ClearVue[PV] Building Products

ClearVue[PV]

Emirates Glass

Solar Façade Solutions

For a Sustainable Building Envelope

Table of Contents

About ClearVue

At ClearVue Technologies Limited (ClearVue), we generate energy from a clear glass window.

ClearVue is a technology company at the forefront of advanced glazing technologies. These technologies allow an Insulated Glass Unit (IGU) window to generate electricity while maintaining the window's transparency and the integrity of the building's aesthetics.

Incorporating complementary Building Integrated Photovoltaic (BIPV) technologies, ClearVue offers a building envelope solution that has the potential to generate and save sufficient energy to achieve sustainability objectives with near net zero performance. This presents a paradigm shift in the sustainability and carbon footprint of the global built environment.

With ClearVue, a building approaching net zero is within reach.

Why ClearVue

The built environment must be included in any meaningful solution to meet global net zero emission aspirations. Representing some 40% of annual global CO_2 emissions, the built environment requires innovative solutions where energy can be generated to lessen the need to draw power from carbon producing energy sources.

ClearVue is building a bridge between the construction and renewable energy industries with aesthetically pleasing solutions that support structural integrity and safety, environmental responsibility, and strong commercial payback.

ClearVue^{PV} Façade

ClearVue's Solar Façade maximizes on-site energy generation. Our solar products include a full line of Building Integrated Photovoltaics (BIPVs) that complement and enhance a broad range of architectural styles.

ClearVue^{PV} Cladding

ClearVue offers a broad range of PV Cladding colors and patterns. Our silicon-based cladding has the ability to generate significant power while offering a broad range of visual textures and colors to achieve architectural intent.

ClearVue^{PV} Vision Glass

Transparent glass building surfaces become energy generating with our patented ClearVue Vision Glass. It has significant advantages. It provides transparency and delivers both energy generation and excellent thermal performance which provides an improved Solar Heat Gain Coefficient (SHGC) when deployed across a building façade. Our Solar Vision Glass can be customized to work in most glass configurations providing flexibility for building integration.

ClearVue^{PV} Spandrel

ClearVue^{PV} spandrel solutions deliver excellent reliability, efficiency, and performance for building sustainability.

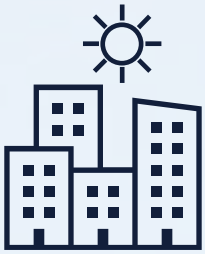
ClearVue^{PV} Skylight & Balustrade

Our class-leading silicon balustrade, and skylight glass can be delivered in single laminated or Insulating Glass Units (IGUs).

Solar Façade Benefits

Provides significant energy generation through the integration of solar solutions across building surfaces.

Typically, ClearVue solutions can deliver 50% or more of the power requirements for buildings.



Compatible with industry standard curtain wall/framing systems and uses advanced sealing system to prevent water infiltration.

A path to sustainable buildings and often qualifies for tax credit and incentive programs.

Supports corporate sustainability programs and ESG goals and assists in keeping pace with regulatory changes.

Operational payback through renewable energy generation that provides substantial carbon footprint offset.

Decreased building operational costs with improved thermal performance.

Increased yield rate of return and leads to higher resale values on real estate assets.

ClearVue provides a practical solution to meet environmental building policy requirements.

Solar Vision Glass

ClearVue^{PV} Vision Glass supports sustainable building operations by providing energy generation that significantly offsets operational energy requirements.

What were once Insulated Glass Units (IGUs) that were an area of energy losses, can now be a source of clean, renewable energy.

Now it is possible to generate energy from truly transparent glass building surfaces.

Emirates Glass

ClearVue^{PV}

Solar Vision Glass

ClearVue^{PV} Vision Glass facilitates clean energy generation into the very fabric of the modern building envelope.

Clear Glass
solar glazing

Clean Energy
generation offsets building energy requirements

Saves
on building heating and cooling costs

ClearVue^{PV} Vision Glass combines several patented, proprietary technologies to generate clean, renewable energy from clear building glazing surfaces. ClearVue is compatible with the majority of glass compositions.

Benefits

- Generates up to 30 Watts/m^2 peak
- Reduction of Solar Heat Gain coefficient (SHGC)
- Fire certified by TÜV SÜD under the EN 13501-1:2018 A2-s1, d0 classification rating for combustibility
- Provides maximum natural lighting with transparency that is the same as standard glazing products
- Decreases use of traditional energy sources and offsets energy use with renewable solar energy
- Compatible with most glass compositions and low emissive (low-e) coating technologies
- Compatible with most standard curtain wall and framing systems
- IGU seal equivalent to standard IGUs (Certified by Insulating Glass Certification Council)
- Project-specific sizes available (up to 3.5m x 1.6m)
- Connected reporting supported

ClearVue^{PV} Vision Glass Specifications

ClearVue^{PV} Vision Glass allows visible light to pass through the glass at up to 70% visible light transmission (VLT) for maximum daylight. ClearVue prevents unwanted solar radiation from penetrating the building envelope while generating energy utilizing custom-shaped solar cells along the perimeter. ClearVue optimizes on site energy generation by making large expanses of building façade glass into renewable energy powerhouses.

The ClearVue^{PV} Vision Glass System is comprised of:

- Silicon solar collectors
- Extruded support frame and connection system
- Fully sealed power system
- Proprietary PVB with photo luminescent nanoparticles

Internal IGU solar collection delivers enhanced reliability

- All electrical connections are solid metal for enhanced reliability
- All electrical connections are within the desiccated IGU cavity forming a completely airtight, dry environment
- Friction assembly system delivers a high quality and fast production rate, streamlining mass production that is comparable with standard IGUs
- Power exit is via an IP67-certified system that is waterproof to 1m of depth for 30 minutes

ClearVue^{PV} Vision Glass meets stringent construction-grade fire safety requirements and is approved for high rise buildings. TÜV SÜD certified that ClearVue^{PV} Vision Glass meets high performance classification criteria making it safe for building façades.

TECHNICAL PROPERTIES

IGU size: 1200 x 1200mm

Parameters	Values
Maximum Power Output	Up to 30 Watts peak per m^2
Visible Light Transmission	Up to 70%
U Value	Dependent on glass composition
SHGC	Dependent on glass composition
Voltage Open Circuit V_{oc}	58V
Amperes Short Circuit I_{sc}	0.95A
Maximum Power Voltage V_{mp}	49V
Maximum Power Current I_{mp}	0.87A
Tolerance	±5%

Solar Spandrel

ClearVue^{PV} Spandrel delivers striking architectural design and maximizes renewable energy generation across the building façade.

ClearVue^{PV} Spandrel can be produced in construction thicknesses and project-specific sizing to integrate seamlessly with framing systems for low maintenance.

Emirates Glass

ClearVue^{PV}

Solar Spandrel

ClearVue^{PV} black spandrel solutions deliver excellent reliability, efficiency, and performance for building sustainability.

Reliable
power generation efficiency

Excellent ROI
through operational cost reductions + significant energy offsets

Tolerant
of extreme environmental conditions

ClearVue full cover spandrel is engineered to replicate traditional black glass spandrel. We offer two options of all black solar spandrel so you can balance desired building aesthetics with power generation and carbon offset goals. First, we offer a pure black spandrel option the prioritizes a unified smooth black appearance. Second, if energy generation is the priority, our high-efficiency spandrel increases energy generation performance.

Benefits

- Up to 200 watts peak per square meter dependent on installation conditions and desired design
- Fire certified by TÜV SÜD under the EN 13501-1:2018 A2-s1, d0 classification rating for combustibility
- ClearVue solar spandrel glass is IP68 water resistant for a long lifespan
- Can be formed into double glazed units to match vision glass
- Silicon solar cells deliver a proven track record of reliability and longevity
- Patent-pending thermally bridged junction box delivers increased reliability and ability to use a weather-proof silicon bead seal at the façade face
- Can be integrated with ClearVue^{PV} vision glass

ClearVue^{PV} Pure Black Spandrel Specifications

Shingled Cell Double Glass Module

ClearVue's proprietary silicon cell design provides a pure black uniform appearance (without lines or squares) spandrel solution that delivers excellent performance and a beautiful aesthetic.

Product Features

- Up to 300 watts peak per panel dependent on installation conditions and desired design
- Pure black design
- Product can be tailored to support custom size requirements up to 1200mm x 1800mm and thickness up to 10+10mm laminated dependent upon structural design
- IP68-rated water resistance
- Fire certified by TÜV SÜD under the EN 13501-1:2018 A2-s1, d0 classification rating for combustibility
- 1000V or 1500V system voltage available
- High resistance to high temperatures, high humidity, sand, acid, and alkali environmental conditions

TYPICAL MECHANICAL SPECIFICATIONS

Cell Type	Mono Crystalline	Mono Crystalline
Solar Cells	296 (37*8)	152 (38*4)
Module Dimension (mm)	1500*1200*14 or 7.4	1200*600*7.4
Weight (Kg)	57.5 or 28	12.6
Front Glass (mm)	6.0 Tempered coated glass or 3.2	3.2 Semi tempered coated glass
Interlayer	Black PVB or POE	EVA/POE/PVB
Back Glass (mm)	6.0 Tempered glass or 3.2	3.2 Semi tempered glass
Junction Box	IP68 Rated, 2 bypass diodes	IP68 Rated, 1 by-pass diode
Connector	MC4 (or equiv)	MC4 (or equiv)
Frame	No Frame	No Frame
Maximum Load Capacity (Pa)	5400(back side)/5400(front side) or 3600Pa	2400 wind load/2400 snow load

TYPICAL ELECTRICAL CHARACTERISTICS

	Size	1500*1200*14 or 7.4	1200*600*7.4
STC: Air Mass AM 1.5, Ir-radiance 1000W/m^2 Cell temperature 25°C	Max Power at STC (P_{max})	300W	180W
	Open Circuit Voltage (V_{oc})	50.49V	51.10V
	Short Circuit Current (I_{sc})	7.72A	3.26A
	Voltage at Max Power Point (V_m)	40.71V	41.94V
	Current at Max Power Point (I_m)	7.37A	3.10A
	Power Tolerance	0~+5W	0~+3%
	Module Efficiency	18.1%	18.1%
NMOT: Air Mass AM 1.5, Ir-radiance 800W/m Ambient temperature 20°C, wind speed 1m/s	Max Power at NMOT (P_{max})	224W	98W
	Open Circuit Voltage (V_{oc})	47.66V	48.34V
	Short Circuit Current (I_{sc})	6.23A	2.63A
	Voltage at Max Power Point (V_m)	37.62V	39.34V
	Current at Max Power Point (I_m)	5.95A	2.50A
	Power Tolerance	0~+5%	0~+3%

ClearVue^{PV} Pure Black Spandrel Specifications

Shingled Cell Double Glass Module

TEMPERATURE COEFFICIENTS

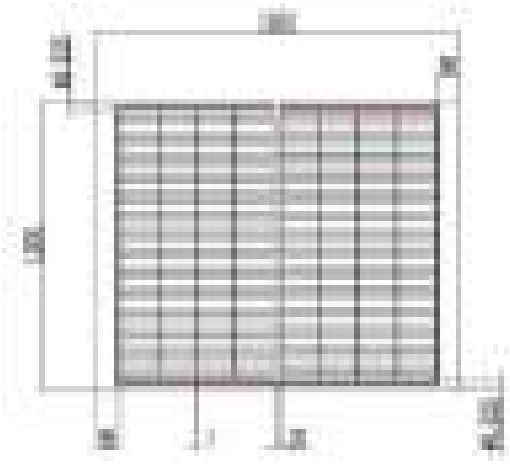
		1500*1200	1200*600
Temperature Coefficient of P_{max}	%/°C	-0.35	-0.36
Temperature Coefficient of V_{oc}	%/°C	-0.28	-0.29
Temperature Coefficient of I_{sc}	%/°C	0.046	0.05

WORKING CONDITIONS

		1500*1200	1200*600
Maximum System Voltage (With S)	V	1000DC (IEC)	1000CE (IEC)
Maximum System Voltage (Without S)	V	1500DC (IEC)	1500DC (IEC)
Operating Temperature	°C	-40~+85	-40~+85
Nominal Operating Cell Temperature	°C	45 ± 3	45 ± 2
Maximum rated current	A	15	20

ENGINEERING DRAWINGS 1500*1200 (mm)

FRONT VIEW



BACK VIEW

1200*600 (mm)

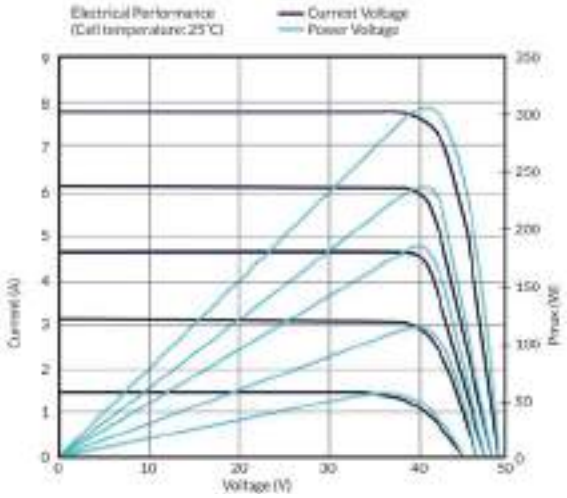
FRONT VIEW

BACK VIEW

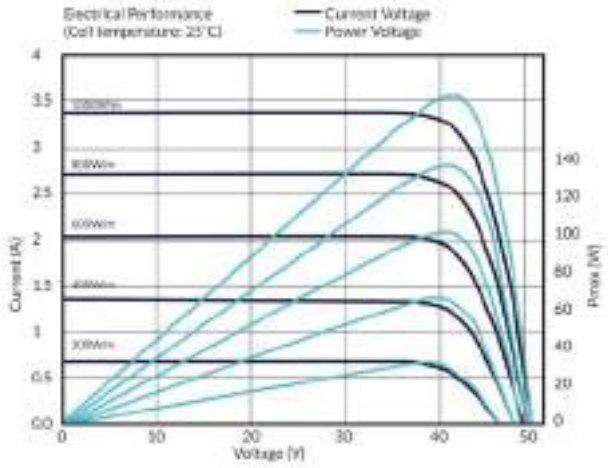
ClearVue^{PV} Pure Black Spandrel Specifications

Shingled Cell Double Glass Module

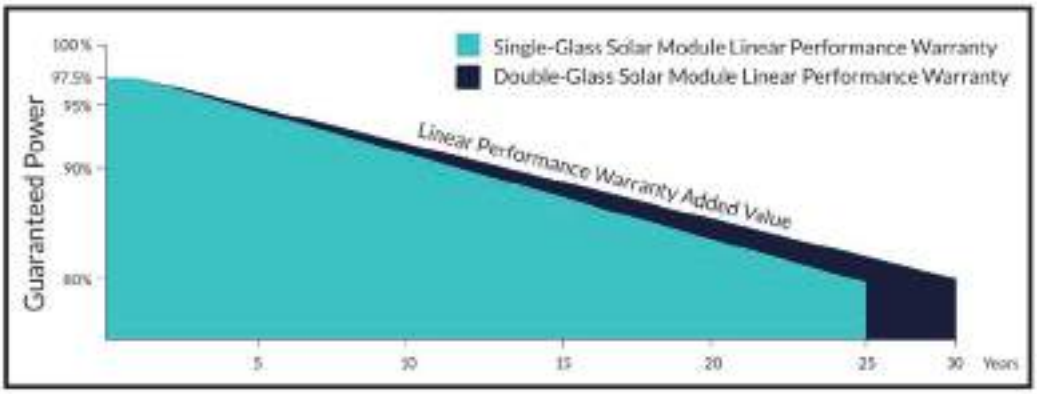
ELECTRICAL CURVES 1500*1200 (mm)



1200*600 (mm)



LINEAR PERFORMANCE



Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without prior notice. The specifications may deviate slightly for final delivered products and are not guaranteed.

ClearVue^{PV} High Efficiency Spandrel Specifications

Black Double Glass Module

ClearVue^{PV} High Efficiency Spandrel extends on-site energy generation to new heights with monocrystalline silicon cells that provide an all black uniform appearance.

Product Features

- Up to 200 watts peak per square meter, dependent on installation conditions and desired design
- Integrates Multiple-Busbar (MBB) technology, to deliver higher power output
- Product can be tailored to support custom size requirements up to 2300x4000mm and thickness up to 10+10mm laminated dependent upon structural design; thicker variants available upon request
- Fire certified by TÜV SÜD under the EN 13501-1:2018 A2-s1, d0 classification rating for combustibility
- 1000 or 1500V system voltage available
- IP68-rated water resistance
- Half-Cell Cutting Technology to lower the output power losses caused by shading
- High resistance to high temperatures, high humidity, sand, acid, and alkali environmental conditions

TYPICAL MECHANICAL SPECIFICATIONS

Cell Type	Mono Crystalline
Solar Cells	120 (6*20)
Module Dimension (mm)	1767*1040*6
Weight (Kg)	25.5
Front Glass (mm)	2.5 Semi tempered coated glass
Interlayer	EVA/POE/PVB
Back Glass (mm)	2.5 Semi tempered glass
Junction Box	IP68 Rated, 3 by-pass diodes
Connector	Multi-Contact MC4 (or equiv)
Frame	No Frame
Maximum Load Capacity (Pa)	2400 wind load/2400 snow load

TYPICAL ELECTRICAL CHARACTERISTICS

STC: Air Mass AM 1.5, Ir-radiance 1000W/m^2 Cell temperature 25°C	Max Power at STC (P_{max})	370W
	Open Circuit Voltage (V_{oc})	41.27V
	Short Circuit Current (I_{sc})	11.35A
	Voltage at Max Power Point (V_m)	34.20W
	Current at Max Power Point (I_m)	10.82A
	Power Tolerance	0~+3%
	Module Efficiency	20.1%
NMOT: Air Mass AM 1.5, Ir-radiance 800W/m Ambient temperature 20°C, wind speed 1m/s	Max Power at NMOT (P_{max})	277W
	Open Circuit Voltage (V_{oc})	38.5V
	Short Circuit Current (I_{sc})	9.15A
	Voltage at Max Power Point (V_m)	31.4V
	Current at Max Power Point (I_m)	8.81A
	Power Tolerance	0~+3%

TEMPERATURE COEFFICIENTS

Temperature Coefficient of P_{max}	%/°C	-0.42
Temperature Coefficient of V_{oc}	%/°C	-0.33
Temperature Coefficient of I_{sc}	%/°C	0.04

WORKING CONDITIONS

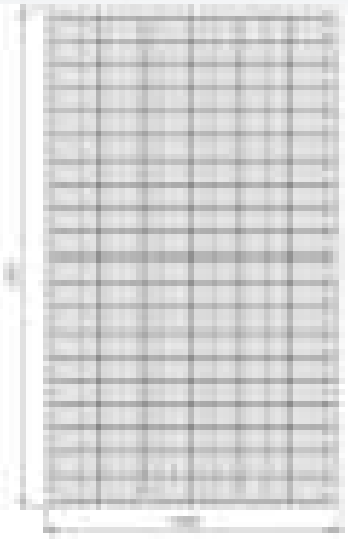
Maximum System Voltage (With S)	V	1000CE (IEC)
Maximum System Voltage (Without S)	V	1500DC (IEC)
Operating Temperature	°C	-40~+85
Nominal Operating Cell Temperature	°C	45 ± 3
Maximum rated current	A	20

ClearVue^{PV} High Efficiency Spandrel Specifications

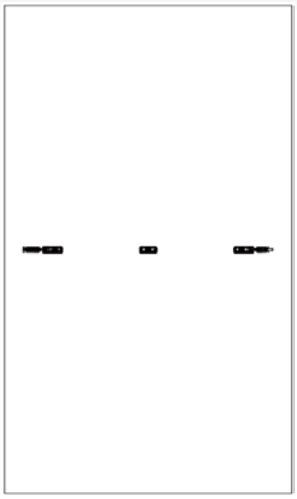
Black Double Glass Module

ENGINEERING DRAWINGS (mm)

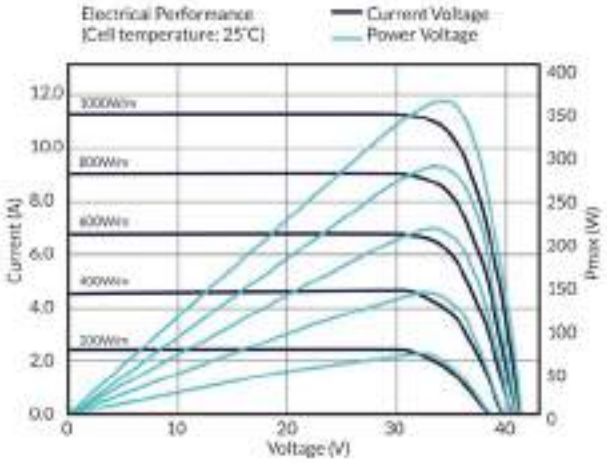
FRONT VIEW



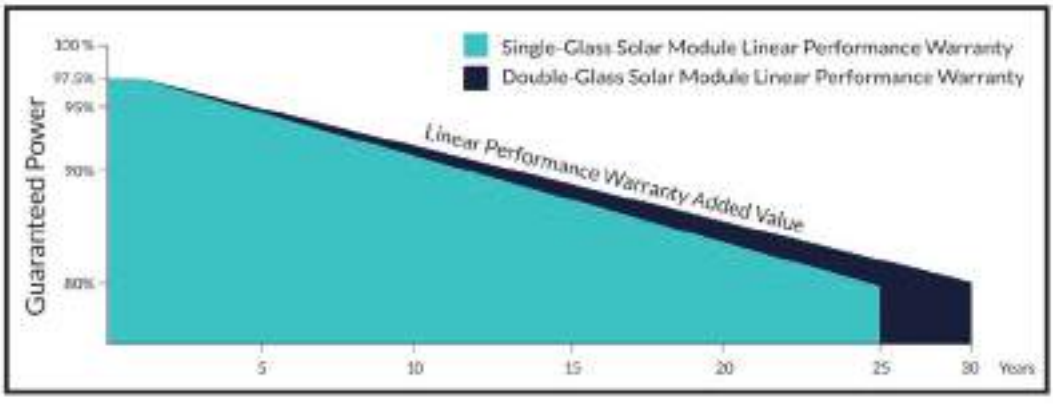
BACK VIEW



ELECTRICAL CURVES



LINEAR PERFORMANCE



Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without prior notice. The specifications may deviate slightly for final delivered products and are not guaranteed.

Solar Skylight & Balustrade

Extending renewable energy generation across glass surfaces of buildings is now possible using tailor-made crystalline BIPV.

Clearvue's solar skylight and balustrade products provide customizable levels of glass to solar cell distribution for varying levels of energy generation and light transmittance.

Emirates Glass

ClearVue PV

Solar Skylight & Balustrade

ClearVue maximizes energy generation with its solar skylight and balustrade solutions which can be used for a broad range of building canopies, balcony railings, fencing, and more.

Reliable
power generation efficiency

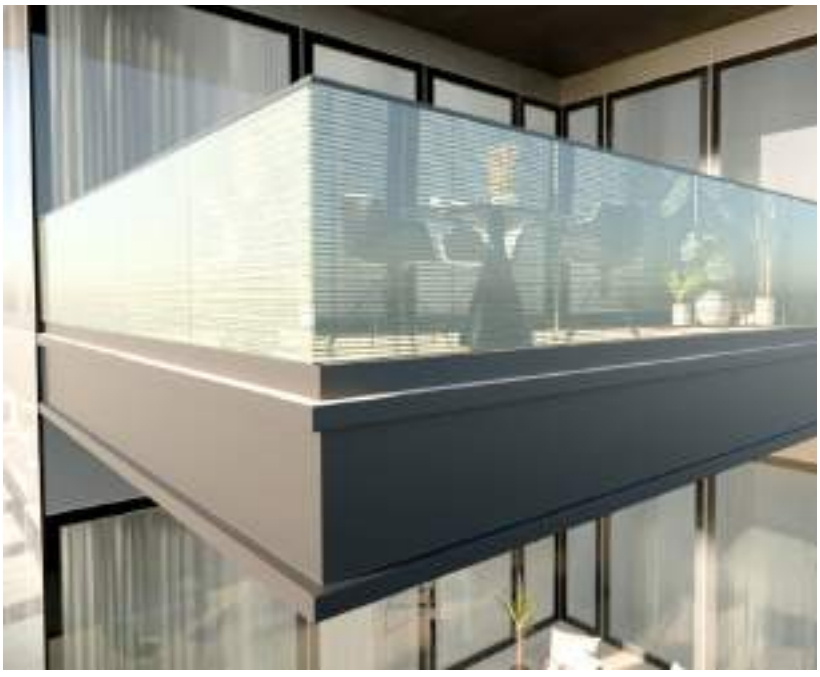
Excellent ROI
through operational cost reductions + significant energy offsets

Transmittance
for excellent natural lighting

ClearVue provides customizable high transmittance glass options specifically designed for building areas where natural light is desired in addition to energy generation to support sustainable building design that stands the test of time.

Benefits

- Customizable crystalline silicon building integrated photovoltaic (BIPV) glass
- Clear appearance with varying solar cell distribution for desired light to energy generation levels
- Replaces traditional architectural glass surfaces with renewable energy generating surfaces
- Construction grade material thicknesses
- Withstands extreme temperature and weather conditions
- IP68-rated water resistance



ClearVue^{PV} Skylight Specifications

High Transmittance BIPV Glass

ClearVue^{PV} Skylight products provide a high-performance energy generating solution for roof light, canopy, and other special glass projects where light transmittance is a priority.

Product Features

- Customizable, tailored options
- Panel size, glass thickness, and shape can be customized
- Highly transparent with excellent light transmittance
- High efficiency for enhanced energy generation
- Supports renewable energy and carbon offset goals
- Long term operation and reliability
- IP68-rated water resistance, fire tested, and wind resistant
- Long lifespan supporting on-site energy generation

ELECTRICAL PARAMETERS

Module Type	CVSLC-73-12X6	CVSLC-125-12X6	CVSLC-230-17X11	CVSLC-380-17X11
Power Output (P_{max})	73W	125W	230W	380W
Power Output Tolerances (ΔP_{max})	±5W	±5W	±5W	±5W
Module Efficiency (η_m)	10.1%	17.4%	11.4%	18.9%
Voltage at Pmax (V_{mpp})	11.6V	20.9V	38.4V	31.4V
Current at Pmax (I_{mpp})	6.29A	5.98A	5.99A	12.1A
Open-Circuit Current (V_{oc})	14.1V	25.3V	46.5V	38.0V
Short-Circuit Current (I_{sc})	6.61A	6.28A	6.29A	12.7A

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

CONSTRUCTION MATERIALS

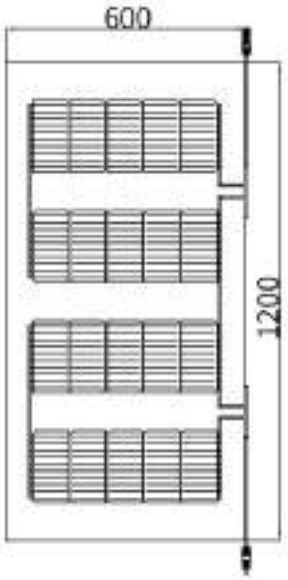
Module Type	CVSLC-73-12X6	CVSLC-125-12X6	CVSLC-230-17X11	CVSLC-380-11X17
Glass (material/thickness)	6mm+6mm (3.2 Opt)	6mm+6mm (3.2 Opt)	6mm+6mm (3.2 Opt)	6mm+6mm (3.2 Opt)
Baseplate (material)	PVB	PVB	PVB	PVB
Junction Box (protection degree)	≥IP68	≥IP68	≥IP68	≥IP68
Cable (length/cross-sectional area)	300mm/4mm^2/ Customizable	300mm/4mm^2/ Customizable	300mm/4mm^2/ Customizable	300mm/4mm^2/ Customizable
Plug connector (type/protection degree)	MC4/IP68	MC4/IP68	MC4/IP68	MC4/IP68
Packing	Pallets or wooden box	Pallets or wooden box	Pallets or wooden box	Pallets or wooden box
Dimensions	1200 x 600mm	1200 x 600mm	1750 x 1150mm	1750 x 1150mm
Dimensions of cell	182 x 91mm	182 x 91mm	182 x 91mm	182 x 91mm
Cell layout	4 x 5 (50%)	3 x 12 (≈10%)	6 x 11 (50%)	2-6 x 9 (≈10%)
Weight	24kg	24kg	67kg	67kg

ClearVue^{PV} Skylight Specifications

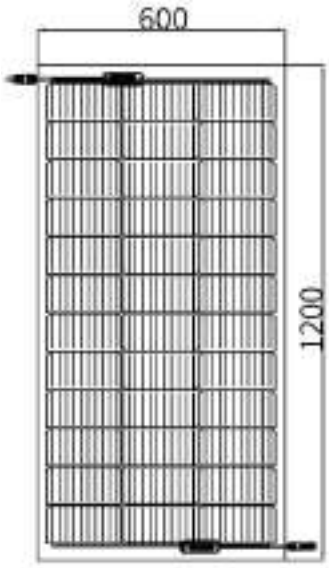
High Transmittance BIPV Glass

ENGINEERING DRAWINGS (mm)

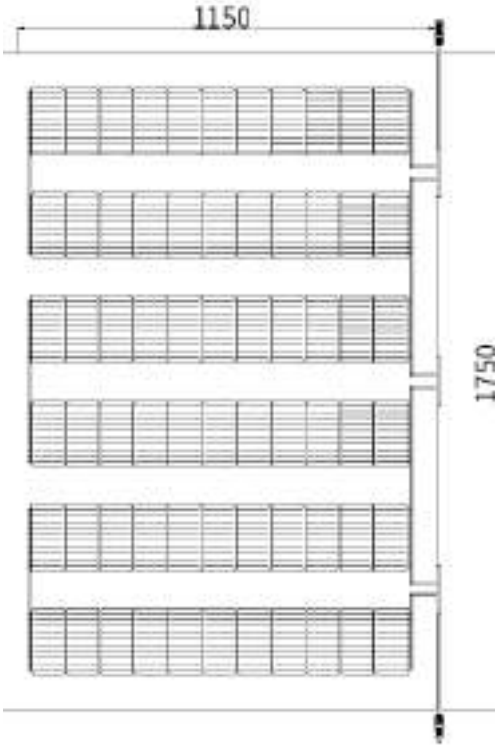
600 x 1200
73W



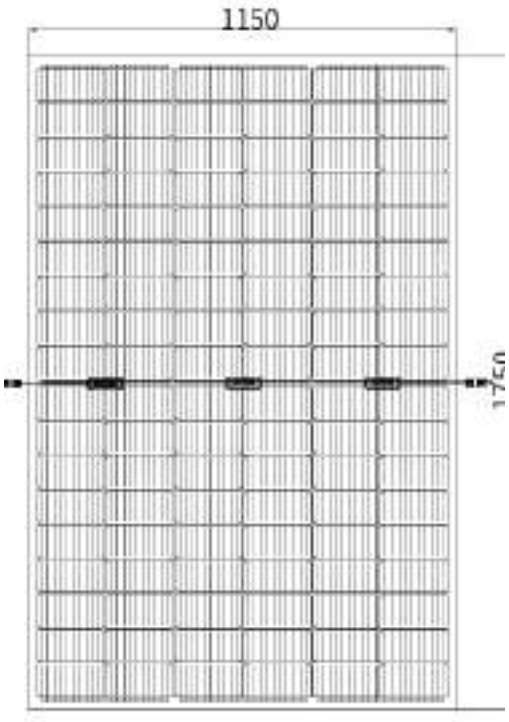
600 x 1200
125W



1150 x 1750
230W



1150 x 1750
380W



Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without prior notice. The specifications may deviate slightly for final delivered products and are not guaranteed.

ClearVue^{PV} Balustrade Specifications

High Transmittance BIPV

ClearVue^{PV} Balustrade delivers a highly customizable energy generation solution that can be used for skylights, façade, balcony railings, and fences. Varying levels of privacy and a broad range of design options are possible.

Product Features

- Cell size and spacing is customizable
- Highly transparent for excellent light transmittance
- Ultra narrow frame design maximizes views
- Optimized energy generation
- Supports renewable energy and carbon offset goals
- Long term operation and reliability
- IP68-rated water resistance, fire tested, and wind resistant
- Long lifespan supporting on-site energy generation

ELECTRICAL PARAMETERS

Module Type	CVBTC-82-10.1X8	CVBTC-165-17X10
Power Output (P_{max})	82W	165W
Power Output Tolerances (ΔP_{max})	±5W	±5W
Voltage at Pmax (V_{mpp})	78.8V	163.4V
Current at Pmax (I_{mpp})	1.04A	1.01A
Open-Circuit Current (V_{oc})	95.3V	197.7V
Short-Circuit Current (I_{sc})	1.09A	1.06A

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

CONSTRUCTION MATERIALS

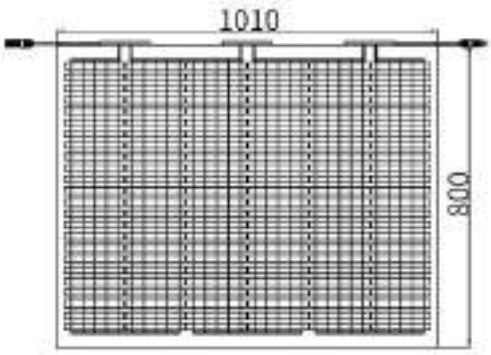
Module Type	CVBTC-82-10.1X8	CVBTC-165-17X10
Dimensions	1010 x 800mm	1700 x 1000mm
Glass structure	6mm + 6mm	6mm + 6mm
Cell layout	6 x 24	10 x 30
Weight	27kg	57kg
Transmittance	52%	52%

ClearVue^{PV} Balustrade Specifications

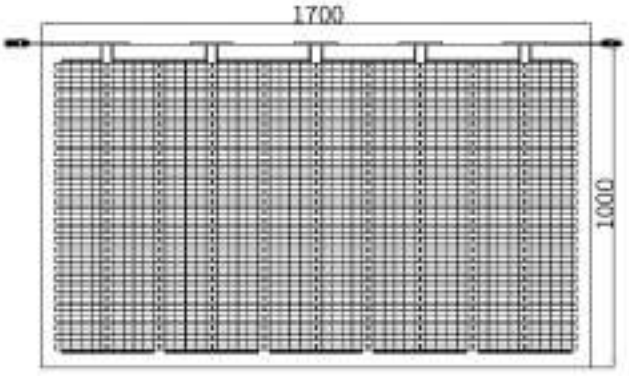
High Transmittance BIPV

ENGINEERING DRAWINGS (mm)

1010 x 800
82W



1700 x 1000
165W



Fence and Rail Options are also available

Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without prior notice. The specifications may deviate slightly for final delivered products and are not guaranteed.

ClearVue^{PV} Balustrade Specifications

High Transmittance BIPV

ClearVue^{PV} Balustrade delivers a highly customizable energy generation solution that can be used for skylights, façade, balcony railings, and fences. Varying levels of privacy and a broad range of design options are possible.

Product Features

- Cell size and spacing is customizable
- Highly transparent for excellent light transmittance
- Ultra narrow frame design maximizes views
- Optimized energy generation
- Supports renewable energy and carbon offset goals
- Long term operation and reliability
- IP68-rated water resistance, fire tested, and wind resistant
- Long lifespan supporting on-site energy generation

ELECTRICAL PARAMETERS (STC)

Module Type	CVBTC-78-10.3X10	CVBTC-130-17X10
Power Output (P_{max})	78W	130W
Power Output Tolerances (ΔP_{max})	±3%	±3%
Voltage at Pmax (V_{mpp})	82.1V	137.5V
Current at Pmax (I_{mpp})	0.95A	0.95A
Open-Circuit Current (V_{oc})	99.3V	166.4V
Short-Circuit Current (I_{sc})	1.01A	1.01A

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

CONSTRUCTION MATERIALS

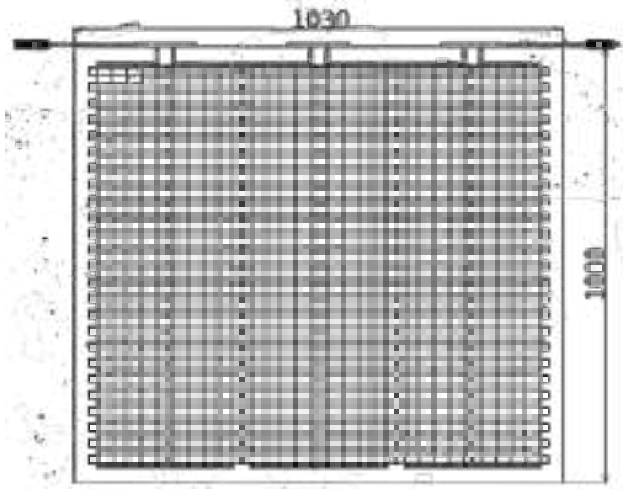
Module Type	CVBTC-78-10.3X10	CVBTC-130-17X10
Glass (material/thickness)	Low-iron tempered glass	
Encapsulating material	PVB	
Junction box (protection degree)	≥IP68	
Cable Length (Customizable)	300mm/4mm^2	
Plug connector (type/rating)	MC4 / IP68	
Packing	A-frame/wooden box	
Dimensions (L x W x TH)	1030 x 1000 x 17.5mm	1700 x 1000 x 17.5mm
Dimensions	158.75 x 17mm	158.75 x 17mm
Cell layout	6 x 25	10 x 25
Weight	42kg	74kg
Transmittance	60%	60%

ClearVue^{PV} Balustrade Specifications

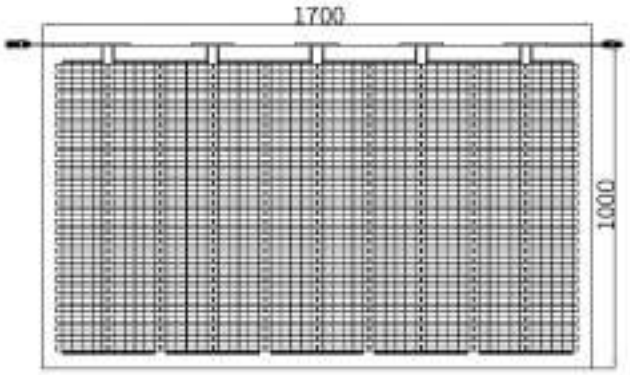
High Transmittance BIPV

ENGINEERING DRAWINGS (mm)

1030 x 1000
78W



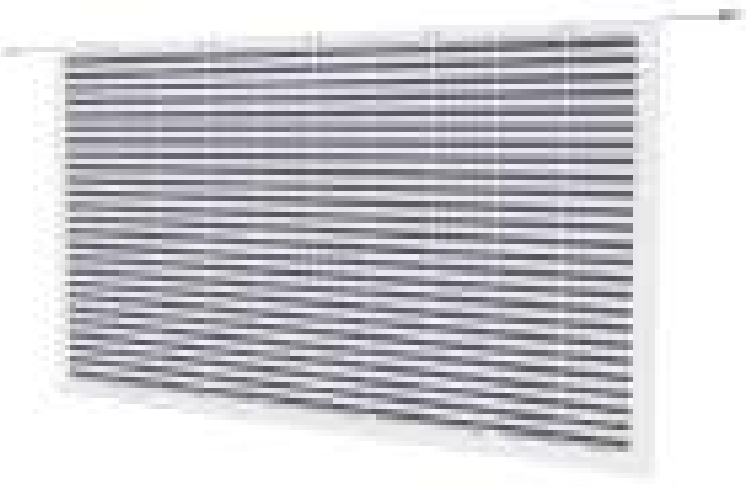
1700 x 1000
130W



PRODUCT IMAGES

1030 x 1000
78W

1700 x 1000
130W



Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without prior notice. The specifications may deviate slightly for final delivered products and are not guaranteed.

Solar Cladding & Architectural BIPV

ClearVue^{PV} Cladding and Architectural BIPV delivers striking architectural design and maximizes energy generation across the building façade with a broad range of colors and textures.

Emirates Glass

ClearVue^{PV}

Solar Cladding & Architectural BIPV

ClearVue^{PV} Building Integrated Photovoltaic (BIPV) colored crystalline silicon replaces traditional curtain wall glass turning it into a solar energy generating building façade.

Excellent
power generation efficiency

Outstanding
range of colors and textures

Tolerant
of extreme environmental conditions

ClearVue^{PV} Cladding and Architectural BIPV solutions come in a wide range of colors to complement the design of new builds and for renovation of existing buildings. Architectural designs can be beautiful and provide energy efficiency while making a positive environmental impact.

Benefits

- Bright gloss and matte finishes available in rich colors
- Reliable and color fast for decades of use
- High-efficiency cells provide excellent power generation
- A broad variety of colors and size configurations are available for maximum flexibility
- Provides significant energy consumption offset for commercial buildings
- Supports renewable energy and carbon offset goals
- IP68-rated water resistance, fire tested, and wind resistant
- Silicon solar cells deliver a proven track record of reliability and longevity

ClearVue^{PV} Bright Gloss Cladding Specifications

Gloss Building Integrated Photovoltaics

ClearVue^{PV} Bright Gloss Cladding supports significant advancements in building envelope sustainability and offers architectural options for creative, eye-catching, contemporary building designs.

Product Features

- Highly transparent, rich color
- Reliable and color fast for decades of use
- High-efficiency cells provide excellent power generation
- A broad variety of colors and size configurations are available for maximum flexibility
- Panel size and shape can be customized
- Provides significant energy consumption offset for commercial buildings
- Supports renewable energy and carbon offset goals
- Environmentally friendly
- IP68-rated water resistance, fire tested, and wind resistant
- Silicon solar cells deliver a proven track record of reliability and longevity

ELECTRICAL CHARACTERISTICS (STC) 1200 x 600mm

Module Type	CVBC__-100-12X6	CVBC__-125-12X6	CVBC__-120-12X6	CVBC__-120-12X6	CVBC__-120-12X6	CVBC__-120-12X6
Color (Customizable)	White	Gray	Blue	Green	Red	Yellow
Power Output (P_{max})	100W	125W	120W	120W	120W	120W
Power Output Tolerances (ΔP_{max})	±5W	±5W	±5W	±5W	±5W	±5W
Module Efficiency (η_m)	13.9%	17.4%	16.7%	16.7%	16.7%	16.7%
Voltage at Pmax (V_{mpp})	20.4V	20.7V	20.5V	20.5V	20.5V	20.5V
Current at Pmax (I_{mpp})	4.90A	6.10A	5.85A	5.85A	5.85A	5.85A
Open-Circuit Current (V_{oc})	24.7V	25.0V	24.8V	24.8V	24.8V	24.8V
Short-Circuit Current (I_{sc})	5.15A	6.41A	6.14A	6.14A	6.14A	6.14A

ELECTRICAL CHARACTERISTICS (STC) 1750 x 1150mm

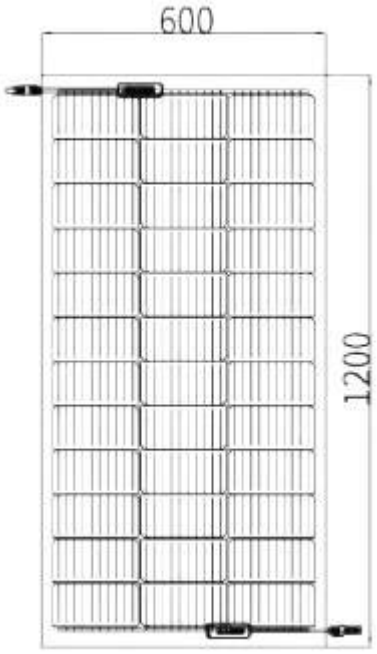
Module Type	CVBC__-295-17X11	CVBC__-380-17X11	CVBC__-360-17X11	CVBC__-360-17X11	CVBC__-360-17X11	CVBC__-360-17X11
Color (Customizable)	White	Gray	Blue	Green	Red	Yellow
Power Output (P_{max})	295W	380W	360W	360W	360W	360W
Power Output Tolerances (ΔP_{max})	±3%	±3%	±3%	±3%	±3%	±3%
Module Efficiency (η_m)	14.7%	18.9%	17.9%	17.9%	17.9%	17.9%
Voltage at Pmax (V_{mpp})	30.1V	31.1V	30.8V	30.8V	30.8V	30.8V
Current at Pmax (I_{mpp})	9.80A	12.2A	11.7A	11.7A	11.7A	11.7A
Open-Circuit Current (V_{oc})	36.4V	37.6V	37.3V	37.3V	37.3V	37.3V
Short-Circuit Current (I_{sc})	10.3A	12.8A	12.3A	12.3A	12.3A	12.3A

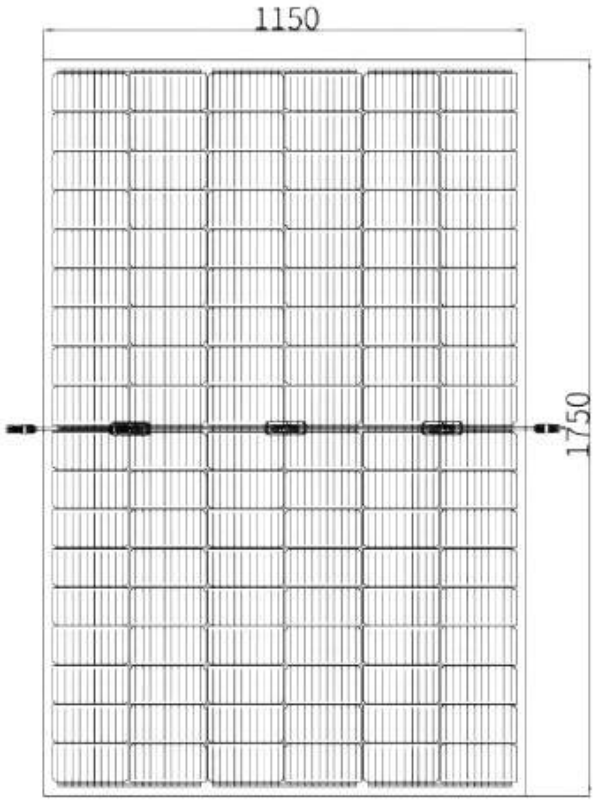
STC: 1000W/m^2 irradiance, 25 degree cell temperature, AM1.5g

ClearVue^{PV} Bright Gloss Cladding Specifications

Gloss Building Integrated Photovoltaics

ENGINEERING DRAWINGS (mm)





CONSTRUCTION MATERIALS

Module Type	CVBC__-___-12X6	CVBC__-___-17X11
Glass (material/thickness)	Low-iron tempered glass/6mm	Low-iron tempered glass/6mm
Baseplate (material)	PVB or EVA	PVB or EVA
Junction Box (protection degree)	≥IP68	≥IP68
Cable (length/cross-sectional area)	300mm/4mm^2/Customizable	300mm/4mm^2/Customizable
Plug connector (type/protection degree)	MC4/IP68	MC4/IP68
Packing	Pallets or wooden box	Pallets or wooden box
Dimensions	1200 x 600mm	1750 x 1150mm
Dimensions of cell	182 x 91mm	182 x 91mm
Cell layout	3 x 12	2-6 x 9
Weight	24kg	67kg

ClearVue^{PV} Bright Gloss Cladding Specifications

Gloss Building Integrated Photovoltaics

COLOR OPTIONS

Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without prior notice. The specifications may deviate slightly for final delivered products and are not guaranteed.

ClearVue^{PV} Matte Cladding Specifications

Matte Building Integrated Photovoltaics

ClearVue^{PV} Matte BIPV is engineered to replace traditional glass curtain wall materials with energy generating building integrated photovoltaic glass and supports a broad range of architectural designs.

Product Features

- Matte finish in a variety of rich colors
- Reliable and color fast for decades of use
- High-efficiency cells provide excellent power generation
- A broad variety of colors and size configurations are available for maximum flexibility
- Panel size and shape can be customized
- Supports renewable energy and carbon offset goals
- Environmentally friendly
- IP68-rated water resistance, fire tested, and wind resistant
- Silicon solar cells deliver a proven track record of reliability and longevity

ELECTRICAL CHARACTERISTICS (STC) 1200 x 600mm

Module Type	CVOC__-125-12X6	CVOC__-110-12X6	CVOC__-110-12X6	CVOC__-100-12X6	CVOC__-100-12X6
Color (Customizable)	Gray	Blue	Green	Red	Yellow
Power Output (P_{max})	125W	110W	110W	100W	100W
Power Output Tolerances (ΔP_{max})	±5W	±5W	±5W	±5W	±5W
Module Efficiency (η_m)	17.4%	15.3%	15.3%	13.9%	13.9%
Voltage at Pmax (V_{mpp})	20.6V	19.4V	19.4V	19.0V	19.0V
Current at Pmax (I_{mpp})	6.07A	5.67A	5.67A	5.26A	5.26A
Open-Circuit Current (V_{oc})	24.9V	23.5V	23.5V	23.0V	23.0V
Short-Circuit Current (I_{sc})	6.37A	5.95A	5.95A	5.53A	5.53A

ELECTRICAL CHARACTERISTICS (STC) 1750 x 1150mm

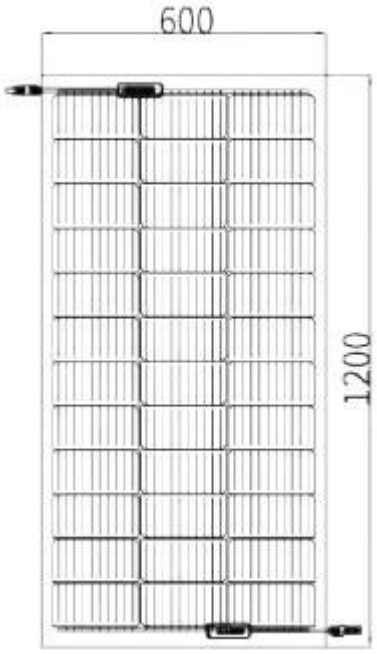
Module Type	CVOC__-375-17X11	CVOC__-325-17X11	CVOC__-335-17X11	CVOC__-300-17X11	CVOC__-305-17X11
Color (Customizable)	Gray	Blue	Green	Red	Yellow
Power Output (P_{max})	375W	325W	335W	300W	305W
Power Output Tolerances (ΔP_{max})	±3%	±3%	±3%	±3%	±3%
Module Efficiency (η_m)	18.6%	16.1%	16.6%	14.9%	15.2%
Voltage at Pmax (V_{mpp})	30.9V	29.1V	29.4V	28.5V	28.6V
Current at Pmax (I_{mpp})	12.1A	11.2A	11.4A	10.5A	10.7A
Open-Circuit Current (V_{oc})	37.4V	35.2V	35.6V	34.5V	34.6V
Short-Circuit Current (I_{sc})	12.7A	11.8A	12.0A	11.1A	11.2A

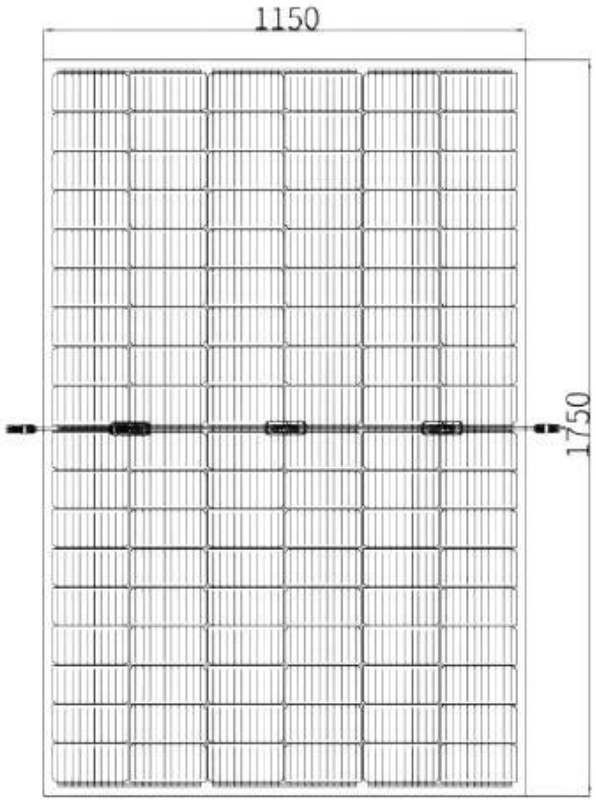
STC: 1000W/m² irradiance, 25 degree cell temperature, AM1.5g

ClearVue^{PV} Matte Cladding Specifications

Matte Building Integrated Photovoltaics

ENGINEERING DRAWINGS (mm)





CONSTRUCTION MATERIALS

Module Type	CVOC__-___-12X6	CVOC__-___-17X11
Glass (material/thickness)	Low-iron tempered glass/6mm	Low-iron tempered glass/6mm
Baseplate (material)	PVB or EVA	PVB or EVA
Junction Box (protection degree)	≥IP68	≥IP68
Cable (length/cross-sectional area)	300mm/4mm^2/Customizable	300mm/4mm^2/Customizable
Plug connector (type/protection degree)	MC4/IP68	MC4/IP68
Packing	Pallets or wooden box	Pallets or wooden box
Dimensions	1200 x 600mm	1750 x 1150mm
Dimensions of cell	182 x 91mm	182 x 91mm
Cell layout	3 x 12	2-6 x 9
Weight	24kg	67kg

ClearVue^{PV} Matte Cladding Specifications

Matte Building Integrated Photovoltaics

COLOR OPTIONS

ClearVue^{PV} Architectural Cladding Specifications

Artistic Building Integrated Photovoltaics

ClearVue^{PV} Architectural Glaze is engineered with high quality p-type mono cells and a proven manufacturing process for reliable power generation. A variety of colors and size configurations can be tailored to meet specific architectural and energy generation goals.

Product Features

- High durability
- Multi-busbar design delivers long term reliability
- More power output per square meter
- Panel size and shape can be customized
- High conversion efficiency
- Lower series resistance and better light harvesting
- Cell string layout and half-cell design maximizes energy generation even when shaded
- Colored crystalline silicon BIPV gives architects limitless design options
- Large cell design increases module peak power and reduces overall system costs

ELECTRICAL CHARACTERISTICS (STC) 1128 x 1716mm

Module Type	CVAC-MT410-11.2X17.1	CVAC-UM400-11.2X17.1	CVAC-CI395-11.2X17.1	CVAC-VV395-11.2X17.2
Color (Customizable)	Mystic Metal	Ultramarine	Citrine	Viridian Vista
Power Output (P_{max})	410W	400W	395W	395W
Power Output Tolerances (ΔP_{max})	±5W	±5W	±5W	±5W
Module Efficiency (η_m)	21.2%/21.0% (framed)	20.7%/20.4% (framed)	20.4%/20.2% (framed)	20.4%/20.2% (framed)
Voltage at Pmax (V_{mpp})	33.3V	33.1V	32.9V	32.9V
Current at Pmax (I_{mpp})	12.3A	12.1A	12.0A	12.0A
Open-Circuit Current (V_{oc})	39.6V	39.4V	39.3V	39.3V
Short-Circuit Current (I_{sc})	12.9A	12.7A	12.7A	12.7A

ELECTRICAL CHARACTERISTICS (STC) 1134 x 1722mm

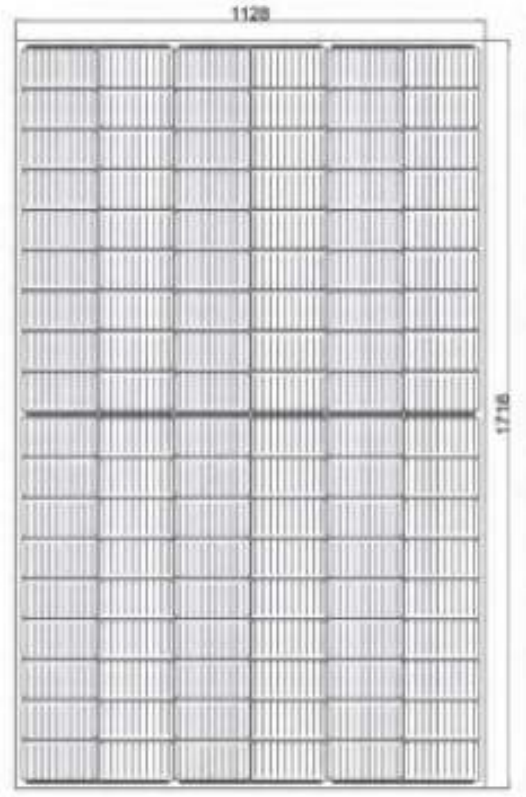
Module Type	CVAC-SS/VM375-11.3X17.2	CVAC-GR350-11.3X17.2	CVAC-MA345-11.3X17.2	CVAC-CY340-11.3X17.2
Color (Customizable)	Solar Spark/Vermillion	Grayscale Glow	Maroon Mosaic	Copper Canyon
Power Output (P_{max})	375W	350W	345W	340W
Power Output Tolerances (ΔP_{max})	±5W	±5W	±5W	±5W
Module Efficiency (η_m)	19.4%/19.2% (framed)	18.1%/17.9% (framed)	17.8%/17.6% (framed)	17.6%/17.4% (framed)
Voltage at Pmax (V_{mpp})	32.6V	32.5V	32.3V	32.1V
Current at Pmax (I_{mpp})	11.5A	10.8A	10.7A	10.6A
Open-Circuit Current (V_{oc})	39.1V	39.1V	39.1V	39.0V
Short-Circuit Current (I_{sc})	12.2A	11.5A	11.4A	11.3A

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

ClearVue^{PV} Architectural Cladding Specifications

Artistic Building Integrated Photovoltaics

ENGINEERING DRAWINGS (mm)



CONSTRUCTION MATERIALS

Module Type	CVAC-_____-17.1X11.2 or -17.2X11.3
Glass (material/thickness)	Low-iron tempered glass
Baseplate (material)	PVB or EVA
Junction Box (protection degree)	≥IP68
Cable (length/cross-sectional area)	300mm/4mm^2/Customizable
Plug connector (type/protection degree)	MC4/IP68
Packing	Pallets or wooden box
Dimensions	1716 x 1128 x 6mm / 1722 x 1134 x 30mm
Dimensions of cell	182 x 91mm
Cell layout	2-6 x 91mm
Weight	30kg (unframed) / 32kg (framed)

ClearVue^{PV} Architectural Cladding Specifications

Artistic Building Integrated Photovoltaics

COLOR OPTIONS

Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without prior notice. The specifications may deviate slightly for final delivered products and are not guaranteed.

Solar Cladding

ClearVue provides a broad range of solar cladding solutions that support nearly any architectural style. Available cladding options are designed to resemble modern and traditional building cladding including materials like masonry, granite, marble, wood, and more.

Emirates Glass

ClearVue PV

Explore all the ways you can bring renewable energy generation for all the surfaces of your sustainable building plans.

Solar Cladding

ClearVue^{PV} Cladding and Spandrel is engineered to simulate a variety of façade materials and maximize solar energy generation across the building envelope.

Excellent ROI

through operational cost reductions + significant energy offsets

Beautiful

range of colors and textures

Tolerant

of extreme environmental conditions

ClearVue^{PV} Cladding offers absolute creative freedom in sustainable architectural design. Whether you are designing a new build or working on a retrofit or refurbishment project, reliable energy efficiency can be built into your construction project.

Benefits

- A broad lineup of simulated cladding materials with rich colors and textures to suit any architectural style
- Imagine beautiful renewable solar that mimics siding exteriors like brick, marble, granite, wood, and more
- Project-specific sizes and bespoke options for projects over 1000 meters
- Silicon bead seals to preserve beauty
- Engineered to integrate with ClearVue vision glass
- IP68-rated water resistance, fire tested, and wind resistant
- Extends energy generation to more building envelope surfaces to significantly decrease the operational carbon footprint of buildings
- Streamlined connections to preserve beauty and decrease installation costs

ClearVue^{PV} Marble Cladding Specifications

Simulated Marble BIPV

ClearVue^{PV} Marble Cladding and Spandrel provides solar energy generation on building façade surfaces that require the sophistication and historical accuracy of marble.

Product Features

- Comes in a range of marble colors and patterns to suit any architectural style
- Safe and reliable operation for long term energy generation
- Project-specific sizes and bespoke options for projects over 1000 meters
- IP68-rated water resistance, fire tested, and wind resistant
- Silicon solar cells deliver a proven track record of reliability and longevity
- Supports renewable energy and carbon offset goals
- Can be integrated with ClearVue Solar Vision Glass to decrease operational costs for buildings

ELECTRICAL CHARACTERISTICS (STC) 1200 x 600mm

Module Type	CVMCEG-105-12X6	CVMCRS-120-12X6	CVMCSM-85-12X6
Color (Customizable)	Ebony Gold Marble	Ravenstone Marble	Silver Mist Marble
Power Output (P_{max})	105W	120W	85W
Power Output Tolerances (ΔP_{max})	±5W	±5W	±5W
Module Efficiency (η_m)	14.6%	16.7%	11.8%
Voltage at Pmax (V_{mpp})	19.1V	20.5V	18.7V
Current at Pmax (I_{mpp})	5.5A	5.85A	4.55A
Open-Circuit Current (V_{oc})	23.1V	24.8V	22.6V
Short-Circuit Current (I_{sc})	5.77A	6.14A	4.87A

ELECTRICAL CHARACTERISTICS (STC) 1750 x 1150mm

Module Type	CVMCEG-315-17X11	CVMCRS-255-17X11	CVMCSM-255-17X11
Color (Customizable)	Ebony Gold Marble	Ravenstone Marble	Silver Mist Marble
Power Output (P_{max})	315W	355W	255W
Power Output Tolerances (ΔP_{max})	±3%	±3%	±3%
Module Efficiency (η_m)	15.6%	17.6%	12.7%
Voltage at Pmax (V_{mpp})	28.8V	30.7V	28.4V
Current at Pmax (I_{mpp})	10.9A	11.6A	8.98A
Open-Circuit Current (V_{oc})	34.8V	37.1V	34.4V
Short-Circuit Current (I_{sc})	11.4A	12.2A	9.52A

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

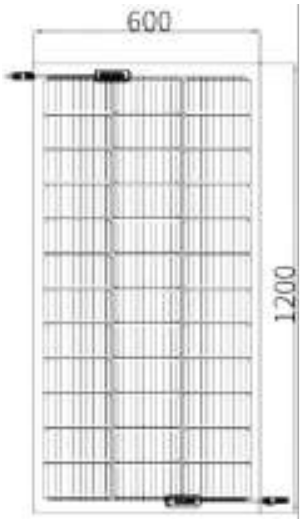
ClearVue^{PV} Marble Cladding Specifications

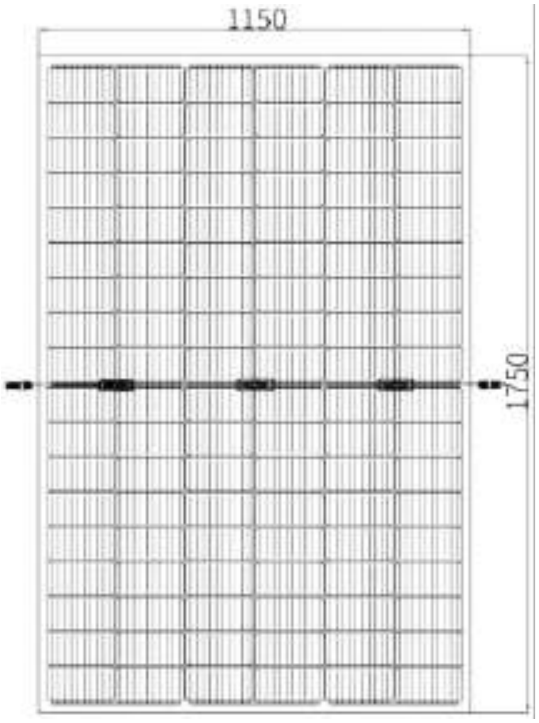
Simulated Marble BIPV

CONSTRUCTION MATERIALS

Module Type	CVMC__-___-17X11
Glass (material/thickness)	Low-iron tempered glass
Baseplate (material)	PVB or EVA
Junction Box (protection degree)	≥IP68
Cable (length/cross-sectional area)	300mm/4mm²/Customizable
Plug connector (type/protection degree)	MC4/IP68
Packing	Pallets or wooden box
Dimensions	1716 x 1128 x 6mm / 1722 x 1134 x 30mm
Dimensions of cell	182 x 91mm
Cell layout	2-6 x 91mm
Weight	30kg

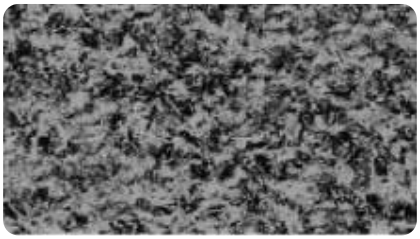
ENGINEERING DRAWINGS (mm)





COLOR OPTIONS

Ebony Gold Marble



Ravenstone Marble

Silver Mist Marble

Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without prior notice. The specifications may deviate slightly for final delivered products and are not guaranteed.

ClearVue^{PV} Masonry Cladding Specifications

Architectural Brick BIPV

ClearVue^{PV} Masonry Cladding and Spandrel brings renewable energy to masonry and stucco clad building façades.

Product Features

- Common building façade materials like brick masonry and stucco can be seamlessly substituted with energy generating BIPV
- Project-specific sizes and bespoke options for projects over 1000 meters
- Can be integrated with ClearVue Solar Vision Glass to decrease operational costs for buildings
- Streamlined connections to preserve architectural charm and reduce deployment costs
- IP68-rated water resistance, fire tested, and wind resistant
- Silicon solar cells deliver a proven track record of reliability and longevity

ELECTRICAL CHARACTERISTICS (STC) 1200 x 600mm

Module Type	CVMBCRM -105-12X6	CVMBCSB-105-12X6	CVMBCGP -95-12X6	CVMBCHB-95-12X6	CVMBCMY-100-12X6	CVMBCCB-90-12X6
Color (Customizable)	Raven Masonry	Smoke Black Masonry	Gray Phantom Texture	Historic Brick Masonry	Mastery Steel Masonry	Crimson Brick Masonry
Power Output (P_{max})	105W	105W	95W	95W	100W	90W
Power Output Tolerances (ΔP_{max})	±5W	±5W	±5W	±5W	±5W	±5W
Module Efficiency (η_m)	14.6%	14.6%	13.2%	13.2%	13.9%	12.5%
Voltage at Pmax (V_{mpp})	19.1V	19.1V	18.9V	18.9V	19.0V	18.8V
Current at Pmax (I_{mpp})	5.50A	5.50A	5.03A	5.03A	5.26A	4.79A
Open-Circuit Current (V_{oc})	23.1V	23.1V	22.9V	22.9V	23.0V	22.8V
Short-Circuit Current (I_{sc})	5.77A	5.77A	5.28A	5.28A	5.53A	5.03A

ELECTRICAL CHARACTERISTICS (STC) 1750 x 1150mm

Module Type	CVMBCRM-310-17X11	CVMBCSB-315-17X11	CVMBCGP -285-17X11	CVMBCHB-285-17X11	CVMBCMY-295-17X11	CVMBCCB-270-17X11
Color (Customizable)	Raven Masonry	Smoke Black Masonry	Gray Phantom Texture	Historic Brick Masonry	Mastery Steel Masonry	Crimson Brick Masonry
Power Output (P_{max})	310W	315W	285W	285W	295W	270W
Power Output Tolerances (ΔP_{max})	±3%	±3%	±3%	±3%	±3%	±3%
Module Efficiency (η_m)	15.4%	15.7%	14.2%	14.2%	14.7%	13.4%
Voltage at Pmax (V_{mpp})	28.7V	28.8V	28.2V	28.2V	28.4V	27.9V
Current at Pmax (I_{mpp})	10.8A	10.9A	10.1A	10.1A	10.4A	9.68A
Open-Circuit Current (V_{oc})	34.7V	34.8V	34.1V	34.1V	34.4V	33.8V
Short-Circuit Current (I_{sc})	11.3A	11.4A	10.6A	10.6A	10.9A	10.2A

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

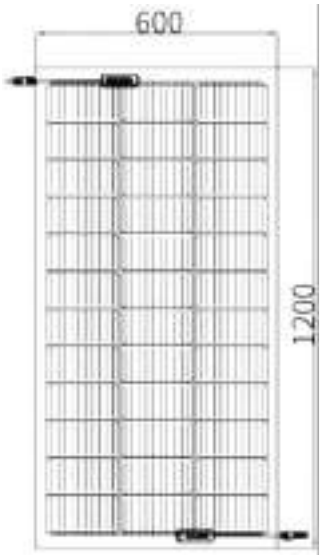
ClearVue^{PV} Masonry Cladding Specifications

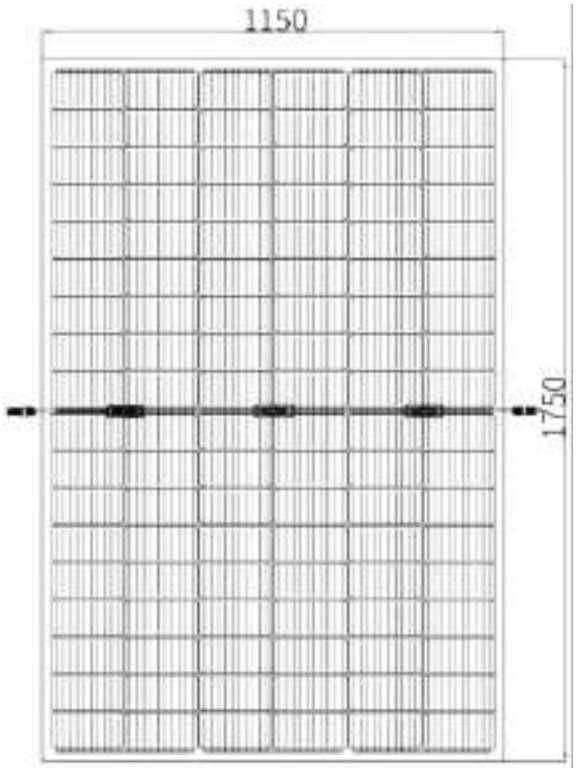
Architectural Brick BIPV

CONSTRUCTION MATERIALS

Module Type	CVMBC__-___-12X6	CVMBC__-___-17X11
Glass (material/thickness)	Low-iron tempered glass/6mm	Low-iron tempered glass/6mm
Baseplate (material)	PVB or EVA	PVB or EVA
Junction Box (protection degree)	≥IP68	≥IP68
Cable (length/cross-sectional area)	300mm/4mm^2/Customizable	300mm/4mm^2/Customizable
Plug connector (type/protection degree)	MC4/IP68	MC4/IP68
Packing	Pallets or wooden box	Pallets or wooden box
Dimensions	1200 x 600mm	1750 x 1150mm
Dimensions of cell	182 x 91mm	182 x 91mm
Cell layout	3 x 12	2-6 x 9
Weight	24kg	67kg

ENGINEERING DRAWINGS (mm)



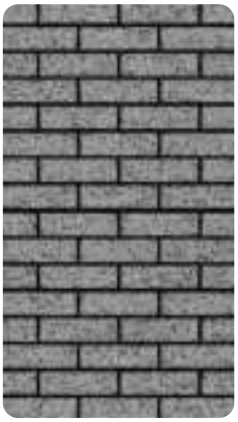


ClearVue^{PV} Masonry Cladding Specifications

Architectural Brick BIPV

COLOR OPTIONS

Raven Masonry



Smoke Black Masonry

Gray Phantom Texture

Historic Brick Masonry

Mastery Steel Masonry

Crimson Brick Masonry

ClearVue^{PV} Granite Cladding Specifications

Stone Texture BIPV

ClearVue^{PV} Granite Cladding and Spandrel provides a variety of BIPV stone textures and colors that maximize energy generation across the building envelope and deliver creative options for a variety of architectural styles.

Product Features

- Advanced exterior wall finishes replace stone material for renewable energy generation
- Corrosion, pressure, and water resistent for durability
- Project-specific sizes and bespoke options for projects over 1000 meters
- Silicon bead seals to preserve beauty
- Can be integrated with ClearVue Solar Vision Glass to decrease operational costs for buildings
- IP68-rated water resistance, fire tested, and wind resistant
- Silicon solar cells deliver a proven track record of reliability and longevity

ELECTRICAL CHARACTERISTICS (STC) 1200 x 600mm

Module Type	CVGCSG-105-12X6	CVGCMB-105-12X6	CVGCGC-105-12X6	CVGCMC-115-12X6
Color (Customizable)	Silverstone	Malibu Fawn	Glacier Capri	Mocha Cider
Power Output (P_{max})	105W	105W	105W	115W
Power Output Tolerances (ΔP_{max})	±5W	±5W	±5W	±5W
Module Efficiency (η_m)	14.6%	14.6%	14.6%	16.0%
Voltage at Pmax (V_{mpp})	19.1V	19.1V	19.1V	19.8V
Current at Pmax (I_{mpp})	5.50A	5.50A	5.50A	5.81A
Open-Circuit Current (V_{oc})	23.1V	23.1V	23.1V	24.0V
Short-Circuit Current (I_{sc})	5.77A	5.77A	5.77A	6.10A

ELECTRICAL CHARACTERISTICS (STC) 1750 x 1150mm

Module Type	CVGCSG-305-17X11	CVGCMB-310-17X11	CVGCGC-310-17X11	CVGCMC-345-17X11
Color (Customizable)	Silverstone	Malibu Fawn	Glacier Capri	Mocha Cider
Power Output (P_{max})	305W	310W	310W	345W
Power Output Tolerances (ΔP_{max})	±3%	±3%	±3%	±3%
Module Efficiency (η_m)	15.2%	15.4%	15.4%	17.1%
Voltage at Pmax (V_{mpp})	28.6V	28.7V	28.7V	29.7V
Current at Pmax (I_{mpp})	10.7A	10.8A	10.8A	11.6A
Open-Circuit Current (V_{oc})	34.6V	34.7V	34.7V	35.9V
Short-Circuit Current (I_{sc})	11.2A	11.3A	11.3A	12.2A

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

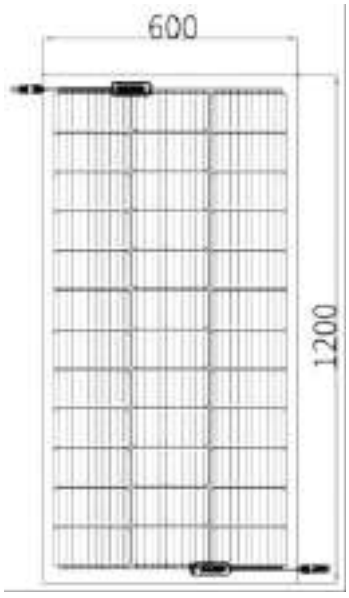
ClearVue^{PV} Granite Cladding Specifications

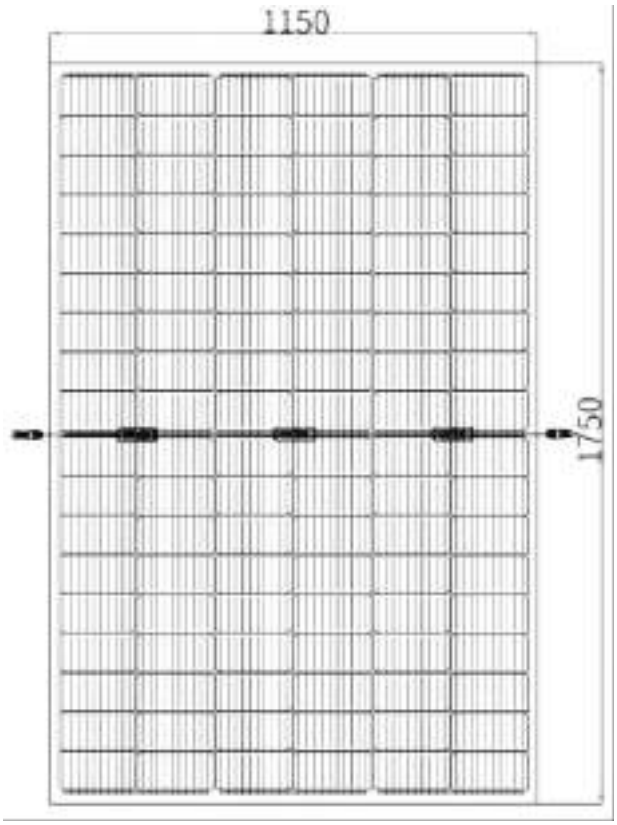
Stone Texture BIPV

CONSTRUCTION MATERIALS

Module Type	CVGC__-___-12X6	CVGC__-___-17X11
Glass (material/thickness)	Low-iron tempered glass/6mm	Low-iron tempered glass/6mm
Baseplate (material)	PVB or EVA	PVB or EVA
Junction Box (protection degree)	≥IP68	≥IP68
Cable (length/cross-sectional area)	300mm/4mm^2/Customizable	300mm/4mm^2/Customizable
Plug connector (type/protection degree)	MC4/IP68	MC4/IP68
Packing	Pallets or wooden box	Pallets or wooden box
Dimensions	1200 x 600mm	1750 x 1150mm
Dimensions of cell	182 x 91mm	182 x 91mm
Cell layout	3 x 12	2-6 x 9
Weight	24kg	67kg

ENGINEERING DRAWINGS (mm)





ClearVue^{PV} Granite Cladding Specifications

Stone Texture BIPV

COLOR OPTIONS

Silverstone Granite

Malibu Fawn Granite

Glacier Capri Granite

Mocha Cider Granite

ClearVue^{PV} Artistic Hex Cladding Specifications

Patterned Color BIPV

ClearVue^{PV} Artistic Hex Cladding and Spandrel provides rich textural and colorful effects for building cladding. Delivers visual high-impact and interest for modern building designs.

Product Features

- Adds texture and color interest to building façades
- Modules can be integrated into the building envelope for a variety of architecturally pleasing options
- High-efficiency cells provide excellent power generation
- A broad variety of colors and size configurations are available for maximum flexibility
- Provides significant energy consumption offset for commercial buildings
- Can be integrated with ClearVue Solar Vision Glass to decrease building operational costs
- IP68-rated water resistance, fire tested, and wind resistant
- Silicon solar cells deliver a proven track record of reliability and longevity

ELECTRICAL CHARACTERISTICS (STC) 1200 x 600mm

Module Type	CVAHCLR-90-12X6	CVAHCSU-120-12X6	CVAHCUA-110-12X6	CVAHCQE-110-12X6	CVAHCMP-110-12X6
Color (Customizable)	Lightspeed Ruby	Supernova Gold	Ultraviolet Azul	Quasar Emerald	Moonlight Pewter
Power Output (P_{max})	90W	120W	110W	110W	110W
Power Output Tolerances (ΔP_{max})	±5W	±5W	±5W	±5W	±5W
Module Efficiency (η_m)	12.5%	16.7%	15.3%	15.3%	15.3%
Voltage at Pmax (V_{mpp})	18.8V	20.5V	19.4V	19.4V	19.4V
Current at Pmax (I_{mpp})	4.79A	5.85A	5.67A	5.67A	5.67A
Open-Circuit Current (V_{oc})	22.8V	24.8V	23.5V	23.5V	23.5V
Short-Circuit Current (I_{sc})	5.03A	6.14A	5.95A	5.95A	5.95A

ELECTRICAL CHARACTERISTICS (STC) 1750 x 1150mm

Module Type	CVAHCLR-270-17X11	CVAHCSU-350-17X11	CVAHCUA-325-17X11	CVAHCUA-325-17X11	CVAHCMP-330-17X11
Color (Customizable)	Lightspeed Ruby	Supernova Gold	Ultraviolet Azul	Quasar Emerald	Moonlight Pewter
Power Output (P_{max})	270W	350W	325W	325W	330W
Power Output Tolerances (ΔP_{max})	±3%	±3%	±3%	±3%	±3%
Module Efficiency (η_m)	13.4%	17.4%	16.1%	16.1%	16.4%
Voltage at Pmax (V_{mpp})	27.9V	30.5V	29.1V	29.1V	29.2
Current at Pmax (I_{mpp})	9.68A	11.5A	11.2A	11.2A	11.3A
Open-Circuit Current (V_{oc})	33.8V	36.9V	35.2V	35.2V	35.3V
Short-Circuit Current (I_{sc})	10.2A	12.1A	11.8A	11.8A	11.9A

STC: 1000W/m² irradiance, 25 degree cell temperature, AM1.5g

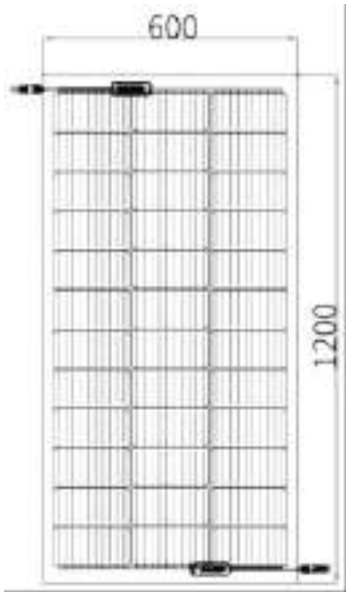
ClearVue^{PV} Artistic Hex Cladding Specifications

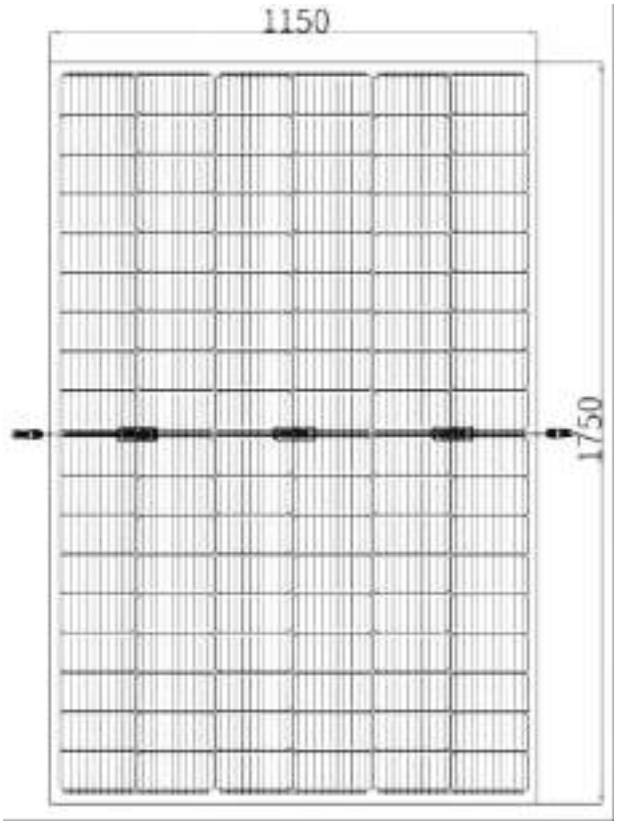
Patterned Color BIPV

CONSTRUCTION MATERIALS

Module Type	CVAHC__-___-12X6	CVAHC__-___-17X11
Glass (material/thickness)	Low-iron tempered glass/6mm	Low-iron tempered glass/6mm
Baseplate (material)	PVB or EVA	PVB or EVA
Junction Box (protection degree)	≥IP68	≥IP68
Cable (length/cross-sectional area)	300mm/4mm^2/Customizable	300mm/4mm^2/Customizable
Plug connector (type/protection degree)	MC4/IP68	MC4/IP68
Packing	Pallets or wooden box	Pallets or wooden box
Dimensions	1200 x 600mm	1750 x 1150mm
Dimensions of cell	182 x 91mm	182 x 91mm
Cell layout	3 x 12	2-6 x 9
Weight	24kg	67kg

ENGINEERING DRAWINGS (mm)





ClearVue^{PV} Artistic Hex Cladding Specifications

Patterned Color BIPV

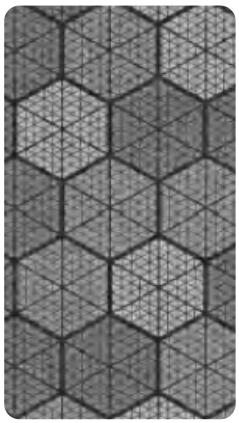
COLOR OPTIONS

Lightspeed Ruby

Supernova Gold

Ultraviolet Azul

Quasar Emerald



Moonlight Pewter

Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without prior notice. The specifications may deviate slightly for final delivered products and are not guaranteed.

Greenhouse Solar Solutions

For a Sustainable Growing Environment

ClearVue^PV Greenhouse Glass promotes sustainable agriculture operations by providing energy generation across the rooftop and vertical wall surfaces of greenhouse buildings.

Download the Brochure

ClearVue^PV

Quality Control & Quality Assurance

Testing & Inspection

Visual inspection of solar cells and testing for quality & performance

Electroluminescence

Inspection and testing of interlayer and solar wafers

Environmental & Stress Testing

Water infiltration, weight bearing, impact, heat, cold, and humidity

Safety & Fire Testing

PV safety, fire classification, fire performance of external cladding

We are dedicated to delivering high-performance, high-quality, long-lasting, and safe façade solutions.

Quality and Safety

ClearVue^{PV} Vision Glass, Spandrel, Skylight, Balustrade, and Cladding products are engineered to meet and/or exceed industry standards for quality, lifespan, and safety.

By undergoing rigorous testing, compliance, and certifications, our solar façade solutions demonstrate the reliability and suitability for deployment in diverse building envelope applications. This ensures optimal energy production, fire resistance, and thermal efficiency. Adherence to these standards underscores our commitment to deliver high-quality, dependable products that contribute to sustainable and resilient built environments.

Certifications & Compliance

ClearVue^{PV} Vision Glass

- 30-year linear power performance warranty
- 10-year product component warranty
- High resistance to high temperatures, high humidity, sand, acid, and alkali environmental conditions
- Fire certified by TÜV SÜD under the EN 13501-1:2018 A2-s1, d0 classification rating for combustibility
- Reliable IGU seal and IP67 connectors

QUALITY & SAFETY TESTING

EN 1279-2	Long term test method and requirements for moisture penetration. Intertek Europe (June 2024)
EN 1279-3	Long term test method and requirements for gas leakage and for gas concentration tolerance. Intertek Europe and SQI (Q3 2024)
ASTM E2190	Insulating Glass Unit Performance and Evaluation. Testing completed and certified by Insulating Glass Certification Council (IGCC)
IEC 61730 and IEC 61215	Electrical Safety Testing by TÜV SÜD (June 2024)
Underwriters Laboratories (UL) UL 61730	PV module safety testing for electrical and mechanical operation by Underwriters Laboratories (Q4 2024)
EN 13501-1	For vertical wall application. by TÜV SÜD Classified as A2-s1, d0 rating; Can be deployed on buildings over 18M high and high-risk environments like hospitals, schools, hotels, etc.

COMPLIANCE & CERTIFICATIONS

Certifications & Compliance

ClearVue^{PV} Spandrel

- 30-year linear power performance warranty
- 12-year product warranty
- High resistance to high temperatures, high humidity, sand, acid, and alkali environmental conditions
- Fire certified by TÜV SÜD under the EN 13501-1:2018 A2-s1, d0 classification rating for combustibility
- Reliable seal and IP68 connectors

TESTING STANDARDS

IEC 61215-1	Terrestrial photovoltaic modules - Design qualification and type approval - Part 1 test requirements
IEC 61215-1-1	Terrestrial photovoltaic modules - Design qualification and type approval - Part 1-1: Special requirements for testing of crystalline silicon photovoltaic modules
IEC 61215-2	Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 2: Test procedures
IEC 61730-1	Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction
IEC 61730-2	Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing
EN 13501-1:2018	Fire classification of construction products and building elements - Achieved A2-s1, d0
AS 4284	Testing of the building facade (Q3 2024)
AS/NZS 1530.3	Fire tests on building materials, components, and structures; Part 3: Ignitability, flame propagation, heat release, and smoke release
Clean Energy Council (CEC) of Australia	Certification - Approved for installation and meets safety standards
ISO	9001 Certified manufacturing facility
UL 61730	PV module safety testing (Q4 2024)

COMPLIANCE & CERTIFICATIONS

Certifications & Compliance

ClearVue^{PV} Cladding

- 30-year linear power performance warranty
- 12-year product warranty
- High temperatures and humidity resistance
- High strength and corrosion resistance
- Fire certified by TÜV SÜD under the EN 13501-1:2018 A2-s1, d0 classification rating for combustibility
- Reliable seal and IP68 connectors
- Excellent wind resistance and static load performance

TESTING STANDARDS

IEC 61215-1	Terrestrial photovoltaic modules - Design qualification and type approval - Part 1 test requirements
IEC 61215-1-1	Terrestrial photovoltaic modules - Design qualification and type approval - Part 1-1: Special requirements for testing of crystalline silicon photovoltaic modules
IEC 61215-2	Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 2: Test procedures
IEC 61730-1	Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction
IEC 61730-2	Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing
EN 13501-1:2018	Fire classification of construction products and building elements - Achieved A2-s1, d0
AS 4284	Testing of the building facade (Q3 2024)
Clean Energy Council (CEC) of Australia	Certification - Approved for installation and meets safety standard
ISO	9001 Certified manufacturing facility
UL 61730	PV module safety testing (Q4 2024)

COMPLIANCE & CERTIFICATIONS

ClearVue PV

Street 10, Al Quoz Industrial 4,P.O. Box 29769,
Dubai, United Arab Emirates

www.emiratesglass.com | +971 4 709 4700 | info@emiratesglass.com

Emirates Glass

v10.2024