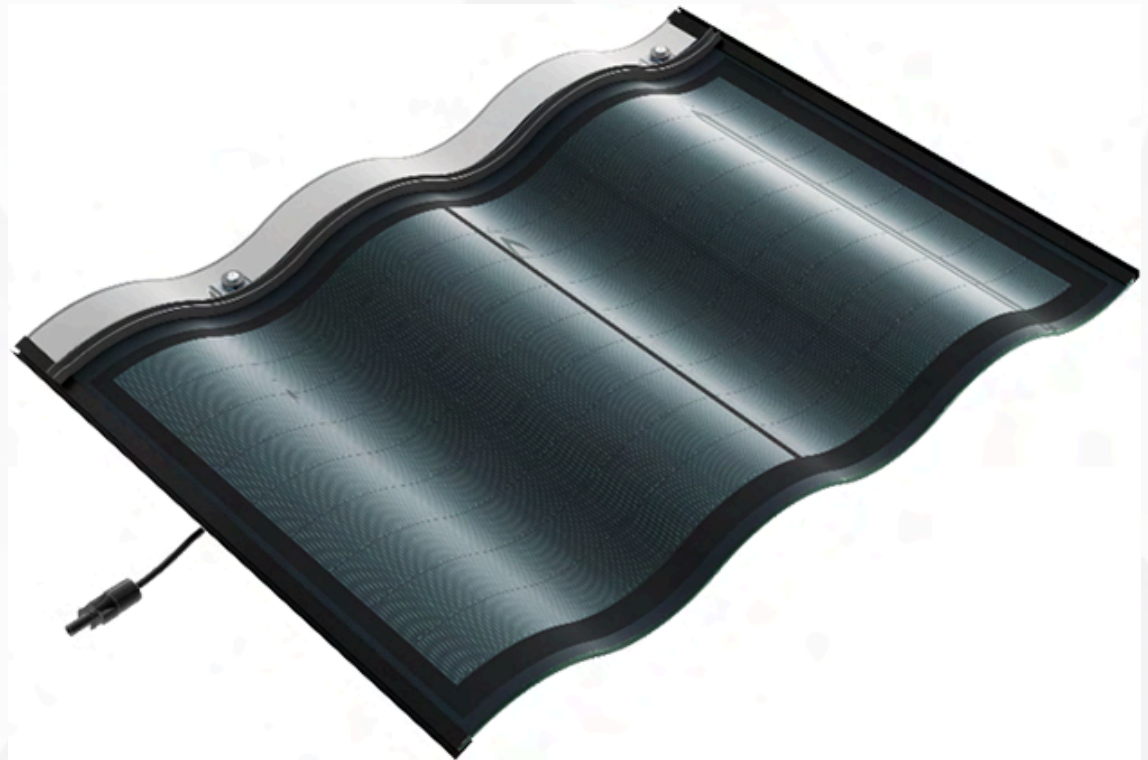
Smart Tiles. Clean Energy.

CIGS Technology

FV CIGS roofing tile, a combination of aesthetics and performance.

SPECIFICATION

Power	30 W
Technology	CIGS
Applications	Integrated photovoltaic tile
Efficiency	8.32%
Dimensions	721 × 500 × 33 (±2) mm
Weight	6.5 (±0.5) kg
Product warranty	10 years
Performance Guarantee	25 years



..... Hantile (tile)

Smart Tiles. Clean Energy.

Specifications				
Parameter	Product 1	Product 2	Product 3	Product 4
Rated Power Pn (W)	18 / 25	21 / 28	23 / 30	25 / 32
Power per m ² Pm (W)	62 / 86	72 / 96	79 / 103	86 / 110
Open Circuit Voltage Voc (V)	9.60 / 10.30	9.80 / 10.50	10.10 / 10.60	10.30 / 10.80
Short Circuit Current Isc (A)	3.30 / 3.80	3.40 / 3.90	3.50 / 4.00	3.60 / 4.10
Maximum Power Voltage Vmp (V)	7.20 / 8.10	7.50 / 8.40	7.80 / 8.60	8.10 / 8.90
Maximum Power Current Imp (A)	2.55 / 3.10	2.82 / 3.40	2.98 / 3.50	3.09 / 3.60
Product Dimensions L×W (mm)	-	-	721 × 500 × 33 (±2)	-
Module Thickness (mm)	-	-	8 (±1)	-
Weight per Module (kg)	-	-	6.5 (±0.5)	-
Weight per m ² (kg)	-	-	22 (±0.5)	-
Cable Service Life (years)	-	-	25	-

Transparency Solar Window

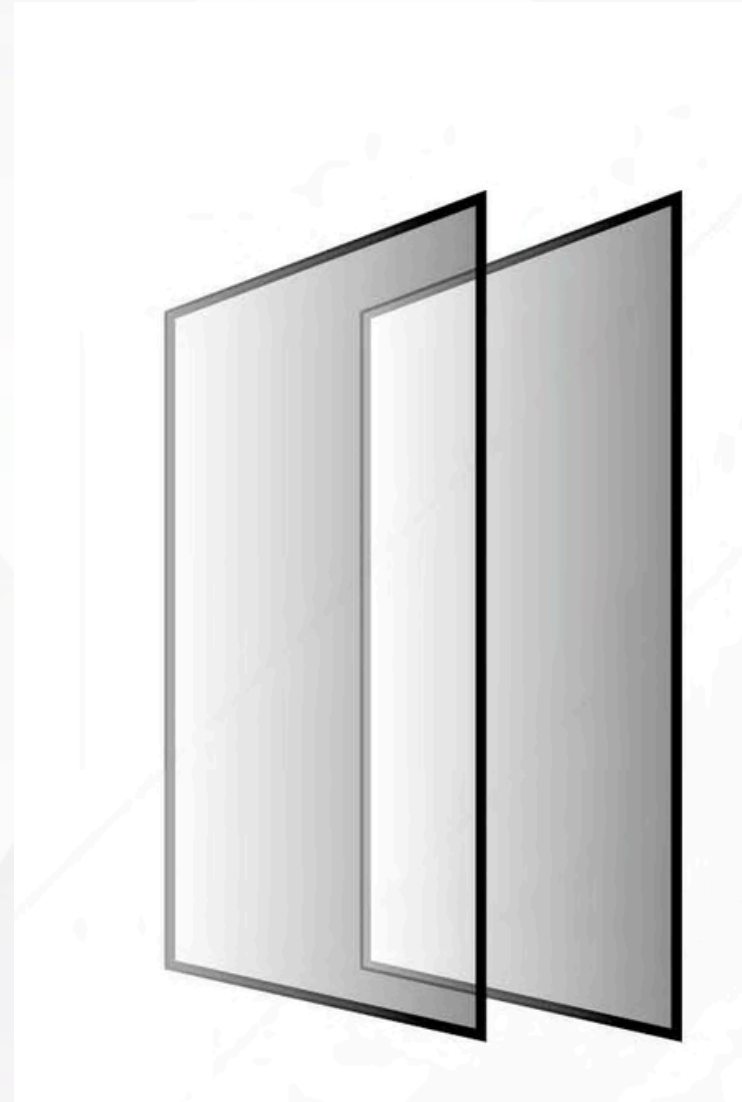
TClarity Outside, Power Inside.

CIGS Technology

Aesthetic transparent solar window with lighting and blind function.

SPECIFICATION

Power	105 W / 80 W
Technology	CIGS
Applications	Transparent window (20% and 40% transmission)
Efficiency	10% / 7.6%
Dimensions	1587 mm × 664 mm × 5.8 mm
Weight	14 kg
Product warranty	10 years
Performance Guarantee	25 years



Transparency Solar Window

Clarity Outside, Power Inside.

Electrical performance parameters (STC *)			
Parameter	Symbol	Unit	Value
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	V_{OC}	[V]	14.74
Short-Circuit Current	I_{SC}	[A]	12.96
Max. series fuse rating		[A]	25
Max. system voltage	IEC/UL	[V]	1500V DC(IEC)

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

Electrical performance parameters (NMOT *)			
Parameter	Symbol	Unit	Value
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	V_{oc}	[V]	11.94
Short-Circuit Current	I_{sc}	[A]	12.31

Temperature coefficient		
Parameter	Unit	Value
Temperature-coefficient of P_{MPP}	[%/°C]	-0.29
Temperature-coefficient of V_{OC}	[%/°C]	-0.26
Temperature-coefficient of I_{SC}	[%/°C]	+0.045
NOCT	°C	45±2°C

Together, Let's Power the World

Contact

Leandre Adifon – CEO

Ladifon@Lumengeo.com

Tel: +1-980-263-1803

Website: www.bipvlumengeo.com

