

FAERS ⚡

CUSTOM BIPV PANEL

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FAERS.TECH

PROUDLY MANUFACTURED
IN RAS AL KHAIMAH, UAE

WHAT IS BIPV

BIPV generally refers to building integrated photovoltaics. It is a technology that integrates solar power generation (photovoltaic) products into buildings. Simultaneously, it serves as a functional part of the building structure, replacing certain traditional architectural elements such as roofs, building facades, canopies, and more.

Through cooperation with builders and designers, adding photovoltaic elements to buildings while maintaining aesthetics and generating electricity is the significance of BIPV.

Unlike ordinary photovoltaic panels, we integrate them into the building. The essential BIPV photovoltaic panel is a building material.

DESIGNERS OFTEN COMBINE BIPV WITH REGULAR GLASS



ARCHITECTURAL FLEXIBILITY

Supports any color, finish, or texture — matte, glossy, satin, or wood transforming buildings into functional, energy-generating facades.



LOW MAINTENANCE

Self-cleaning and corrosion-resistant glass; panels are easy to wash and retain both aesthetics and efficiency over time.



NON-COMBUSTIBLE MATERIALS

The facade does not burn or spread fire, ensuring full building safety.



DURABILITY

Resistant to UV exposure, temperature extremes from -40°C to $+85^{\circ}\text{C}$, and physical impact maintaining long-term performance without cracking or fading.



ENERGY AND INSULATION EFFICIENCY

Panels not only generate electricity but also reduce heat transfer, keeping interiors cooler and cutting overall energy use.

BAPV — BUILDING APPLIED PHOTOVOLTAICS

BAPV systems are solar panels installed on top of an existing building facade or roof. They do not replace the construction material but are attached to it using mounting systems.

KEY ADVANTAGES



EASY INSTALLATION ON NEW OR EXISTING BUILDINGS



IDEAL FOR RETROFIT PROJECTS AND BUILDINGS WITH FINISHED FACADES



LIGHTWEIGHT STRUCTURE



LOWER COST AND FASTER IMPLEMENTATION



High automation with low energy consumption, ensuring stable and sustainable performance.

TIER 1

Tier 1 equipment and raw material suppliers, guaranteeing consistent product quality and durability.



High efficiency output, delivering increased power per square meter compared to conventional technologies.



Climate adaptation: panels are designed for hot and arid environments, maintaining stability under high temperatures.

FAERS BIPV

CUSTOMIZED BUILDING INTERGATED PANELS

TOPCON Bifacial Dual Glass

750W

MAXIMUM POWER OUTPUT

24.3%

MAXIMUM MODULE EFFICIENCY

0~+5W

POWER TOLERANCE

12 YEARS

PRODUCT WARRANTY
ON MATERIALS

27 YEARS

LINEAR POWER OUTPUT
WARRANTY

INTRODUCTION

Assembled with 18N-Type Topcon Cells, The Half-Cell configuration of the Modules offer the advantages of higher power output, better temperature-dependent performance, reduced shading effect on the energy generation, lower risk of hot spot, as well as enhanced tolerance for mechanical loading.

MORE POWER

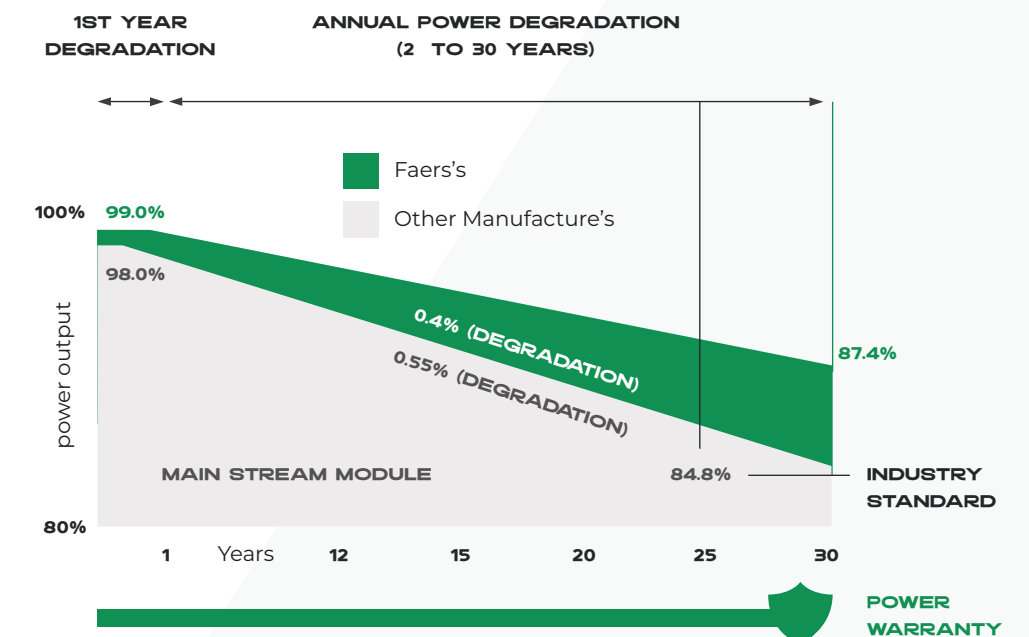
 TESTED IN-HOUSE NABL
ACCREDITED LAB FOR
MAXIMUM RELIABILITY.

 BETTER SHADING
TOLERANCE

 UP TO 4.5% LOWER LCOE
UP TO 5,6 LOWER
SYSTEM COST

 COMPREHENSIVE LID /
LETID MITIGATION
TECHNOLOGY, UP TO 50%
LOWER DEGRADATION

LINEAR PERFORMANCE WARRANTY



 ENHANCED
MECHANICAL LOAD

 MINIMIZES
MICRO-CRACK IMPACTS

SYSTEM AND PRODUCT CERTIFICATION



SIZE & SHAPES DETAILS

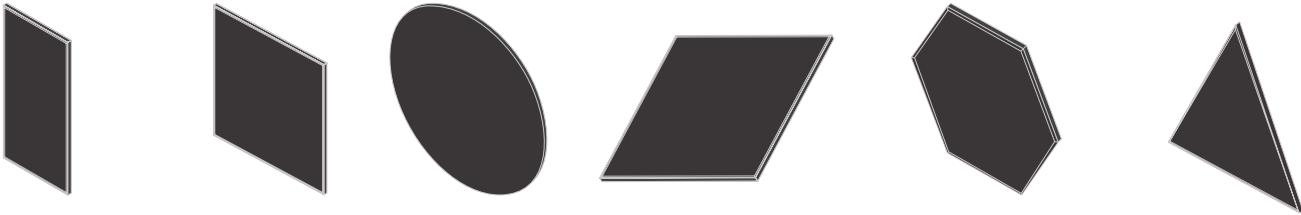
SIZE CAPABILITIES

FAERS Facade can be fabricated in virtually any size, from compact modules to oversized formats. Available in fully customizable sizes up to 125 x 80 inches, BIPV Facades supports a wide range of shapes including tilted panels, rectangles, triangles, curves, and integrated corner panels.

SHAPES & CURVING CAPABILITIES

FAERS offers a wide range of shapes - from elegant circles and sharp triangles to precise hexagons and more unconventional forms. It also enables curved modules with a minimum radius of R=1800mm or L/18, adding a sleek, modern touch to any design.

RECTANGULAR SQUARE CICALAR PARALLELIGRAM HEXAGONAL TRIANGULAR



SHAPES & SIZES OFFERED BY FAERS

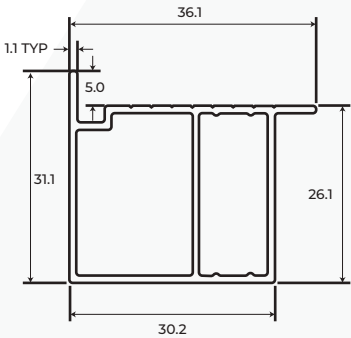
BIPV sizes						
Sr. N°	Type of panel we can produce in out facility	Configurations	Length	Width	Glass Thinckness	Output
1	Standard Module	36 cell	1975	900	2/3.2	Output power depends on the shed-glass thickness we will be using range of power we can supply 300Wp-600Wp
		48 cell	1800	1303	2/3.2	
		60 cell	2200	1303	2/3.2	
		66 cell	2385	1303	2/3.2	
2	Triangle	Minimum (x3)	1000	-	2/3.2	
	Triangle	Minimum (x3)	2500	-	2/3.2	
3	Circle	Minimum Diameter	750	-	2/3.2	
		Maximum Diameter	1500	-	2/3.2	
4	Facade-Customize Product	Minimum	1000	1000	2/3.2/4/5/6	
		Minimum	5000	2500	2/3.2/4/5/6	

BACKING DETAILS - ALUMINUM HONEYCOMB

General Mechanical Data		
	Size 2 in	Size 2 in
Total Thinckness	25.4mm	50.8mm
Skin Thinckness	1mm	1mm
Weight	4.67kg/m²	5.28kg/m²
Flexural Rigidity	1.26 (10³ N*mm²)	10.08 (10³ N*mm²)
Shear Rigidity	2.29 (10³ N*mm²)	2.29 (10³ N*mm²)
Tensile Strength	1.35 MPa	2.70 MPa
Compressive Strength	108 MPa	216 MPa
Compressive Elastic Modulus	0.7 MPa	1.4 MPa
Shear Strength	8.5 MPa	17 MPa
Thinckness Options		

BACKING AND MODULE FRAME DETAILS - EXTRUDED ALUMINUM PROFILE

Backing Details - Extruded Aluminum Profile	
Dimensions	36.1 × 31.1mm
Weight	0.43kg/m
Tensile Modulus	69 GPa
Tensile Strength	145 MPa
Shear Strength	117 MPa
Material	Aluminum Alloy



LIFETIME WARRANTY

- FAERS solar facade products physically last the lifetime of the building and beyond as a building envelope product.
- The warranty guarantees that the energy generation will have a minimum energy output of 80% by year 25. However, energy generation will continue after the warranty period ends for as long as the panels are on the wall.
- Our lifetime warranty ensures reliable, durable facades as the panels require minimal maintenance and there is zero panel replacement needed for the building lifetime



COLORS AND PATTERNS IDEAS

FAERS Façade utilizes advanced surface treatment technology to ensure your building generates clean energy while looking exactly how you envisioned it. There are no limitations to architectural creativity.

KEY CAPABILITIES

UNLIMITED COLOR MATCHING

Target precisely any specific color, including exact RAL or Pantone® shades.

MATERIAL REPLICATION

Seamlessly mimic the look and feel of natural materials, including aged metal, warm wood, concrete, or stone.

CUSTOM GRAPHICS

Turn facades into statements by incorporating bold visual patterns or branding directly onto the solar panels.

NO COMPROMISE

Blend high-efficiency energy generation with complete aesthetic control.

DESIGN TEXTURES



UNLIMITED COLOR

More custom colors are available. Ask one of our representatives how to get a sample color for your project.

DESIGN FLEXIBILITY

Full design flexibility with customizable panel sizes (up to 125in x 80in), curved modules, and integrated corner solutions.

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COLORS AND PATTERNS IDEAS

FAERS Facade offers unlimited design possibilities with customizable colors, patterns, and finishes to match any architectural vision. From natural textures to bold, contemporary designs, the options are endless. Included here is a sample of our Blended Series and Single color Series—just a glimpse of the wide range of aesthetics available through our advanced solar cladding technology.



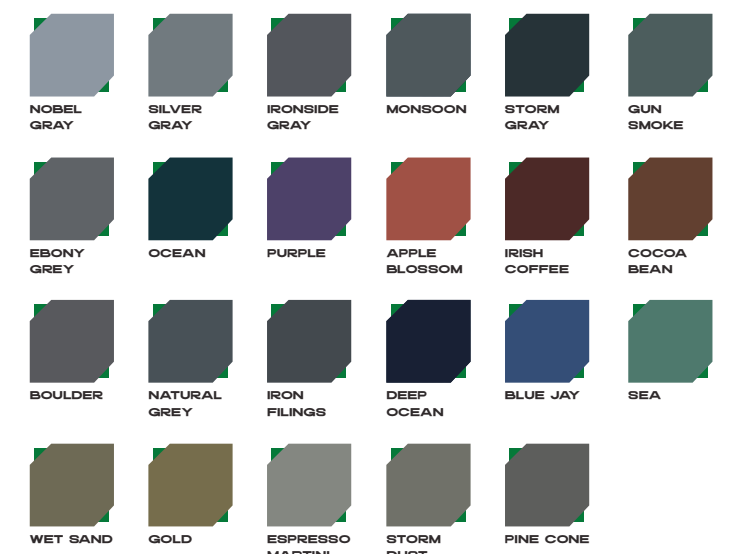
TEXTURED/ BLENDED SERIES

Textured Solar Series seamlessly blends aesthetics with innovation, offering a diverse range of color options that can be optimized to meet any design vision. These advanced solar facings provide both energy generation and architectural versatility, redefining the possibilities of sustainable building design.



SINGLE COLOR SERIES

Delivers a sleek, uniform aesthetic with a single-color design per module, ensuring a consistent and sophisticated look. While the color options are fixed, these high-performance solar facings seamlessly integrate renewable energy into any architectural project.



FAERS

FAERS EFACADE

PLUG & POWER UP YOUR BUILDING

The eFacade LITE system, brought to you by FAERS, is a cutting-edge, pre-engineered solar facade solution that integrates advanced Building-Integrated Photovoltaic (BIPV) technology.



ENERGY AND SYSTEM DESIGN

- Offers high energy output—up to 18W/SF—without compromising durability.
- Features pre-engineered wiring with a plug-and-power setup, removing the need for additional solar system design or engineering.



AESTHETICS AND VERSATILITY

- Available in five colors with a satin glass finish, providing a minimalist aesthetic.
- Offered in two standardized sizes and 11 panel layouts.



BUILDING ENVELOPE PERFORMANCE

- Designed as a ventilated rainscreen.
- Improves thermal performance, reduces moisture, and boosts the building envelope's durability and efficiency.



ENVIRONMENTAL COMMITMENT

- Generates clean energy, supporting a lower-carbon built environment.
- Made with recyclable, low-embodied carbon materials.



SAFETY AND COMPLIANCE

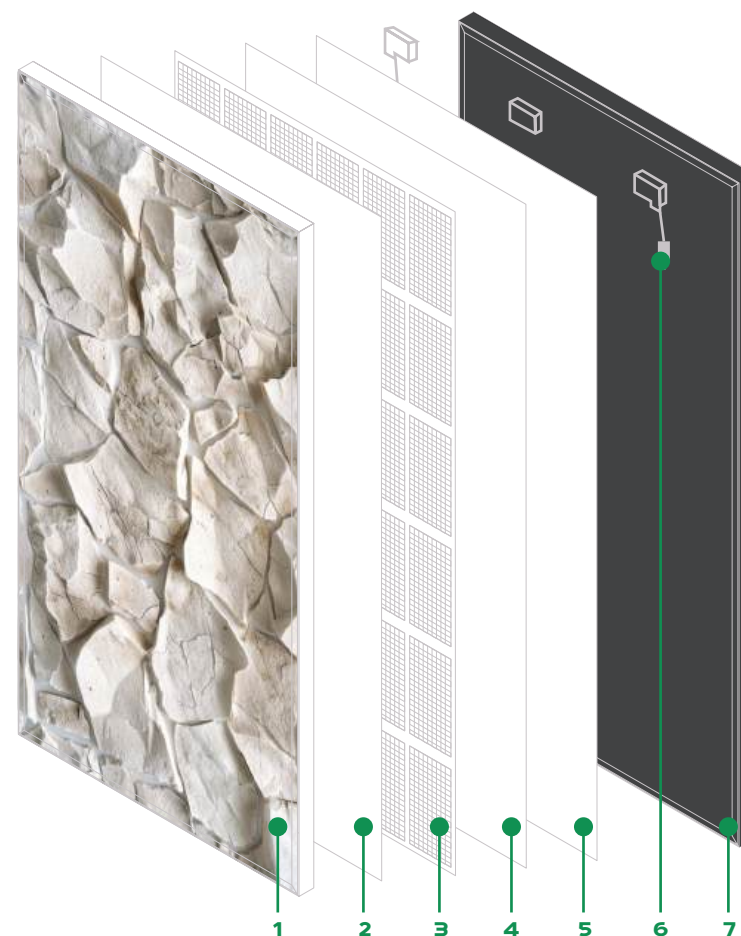
- Independently tested and certified to meet key international standards for wind and impact resistance, as well as UL safety requirements.
- Built with non-combustible glass and a tested backing system. Meets strict global fire safety standards.



DURABILITY AND CLIMATE RATING

- Extreme Conditions: Rated to withstand UV exposure, heavy rain, high winds, and freeze-thaw cycles.
- Operating Range: Operates reliably from -40 degree C to +85degree C.

We created eFacade LITE to accelerate solar adoption by delivering exceptional energy performance without sacrificing aesthetics or ease of installation.



EFACADE MODULE DETAILS

- 1. Glass / Customizable Facing
- 2. and 4. Encapsulant
- 3. Solar Cells
- 5. Back Sheet
- 6. Junction Box
- 7. Aluminum Honeycomb or Extruded Aluminum Profile

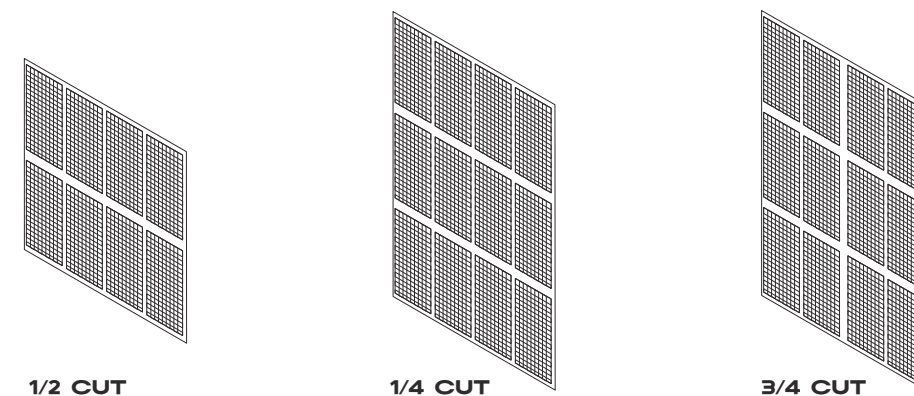


LONGEVITY AND UPKEEP

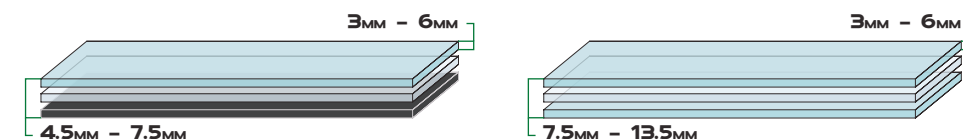
- Long-Term Durability: Engineered for longevity, featuring self-cleaning glass and durable surface treatments.
- Warranty: Requires minimal maintenance over a 25-year power performance warranty.

CUSTOMIZATION OPTIONS

CELL TECHNOLOGY (TOPCON)



GLASS SELECTION



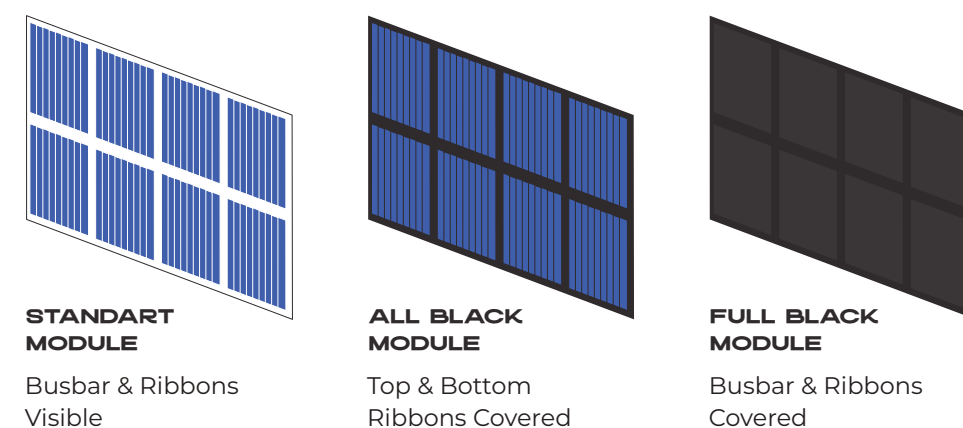
GLASS / BACKSHEET

Glass Thickness: 3mm – 6mm
Module Thickness: 4.5mm – 7.5mm

GLASS / GLASS

Glass Thickness: 3mm – 6mm
Module Thickness: 7.5mm – 13.5mm

SELECTION OF CELL MODULE APPEARANCE



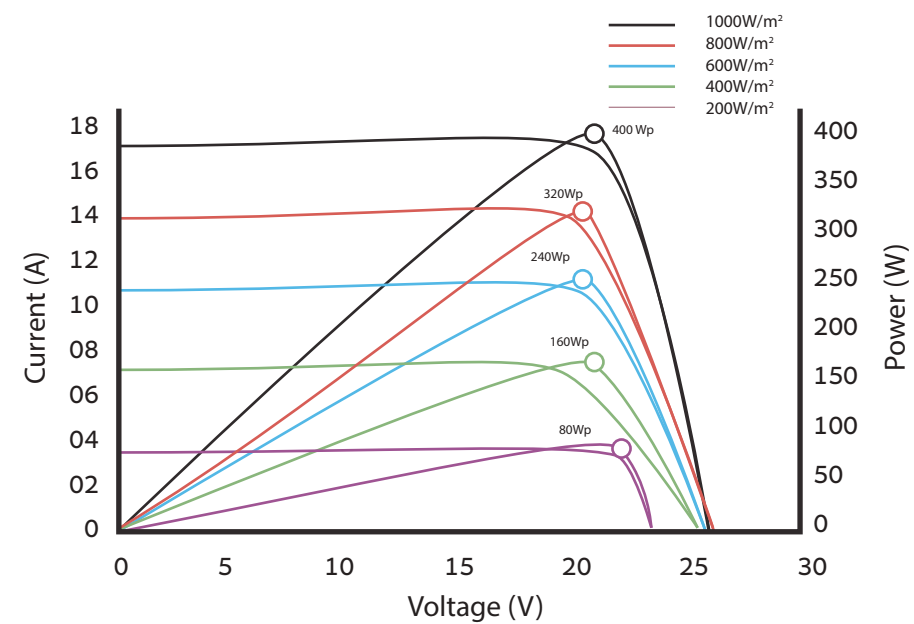
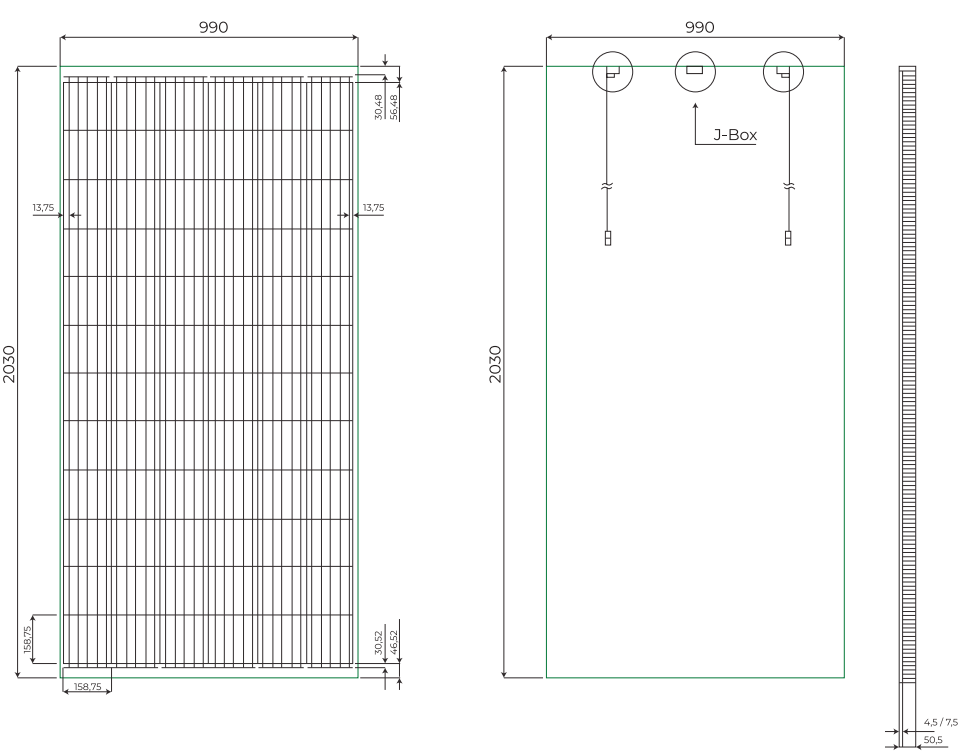
SELECTION OF BACKSHEET



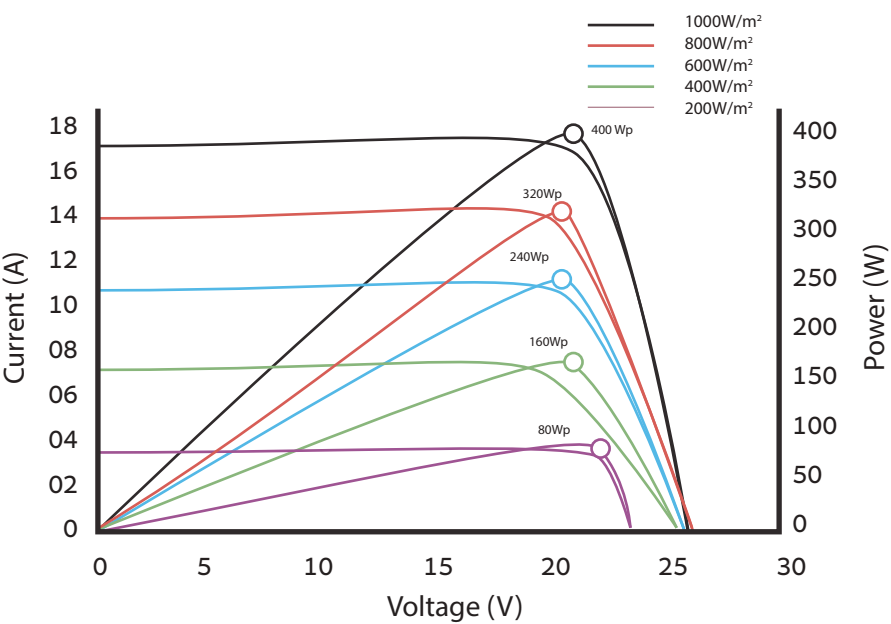
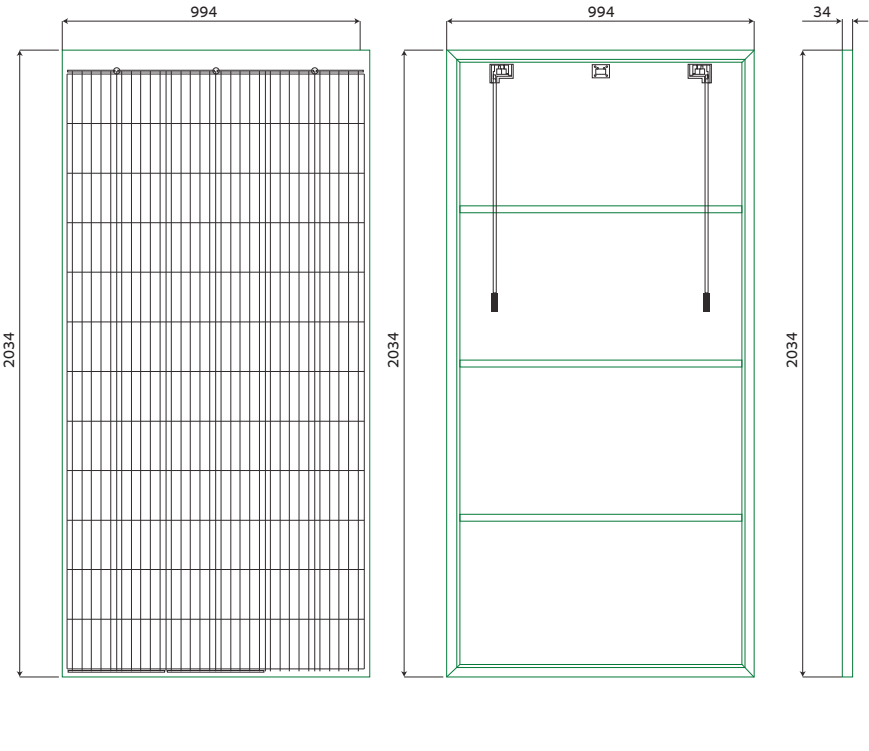
FAERS EFACADE

PLUG & POWER UP YOUR BUILDING

ALUMINUM HONEYCOMB STANDARD
MODULE 2030 X 990 MM (79.9 X 39.0 IN)



EXTRUDED ALUMINUM PROFILE STANDARD
MODULE 2034 X 994 MM (80 X 39.1 IN)



EXTRUDED ALUMINUM PROFILE STANDARD
MODULE 2034 X 994 MM (80 X 39.1 IN)

Mechanical Properties	Aluminum Honeycomb	Extruded Aluminum Profile
Module Weight	32.3kg / 46.4kg	37.8kg
Dimensions (H x L x D)	2030 x 990 x 55mm / 2030 x 990 x 58mm	2034 x 994 x 34mm
Maximum Surface Load	8000Pa rear load / 8000Pa front load	8000Pa rear load / 8000Pa front load
Design Load	5400Pa rear load / 5400Pa front load	5400Pa rear load / 5400Pa front load
Hail Impact Resistance	ø 25mm at 83 km/h	ø 25mm at 83 km/h
Cells	72 [12x6] Mono-crystalline (158.75 x 158.75mm)	72 [12x6] Mono-crystalline (158.75 x 158.75mm)
Glass	3.2mm / 6mm tempered glass, high transmittance, anti-reflective coating	6mm tempered glass, high transmittance, anti-reflective coating
Cables & Connectors	1200mm - 4mm ² , 12 AWG (UL), MC4 from Staubli	1200mm - 4mm ² , 12 AWG (UL), MC4 from Staubli
Backsheet	High durability, UV resistant, PV backsheet	High durability, UV resistant, PV backsheet
Back Support	Aluminum Honeycomb	Aluminum Honeycomb
Bypass Diodes	3 diodes - 30SQ045T (45V max DC blocking voltage, 30A max forward rectified current)	3 diodes - 30SQ045T (45V max DC blocking voltage, 30A max forward rectified current)
Junction Box	IP68 rated, TUV and UL certified	IP68 rated, TUV and UL certified
Fire Rating	Spread of Flame A, Burning Brand C	Type II

Test	Specification
Test Conditions	STC
Module Power (Pmax)	
Maximum Power Voltage (Vpmax)	
Maximum Power Current (Ipmax)	Varies depending on color, contact us for more information
Open Circuit Voltage (Voc)	Email: info@faers.tech
Short Circuit Current (Isc)	
Module Efficiency	
Cell Efficiency	22.5% - Monocrystalline Solar Cell
Maximum System Voltage (VDC)	1000V(IEC/UL)
Series Fuse Rating	20A
Power & Other Electrical Specification Tolerance	5%
Application Classification	Class A

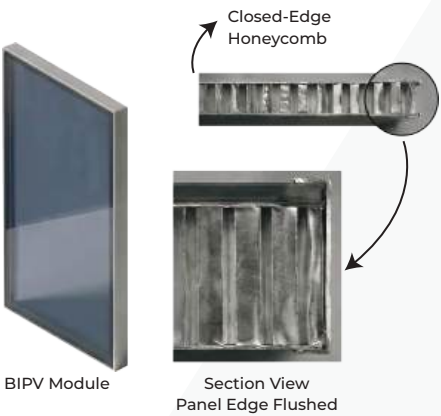
Temperature Ratings	
Temperature Coefficient Isc	0.036% /°C
Temperature Coefficient Voc	-0.27% /°C
Temperature Coefficient Pmax	-0.36% /°C
Nominal Module Operating Temperature	45 ± 3°C
Operating Temperature	-40°C ~ +85°C

MODULE CORNERS & EDGES DETAILS

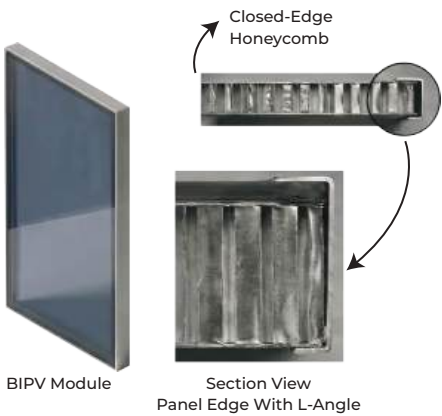
ALUMINUM HONEYCOMB BACKING

At FAERS, every detail matters—right down to the corners and edges. FAERS eFacade corner and edge solutions are engineered to maintain the aesthetic continuity of the building envelope while ensuring performance, safety, and durability.

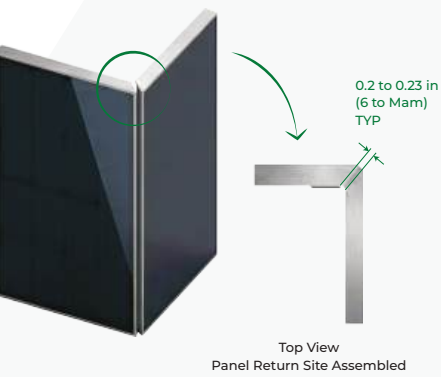
PANEL EDGE FLUSHED



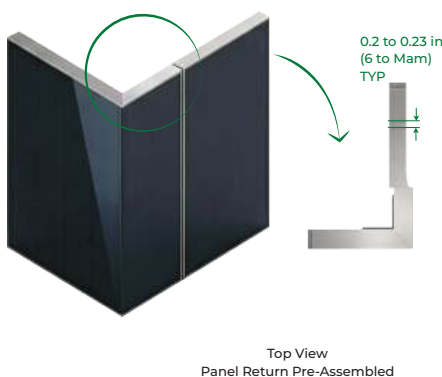
PANEL EDGE WITH L-ANGLE



PANEL RETURN SITE ASSEMBLED

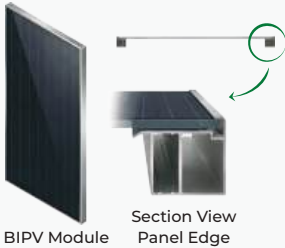


PANEL RETURN PRE-ASSEMBLED

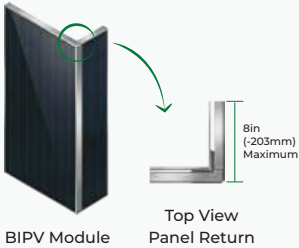


EXTRUDED ALUMINUM PROFILE

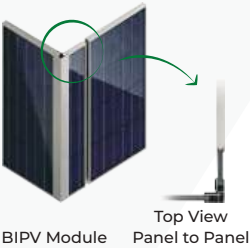
PANEL EDGE



PANEL RETURN



PANEL TO PANEL



Module Tolerances Details		
	Aluminum Honeycomb Backing	Extruded Aluminum Profile
Dimensional Variation Length	± 3mm	± 2mm
Dimensional Variation With	± 3mm	± 2mm
Thickness Tolerance	± 1mm	± 1mm
Diagonal Difference	± 7mm	± 5mm

ELECTRICAL DATA

Model Name	Module Power (W/SF)	Max. Power Current - I _{max} (A)	Max. Power Voltage - V _{max} (V)	Short Circuit Current - I _{sc} (A)	Open Circuit Voltage - Voc(V)	Module Efficiency (%)
Apple Beacom	8	4.16	40.90	4.44	47.50	8%
Arcturus	12	6.26	42.30	7.36	48.40	13%
Ash Belge	11	5.20	40.40	5.46	47.90	11%
Astra	11	6.92	42.60	8.20	48.70	12%
Belge	5	2.61	40.30	2.74	46.90	5%
Blackout	16	8.62	40.60	9.07	48.90	17%
BlueJay	14	7.59	40.20	7.30	48.50	15%
Boulder	13	6.90	40.60	7.23	48.50	14%
Brown	9	4.92	41.10	4.96	47.70	9%
Castro	15	6.85	41.60	7.12	48.10	16%
Cassia	14	7.32	41.00	7.74	48.60	15%
Charcoal Grey	10	5.43	40.50	5.71	48.00	11%
Colastic	13	6.14	40.70	6.49	48.30	14%
Cocoa Bean	9	4.62	41.10	4.96	47.70	9%
Core Black	18	9.31	41.90	9.97	48.20	19%
Deep Ocean	15	8.17	40.40	8.55	48.70	16%
Dull Orange	5	3.21	40.50	3.39	47.10	6%
Dull Yellow	6	3.21	40.50	3.39	47.10	6%
Ebony Grey	13	7.00	40.70	7.36	48.60	14%
Espresso Martini	10	5.43	40.50	5.71	48.00	11%
Gold	11	5.67	40.60	5.97	48.10	11%
Gravel Grey	11	5.97	40.20	6.19	48.10	12%
Gun Smoke	13	7.00	40.70	7.36	48.60	14%
Icy White	5	3.21	40.50	3.39	47.10	6%
Irish Coffee	12	6.44	40.40	6.71	48.30	13%
Iron Filings	14	7.48	40.10	7.77	48.40	15%
Ironside Grey	13	6.67	40.50	6.97	48.40	13%
Monsoon	13	6.77	40.60	7.10	48.50	14%
Moonstone	10	5.38	40.90	5.71	48.00	11%
Natural Grey	13	7.00	40.70	7.36	48.60	14%
Navy Blue	11	6.08	40.30	6.32	48.20	12%
Nobel Grey	10	5.20	40.40	5.45	47.90	10%
Ocean	15	7.94	40.30	8.29	48.60	16%
Orbit	16	7.95	40.90	8.34	48.60	17%
Pale Rose	7	3.45	40.60	3.66	47.20	7%
Peridot	5	3.21	40.50	3.39	47.10	6%
Pine Cone	13	6.77	40.60	7.10	48.50	14%
Polaris	9	4.16	40.90	4.44	47.50	9%
Purple	13	6.90	40.60	7.23	48.50	14%
Red	9	4.62	41.10	4.96	47.50	9%
Rocksalt	11	5.74	41.80	6.17	48.30	12%
Sea	14	7.48	40.10	7.77	48.40	15%
Silver Grey	10	5.43	40.50	5.71	48.00	11%
Smokey Grey	10	5.43	40.50	5.71	48.00	11%
Storm Dust	8	4.26	41.00	4.57	47.60	9%
Storm Grey	13	6.90	40.60	7.23	48.50	14%
Turquoise	7	3.68	40.70	3.92	47.30	7%
Wet Sand	12	6.44	40.40	6.71	48.30	12%

FAERS DESIGN ASSIST SERVICE

FAERS with architects and engineering teams from the earliest stages of design to co-develop integrated building envelope systems that satisfy both performance objectives and aesthetic goals. Through a structured Design Assist process, we offer façade system modeling, engineering validation, energy simulations, mock-up testing, and prefabrication strategies to streamline construction and reduce life cycle costs.

INITIAL CONSULTATION TECHNICAL DELIVERABLES

- Site analysis summary
- Design brief

IMPLEMENTATION SUPPORT TECHNICAL DELIVERABLES

- Site installation guide
- QA checklist
- Commissioning certificate

SOLUTION EXPLORATION TECHNICAL DELIVERABLES

- System recommendation matrix
- Solar energy potential analysis

COLLABORATIVE DESIGN DEVELOPMENT TECHNICAL DELIVERABLES

- CAD/Revit details
- Connection drawings
- Integrated facade layouts

ENGINEERING & ENERGY ANALYSIS TECHNICAL DELIVERABLES

- Structural calculations
- Energy modeling reports
- Code compliance checklists

PROTOTYPING & TESTING TECHNICAL DELIVERABLES

- Performance test reports
- QA reviews

PREFABRICATION & LOGISTICS PLANNING TECHNICAL DELIVERABLES

- Factory QC documentation
- Logistics plan
- Panel maps

KEY FEATURES & BENEFITS

- **Integrated Powerhouse:** Each panel is a source of clean energy, constructed as a ventilated rainscreen system. It features a hidden extruded aluminum frame that encases a layer of high-efficiency solar cells protected by a durable glass facing.
- **Rapid & Simple Deployment:** Designed for projects that demand speed and cost-efficiency. The system features a built-in PowerBar that enables plug-and-play wiring directly on-site, significantly simplifying electrical integration.
- **Versatile Design:** Available in two panel sizes and five color options, eFacade LITE delivers robust energy performance within a highly durable system optimized for streamlined delivery.
- **Ideal Applications:** This solution is perfect for retrofit projects, budget-conscious new developments, or any building requiring unparalleled simplicity and installation speed.