



- Facade LITE

Plug & Power Up! - As easy as it sounds

Energy Generating Building Materials:
eFacade LITE Product Datasheet

 MITREX™
mitrex.com

⚡ Plug & Power Up with eFacade LITE

eFacade LITE by Mitrex is a pre-engineered solar facade system with advanced building-integrated photovoltaic technology (BIPV) created to accelerate solar adoption without compromising performance. A ventilated rainscreen system with a hidden extruded aluminum profile encasing a layer of high-efficiency solar cells and a glass facing, each panel is a powerhouse of energy.

Designed for projects seeking rapid deployment, lower costs, and simplified electrical integration, LITE panels feature a built-in PowerBar that enables plug-and-play wiring on site. With two panel sizes and five color options, eFacade LITE delivers energy performance in a system that’s optimized for streamlined delivery and long-term durability. It’s the ideal solution for retrofit projects, budget-conscious developments, or buildings that require



Plug & Power Up

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



Colors & Sizes

Available in five colors with a satin glass finish, this solution provides a minimalist aesthetic. Available in two standardized sizes and 11 panel layouts preserving design flexibility.



Rainscreen System

Designed as a ventilated rainscreen, it improves thermal performance, reduces moisture, and boosts the building envelope’s durability and efficiency.



Sustainability

Supporting a lower-carbon built environment, it generates clean energy and is made with recyclable, low-embodied carbon materials.



Certifications

Independently tested and certified, it meets key international standards for wind and impact resistance, as well as UL safety requirements.



Fire Safety

Built with non-combustible glass and a tested backing system, it meets strict global fire safety standards, including EN 13501 A2-s1,d0 and NFPA 285.



Performance

Rated for extreme conditions, it withstands UV exposure, heavy rain, high winds, and freeze-thaw cycles, operating reliably from -40°C to +85°C.



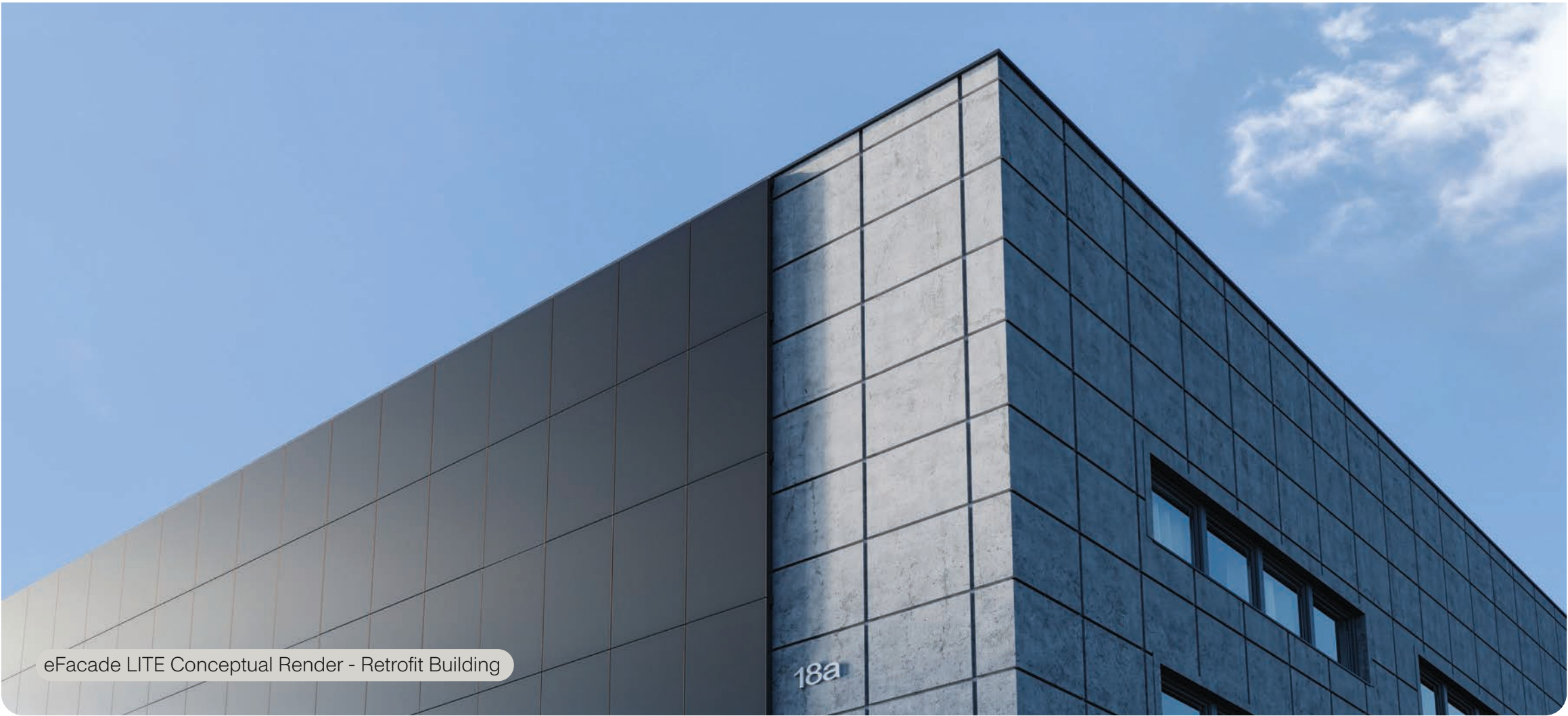
Maintenance

Engineered for longevity, it features self-cleaning glass and durable surface treatments, requiring minimal maintenance over a 25-year power performance warranty.

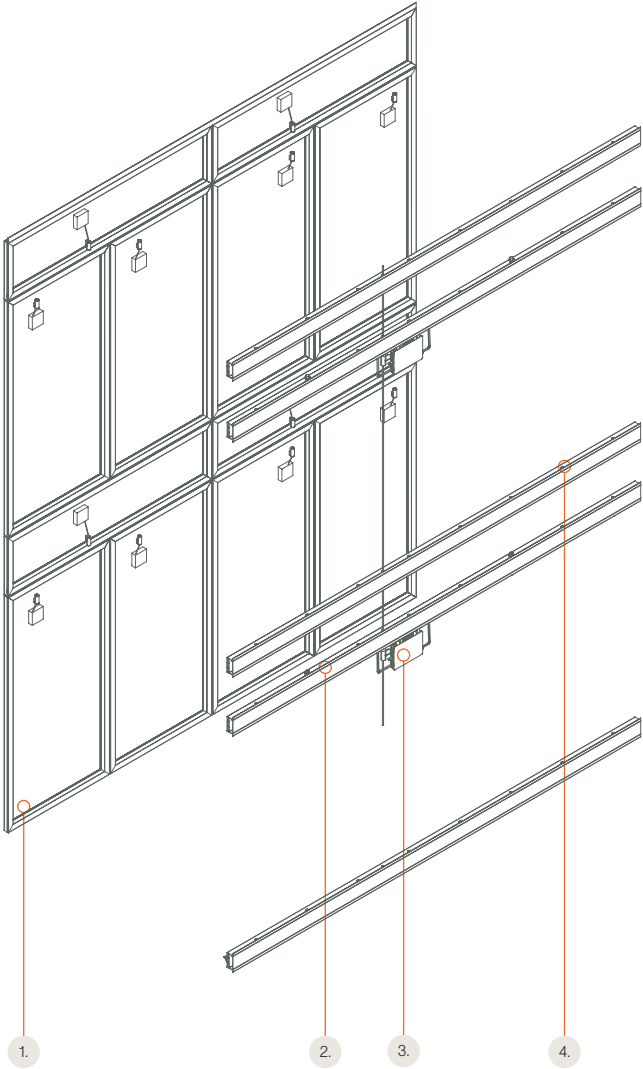


Incentives

Projects may qualify for sustainability incentives such as government rebates, green energy grants, and low-cost financing across North America.



eFacade LITE Conceptual Render - Retrofit Building



eFacade LITE Layers

- 1. ⚡ SunTile (Solar Modules)
- 2. Power Bar
- 3. Microinverter
- 4. Support Bar

SunTile Electrical And Mechanical Data
For Large Standard Panel 1854×922×31mm (72.9×36.2×1.2in)

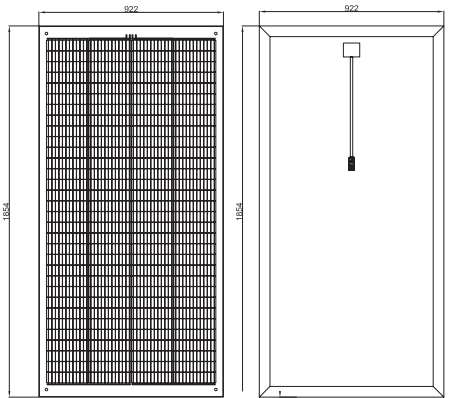
● Test

Test Conditions	STC
Module Power (Pmax)	170 - 315 W
Maximum Power Voltage (Vpmax)	41.0 - 41.3 V
Maximum Power Current (Ipmax)	4.15 - 7.63 A
Open Circuit Voltage (Voc)	49.2 - 49.6V
Short Circuit Current (Isc)	4.38 - 8.05 A
Module Efficiency	9.9 - 18.4%
Cell Efficiency	23.5% - Monocrystalline Solar Cell
Maximum System Voltage (VDC)	1000V (IEC/UL)
Max Series Fuse Rating	20A
Power & Other Electrical Specification Tolerance	5%
Application Classification	Class A

Measurement Conditions: STC 1000 W/m² - AM 1.5 - Temperature 25°C

● Specification

● Engineering Drawing



● Mechanical Properties	● Metric	● Imperial
Module Weight	19kg	41lbs
Dimensions (H x L x D)	1854 × 922 × 31mm	72.9 × 36.2 × 1.2in
Maximum Surface Load (Wind / Snow)	2400Pa rear load / 2400Pa front load	50psf rear load / 50psf front load
Design Load	1600Pa rear load / 1600Pa front load	33psf rear load / 33psf front load
Hail Impact Resistance	ø 25mm at 83 km/h	ø 1in at 51.6 mph
Cells	128 [2 x (2 × 32)] Mono-crystalline M12 quarter cell (210.0 × 52.5mm)	128 [2 x (2 × 32)] Mono-crystalline M12 quarter cell (8.26 × 2.07in)
Glass	3.2mm tempered glass, high transmittance, anti-reflective coating	0.125in tempered glass, high transmittance, anti-reflective coating
Backsheet	High durability, UV resistant, PV backsheet	
Back Support	Black anodized aluminum frame	
Junction Box	IP68 rated, TUV and UL certified	
Fire Rating	Spread of Flame A, Burning Brand C	

● Temperature Ratings	
Temperature Coefficient Isc	0.05% /°C
Temperature Coefficient Voc	-0.28% /°C
Temperature Coefficient Pmax	-0.35% /°C
Nominal Module Operating Temperature	45 ± 3°C
Operating Temperature	-40°C ~ +85°C

SunTile Electrical And Mechanical Data
For Small Standard Panel 1854×456×31mm (72.9×18.0×1.2in)

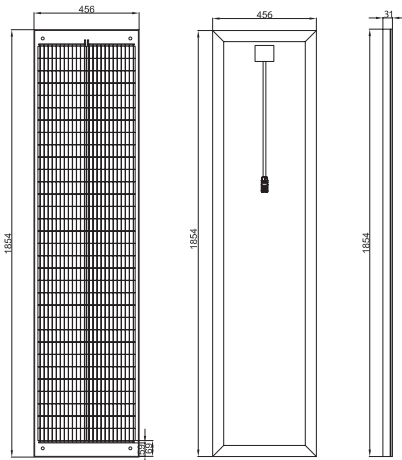
● Test

Test Conditions	STC
Module Power (Pmax)	85 - 160 W
Maximum Power Voltage (Vpmax)	41.0 - 41.3 V
Maximum Power Current (Ipmax)	2.07 - 3.87 A
Open Circuit Voltage (Voc)	49.2 - 49.6 V
Short Circuit Current (Isc)	2.19 - 4.03 A
Module Efficiency	10.0 - 18.9 %
Cell Efficiency	23.5% - Monocrystalline Solar Cell
Maximum System Voltage (VDC)	1000V (IEC/UL)
Max Series Fuse Rating	20A
Power & Other Electrical Specification Tolerance	5%
Application Classification	Class A

Measurement Conditions: STC 1000 W/m² - AM 1.5 - Temperature 25°C

● Specification

● Engineering Drawing



● Mechanical Properties	● Metric	● Imperial
Module Weight	10kg	22lbs
Dimensions (H x L x D)	1854 × 456 × 31mm	72.9 × 18.0 × 1.2in
Maximum Surface Load (Wind / Snow)	2400Pa rear load / 2400Pa front load	50psf rear load / 50psf front load
Design Load	1600Pa rear load / 1600Pa front load	33psf rear load / 33psf front load
Hail Impact Resistance	ø 25mm at 83 km/h	ø 1in at 51.6 mph
Cells	64 [32 × 2] Mono-crystalline M12 quarter cell (210.0 × 52.5mm)	64 [32 × 2] Mono-crystalline M12 quarter cell (8.26 × 2.07in)
Glass	3.2mm tempered glass, high transmittance, anti-reflective coating	0.125in tempered glass, high transmittance, anti-reflective coating
Backsheet	High durability, UV resistant, PV backsheet	
Back Support	Black anodized aluminum frame	
Junction Box	IP68 rated, TUV and UL certified	
Fire Rating	Spread of Flame A, Burning Brand C	


● Temperature Ratings	
Temperature Coefficient Isc	0.05% /°C
Temperature Coefficient Voc	-0.28% /°C
Temperature Coefficient Pmax	-0.35% /°C
Nominal Module Operating Temperature	45 ± 3°C
Operating Temperature	-40°C ~ +85°C




eFacade LITE Crafted For Perfection

Mitrex eFacade LITE is available in five clean, neutral color tones to blend with any project. These curated options are designed to complement a wide range of architectural materials such as aluminum panels, GFRC, EIFS, and ACM. Whether your design calls for a bold contrast or understated elegance, LITE's palette offers the flexibility to enhance visual cohesion across facades.


The colors are not just applied finishes; they are built into the solar panel surface, preserving both appearance and performance over time. The satin glass finish ensures a low-glare, consistent aesthetic that integrates cleanly into contemporary architectural styles.




Core Black
⚡ 18W/SQFT




Blackout
⚡ 16W/SQFT



Nobel Grey
⚡ 10W/SQFT



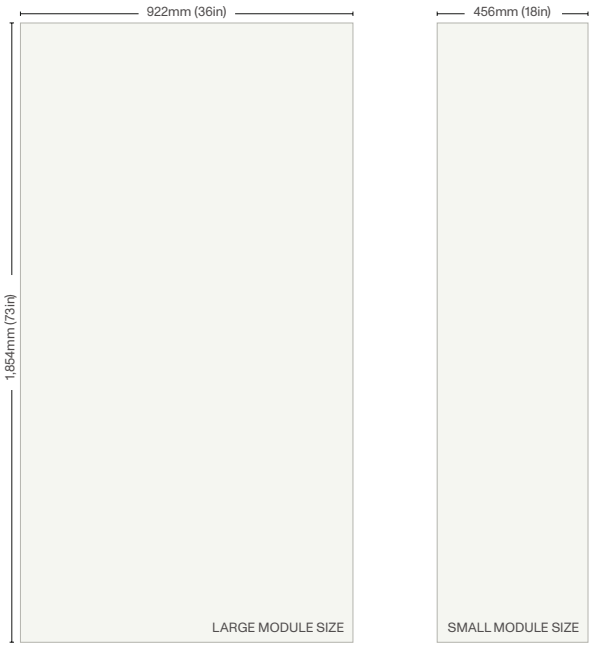
Storm Grey
⚡ 13W/SQFT



Cassia
⚡ 14W/SQFT

Module Size Capabilities

Mitrex eFacade LITE offers two standard sizes that can be seamlessly integrated either with other modules of the same size or between the two sizes.

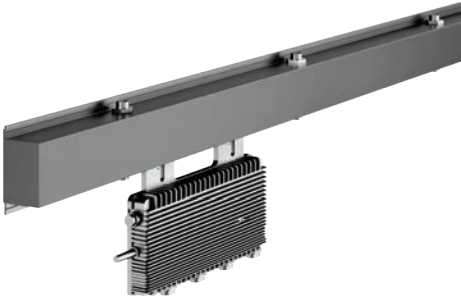


eFacade LITE Package Components

Each eFacade LITE package comes with 150 SQFT of material and the following components. The amount of the SunTiles may vary depending on the layout.



x2 Support Bar



x1 ⚡ Power Bar



⚡ Large SunTile



⚡ Small SunTile

SunTile (Solar Module) Details

Solar Glass Mechanical Data

	Imperial	Metric
Glass Type	Satin Glass	
Thickness	0.125 ± 0.012in	3.2 ± 0.3mm
Weight	1.54lb/SQFT	7.53kg/m²
Dimensional Tolerance	± 0.04in	± 1.0mm
Density	0.09lbs/in³	2.5gm/cm³
Corner	Radius, Chamfer or cut (0.04-0.16in)	Radius, Chamfer or cut (1.0-4.0mm)
Overall Bow / Warp <small>(EN 12150-1:2015)</small>	0.16in / 39,37in	4.0mm/M / 990mm/M
Local Warp <small>(EN 12150-1:2015)</small>	0.002in / 11.81in	0.5mm / 300mm/M
Bending Strength <small>(EN 12150-1:2015) (0.23in / 6mm)</small>	685.21lbs/in	120N/mm
Iron Content <small>(ASS)</small>	<120ppm	
Edge	At least seamed	
Scratch Hardness <small>(Mohs)</small>	5	
Fragmented Particles in 50×50mm <small>(If Tempered) (EN 12150-1:2015)</small>	Min 40 pcs	

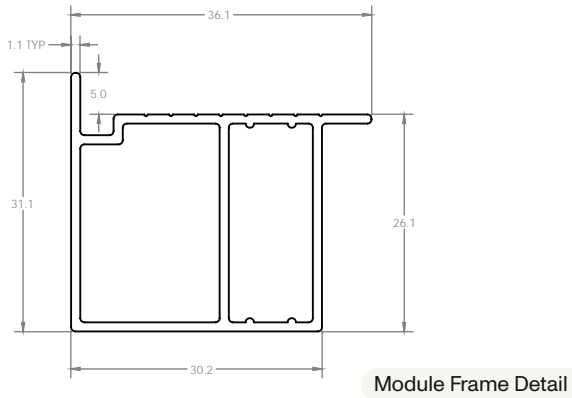
Solar Glass Facing Specification

	Certification	Imperial	Metric
Density	ASTM C729	158lb/ft³	2,530kg/m³
Absorption By Wt.	ASTM C373	0%	0%
Compressive Strength	-	150,000psi	1,000MPa
Flexural Strength <small>(Dry)</small>	ASTM C158	8,700psi	60MPa
Modulus Rupture	ASTM C158	5,950psi	41MPa
Hardness	ASTM C730	570KHN	

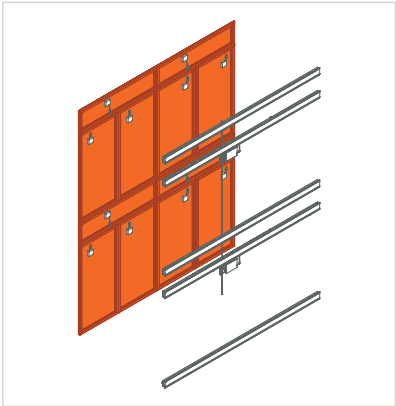
For further mechanical information about solar glass, please check Mitrex solar glass datasheet.

Module Frame Mechanical Data

	Imperial	Metric
Dimensions	1.42 × 1.22in	36.1 × 31.1mm
Weight	0.29lb/ft	0.43kg/m
Tensile Modulus	10 × 10 ⁶ psi	69 GPa
Tensile Strength	0.21 × 10 ⁵ psi	145 MPa
Shear Strength	0.17 × 10 ⁵ psi	117 MPa
Material	Aluminum Alloy	



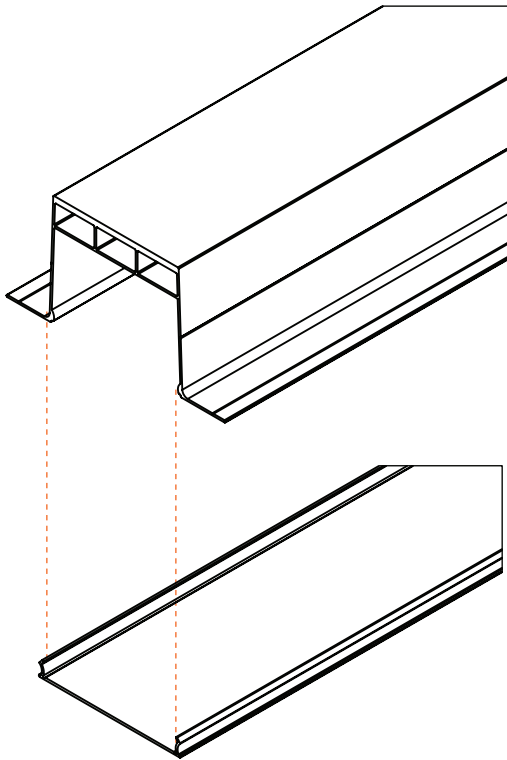
Test	Rating
Smoke And Flame Spread (ASTM E84)	Class A
Sound Transmission Coefficient (ASTM E90)	34



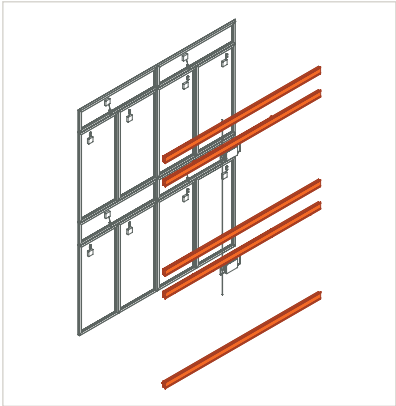
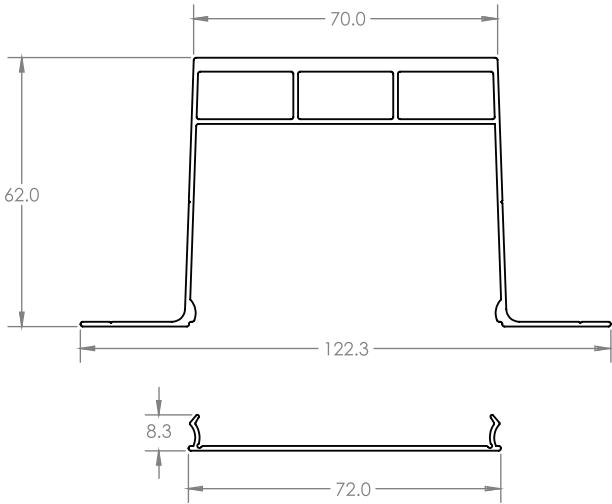
System Components Details

Power Bar (Mounting Rail and Cap) Mechanical Data

	Imperial	Metric
Dimensions	4.80 × 2.44in	122 × 62mm
Weight	1.24lb/ft	1.84kg/m
Tensile Modulus	10 × 10 ⁶ psi	69 GPa
Tensile Strength	0.21 × 10 ⁵ psi	145 MPa
Shear Strength	0.17 × 10 ⁵ psi	117 MPa
Material	Aluminum Alloy	



Power Bar (Mounting Rail and Cap) Isometric View



Microinverter Details

Mechanical Data

	Imperial	Metric
Ambient Temperature Range	-40 to +149 F°	-40 to +65 C°
Enclosure Rating	Outdoor - IP67 (NEMA6)	
Cooling	Natural Convection - No Fans	

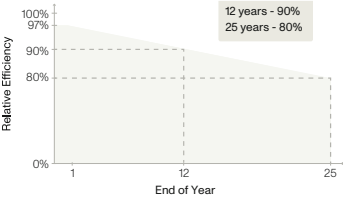
Input Data (DC)

	Model 480V
Commonly Used Module Power (W)	50 to 1000 +
Maximum Input Voltage (V)	65
MPPT Voltage Range (V)	16 - 60
Start-up Voltage (V)	22
Maximum Input Current (A)	4 × 30
Maximum Input Short Circuit Current (A)	4 × 40
Number Of MPPTs	4
Number Of Inputs Per MPPT	1

¹ Nominal voltage/frequency range can depending on local. ² Refer to local requirements for exact number of microinverters per branch

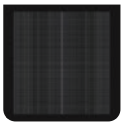
Warranty

Our products are backed by an industry-leading 25-year product and performance warranty.




Product Material Warranty: 25 years
Performance Warranty: 25 years
≥ 97% end of 1st year
≥ 90% end of 12th year
≥ 80% end of 25th year


System Size Per Color




Core Black
⚡ 2.5 kW




Blackout
⚡ 2.2 kW



Nobel Grey
⚡ 1.3 kW



Storm Grey
⚡ 1.8 kW



Cassia
⚡ 2.0 kW

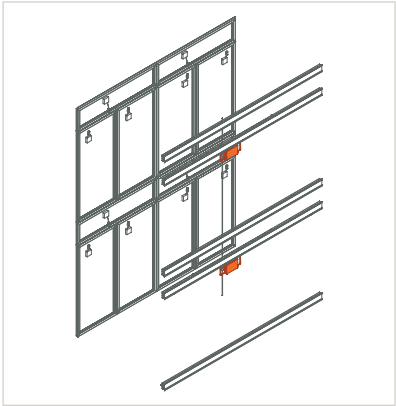
Note: These system sizes are based on one standard package consisting of 150 SQFT.

Efficiency

	Model 480V
CEC Peak Efficiency	>= 96.5%
Normal MPPT Efficiency	>= 99.7%
Night Power Consumption (mW)	< 50

Output Data (AC)

	Model 480V
Peak Output Power	1900
Maximum Continuous Output Po wer (A)	1900
Maximum Continuous Output Current (A)	2.28
Normal Output Voltage/Range (V) ¹	480/422 - 528
Nominal Frequency/Range (Hz)	60/55 - 65
Power Factor (Adjustable)	> 0.99 default 0.8 leading ... 0.8 lagging
Total Harmonic Distortion	< 3%
Maximum Units Per 8AWG Branch (45A) ²	15



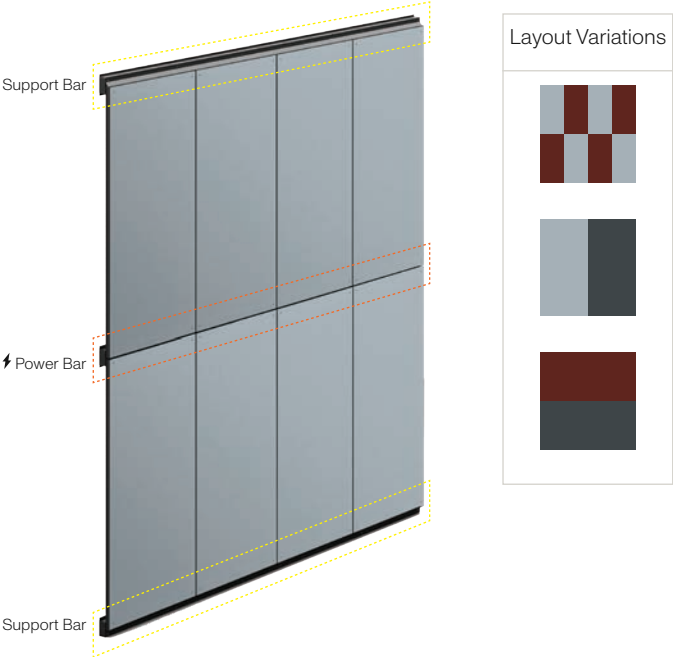
Testing And Certifications Details

Category	Test Name	Test Specification	Result
Acoustic	Sound Transmission Loss	ASTM E90	Sound Transmission Rating: CladiShield Rainscreen: 34; Claditized Unitized: 35; CladiFab Prefab: 55
Environmental	Salt Spray Resistance	ASTM B117-16	No deleterious effects.
	Laboratory Aging of Sandwich Construction	ASTM C481-99 (Reapproved 2016)	ASTM C273; C297; C364; C393 tests were reconducted after aging: the variation was +1.36 %, -5.90%; +2.55%; -7.95%. Note: Positive variation indicates no decrease in strength after aging.
	Resistance to Rapid Freezing and Thawing	ASTM C666/C666M-15	No visible change to panel
	Air Leakage Resistance	ASTM E283-04 (2012)	Qinf = 0.031 cfm/ft² or 0.155 L/s-m² at 300 Pa; Qexf = 0.024 cfm/ft² or 0.122 L/s-m² at 300 Pa
	Fluorescent UV Exposure	ASTM G154 -16	No visible change
Fire Safety	Water Penetration Resistance	ASTM E331	No water infiltration at 15 psf or 720 Pa
	Fire Endurance Test	ASTM E119 / CAN/ULC S101	Passed
	Exterior Wall Assembly Fire Test	CAN/ULC S134	Passed
	Fire Classification	EN13501	Rating: A2-s1,d0
	Tunnel Test	ASTM E84	FSI = 10; SDI = 200; Class A
	Non-Combustibility (ASTM E136)	ASTM E136	Passed
	Multi-Story Fire Test	NFPA 285	Passed
	Surface Burning Characteristics	CAN/ULC S102	FSR = 0; Class A
	Non-Combustibility (CAN/ULC S114)	CAN/ULC S114	Passed
	Combustibility Parameters (Cone Calorimeter)	CAN/ULC S135	Passed NBCC 2015 requirements
Impact / Safety	Large Missile Impact Test	ASTM E1996 / TAS 201	Passed
	Cyclic Pressure Loading	ASTM E1886 / TAS 203	Passed. Over 3,500 positive and negative pressure cycles were applied at ± 2880 Pa (60 psf), equivalent wind load of 165 mph. Ultimate core shear strength = 1.01 MPa (147 psi); Core shear modulus = 10.9 MPa (1583 psi)
Mechanical	Shear Strength and Shear Modulus	ASTM C273/C273M-18	Ultimate core shear strength = 1.01 MPa (147 psi); Core shear modulus = 10.9 MPa (1583 psi)
	Shear Strength by Beam Flexure	ASTM C393/C393M-16	Max core shear strength = 0.94 MPa (137 psi); Facing bending stress = 8.14 MPa (1180 psi)
	Flexure Creep Evaluation	ASTM C480/C480M-16	Net creep (in/day) facing - 0.029
	Density of Sandwich Core	ASTM C271/C271M-16	327 kg/m³ (20.42 lbm/ft³)
	Flatwise Tensile Bond Strength	ASTM C297/C297M-16	1.52 MPa (220 psi)
	Edgewise Compressive Strength	ASTM C364/C364M-16	37.85 MPa (5490 psi)
	Flatwise Compressive Strength	ASTM C365	1.92 MPa (278 psi)
	Flexural Strength	ASTM C880/C880M-15	22.83 MPa (3311.21 psi); No failure
	Tensile Properties of Adhesive Bond	ASTM C897-08 (2016)	Adhesive bond did not fail
	Damage Resistance	ASTM D7766/D7766M-16	No panel deformation
Structural	Structural Performance	ASTM E330	+/- 80 psf or +/- 3840 Pa; no failure
Thermal	Thermal Resistance	ASTM 1363-11	0.20 m²·°C/W (1.12 hr·ft²·°F/BTU)
	Linear Thermal Expansion	ISO 10545-8	11.28 × 10 ⁻⁶ /°C
PV Quality	Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval	IEC/UL 61215	Passed
PV Safety	Standard for Photovoltaic (PV) Module Safety	IEC/UL 61730	Passed

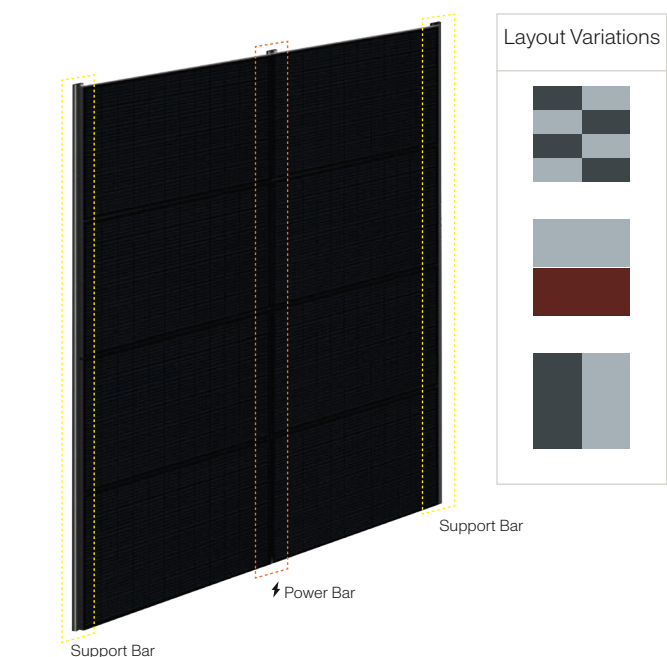


eFacade LITE Layout Options

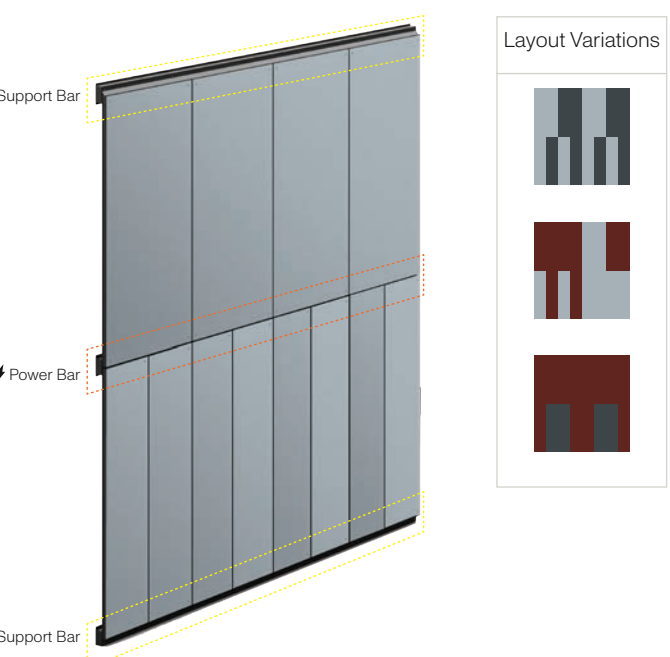
eFacade LITE Linear Precision



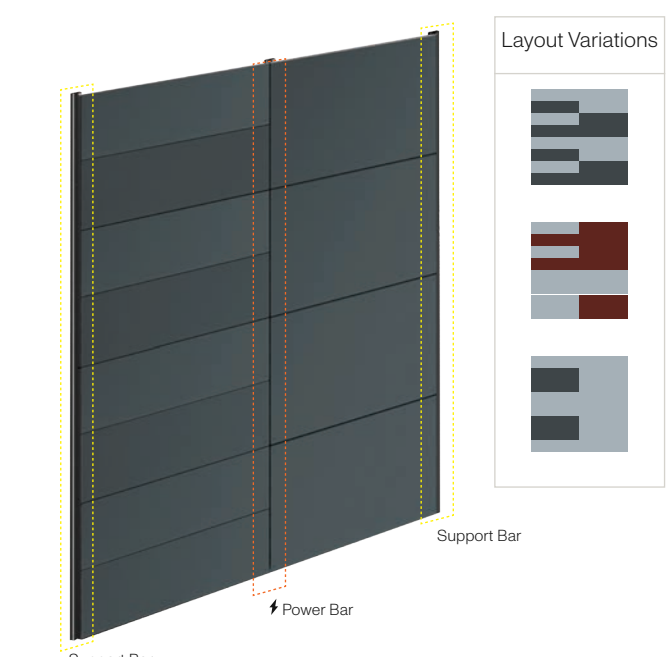
eFacade LITE Horizon Grid



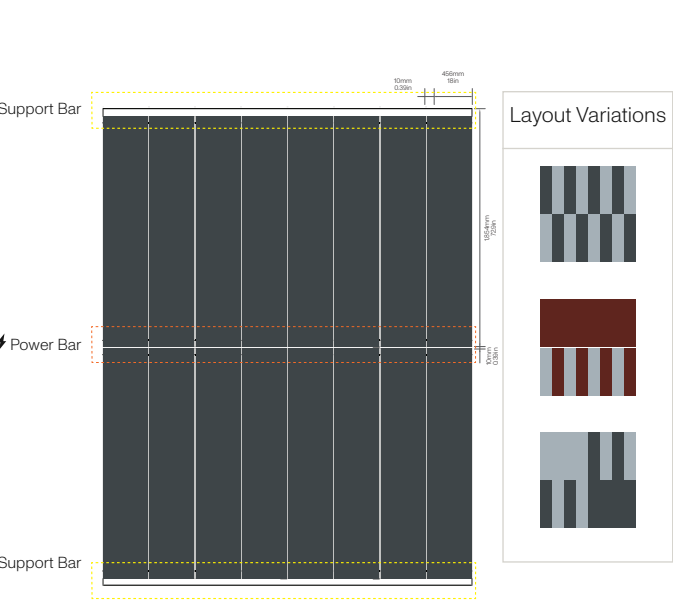
eFacade LITE Dual Linear Precision



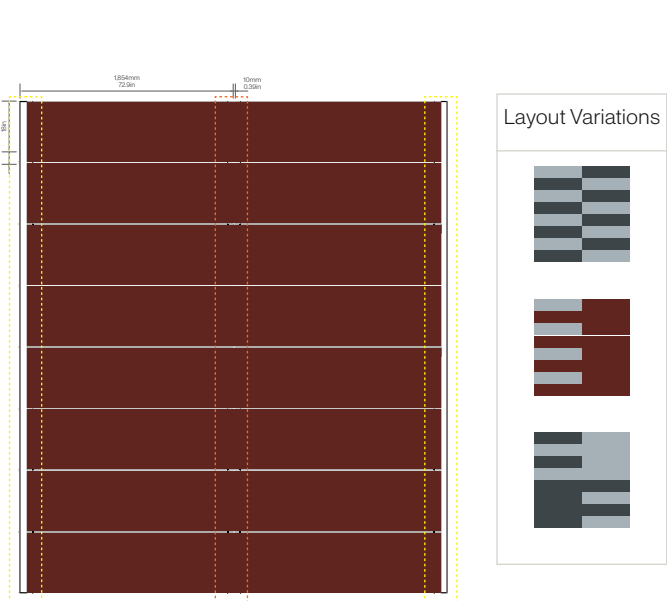
eFacade LITE Dual Horizon Grid



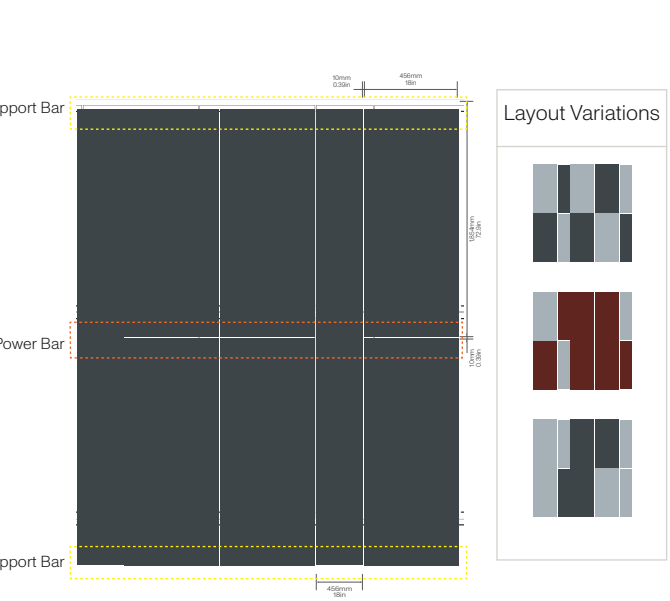
eFacade LITE Half Linear Precision



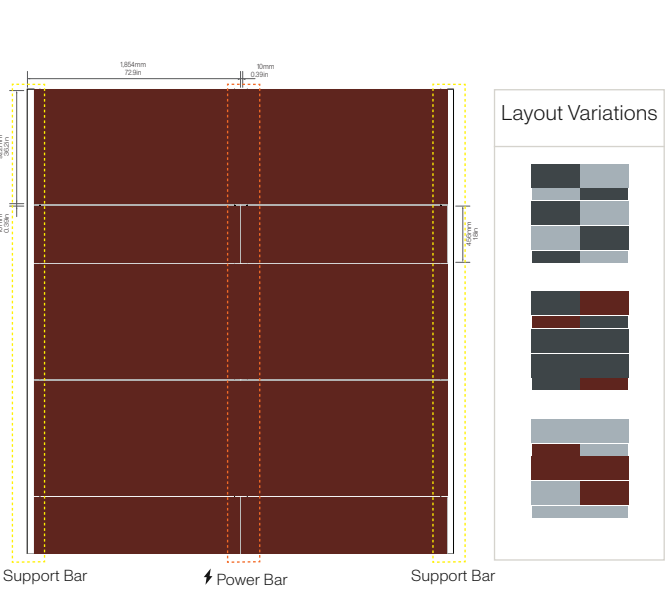
eFacade LITE Half Horizon Grid



eFacade LITE Mixed Linear Precision

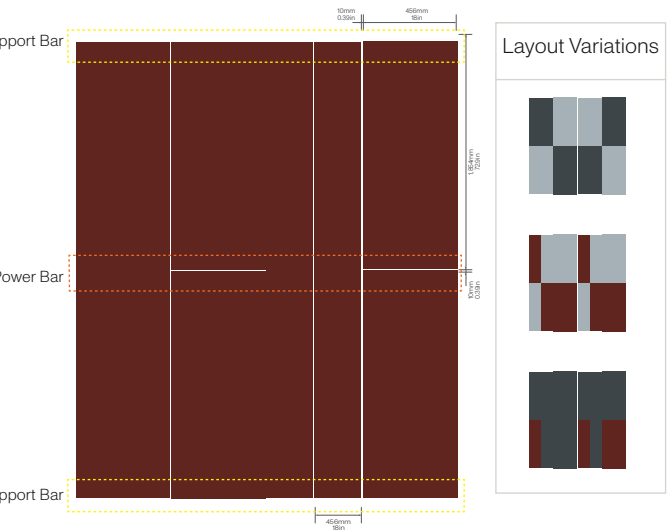
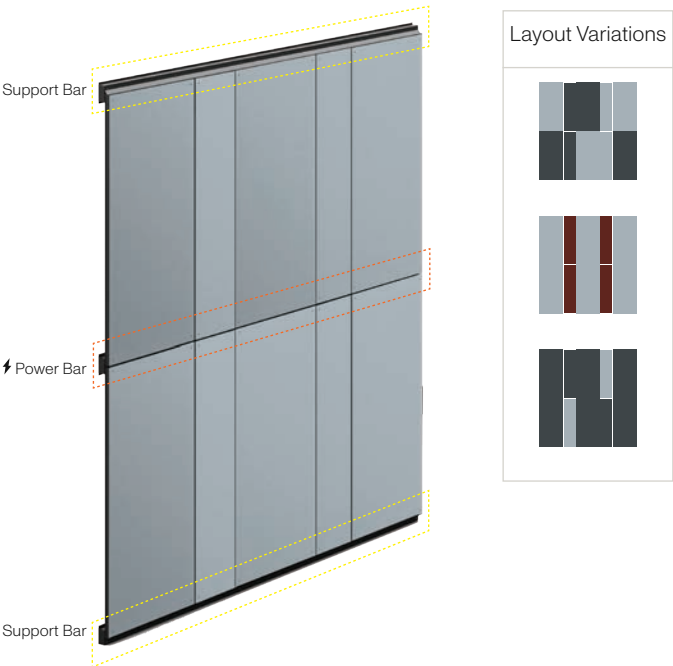
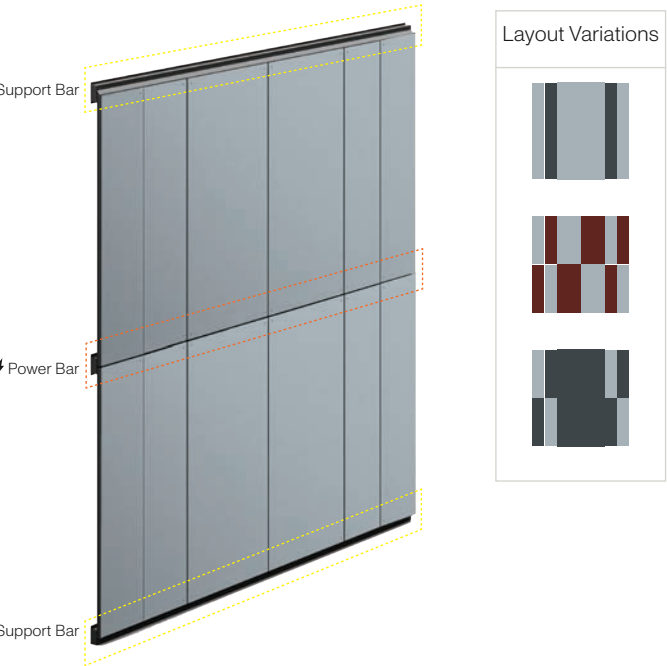


eFacade LITE Mixed Horizon Grid

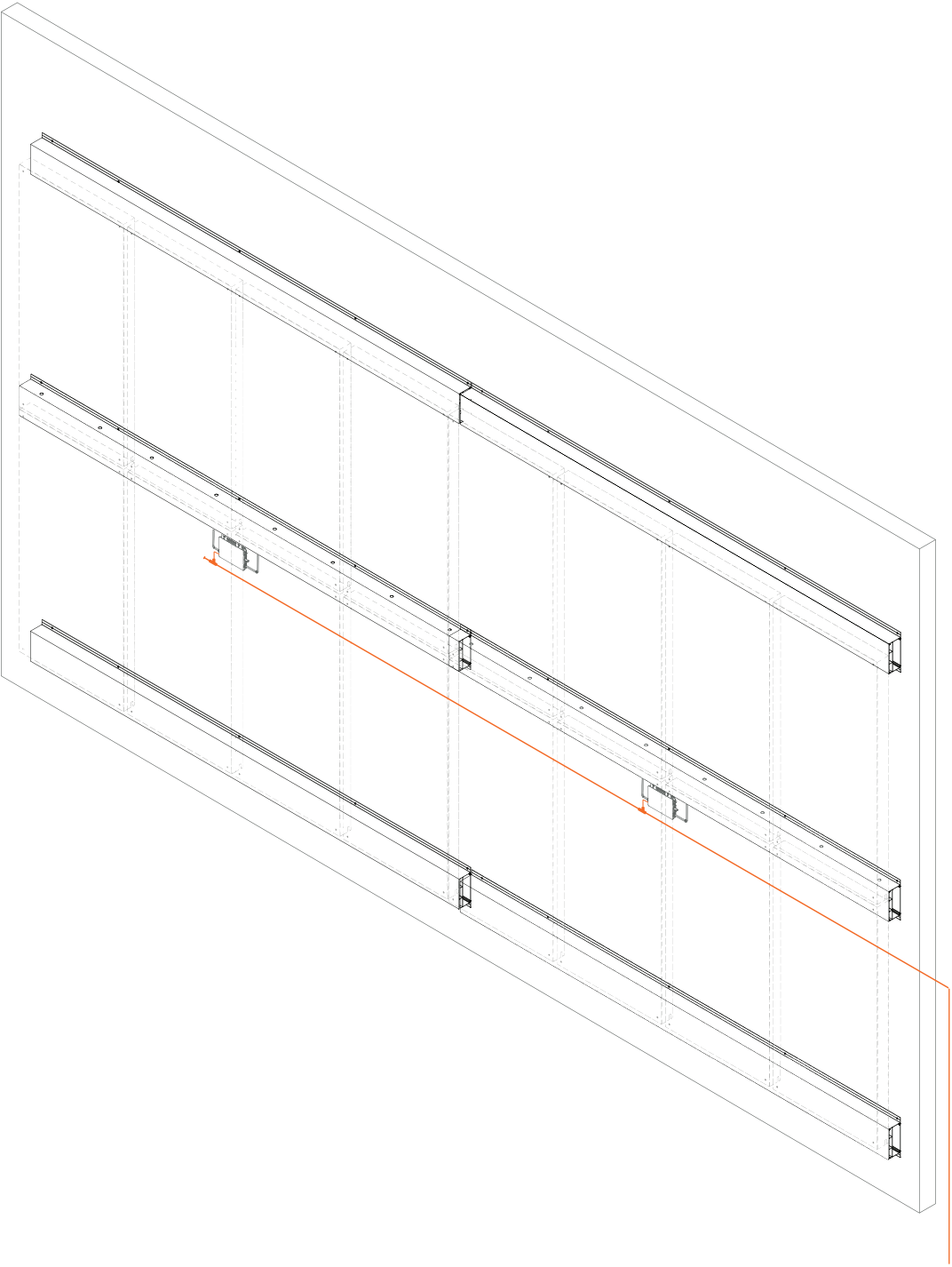


eFacade LITE Layout Options

More eFacade LITE Dual Linear Precision



eFacade LITE Electrical Connection



Mitrex eFacade Products Comparison

Mitrex offers three distinct solar cladding solutions—eFacade LITE, eFacade PRO, and eFacade PRO+—each engineered to meet varying project needs in terms of design flexibility, performance, and scale.

The table below provides a detailed comparison across key features such as colors and finishes, sizing options, weight, system compatibility, and testing standards. Whether you're prioritizing affordability, customization, or advanced performance, this side-by-side overview will help you identify the best fit for your project.

	<div><div></div>eFacade LITE</div>	<div><div></div>eFacade PRO</div>	<div><div></div>eFacade PRO+</div>
Colors & Patterns	5 color options	48 color options	Unlimited customizable colors & patterns
	Finish: Satin glass Thickness: 0.24in (6mm)	Finish: Satin glass Thickness: 0.24in (6mm)	Finish: Super satin, satin, matte, glossy, wood grain, aqualite, and more. Thickness: 0.24-0.47in (6-12mm)
Sizes & Weight	2 size options: 73 × 36 in (1854 × 922 mm) 73 × 18 in (1854 × 456 mm)	Custom sizes up to 80 × 39 in (2034 × 994mm). Minimum size of 49 × 27 in (1245 × 686 mm).	Customizable single piece sizes up to 125 × 80 in (3175 × 2032mm). Preassembled pieces up to 420 inches (10.7) long.
	Weight: 3.16 lb/SQFT (15.4 kg/sqm)	Weight: 3.16 lb/SQFT (15.4 kg/sqm)	Weight: 3.19 - 4.00 lb/SQFT (15.6-19.5 kg/sqm)
	Backing: Extruded aluminum profile with panel thickness of 1.3in (34mm)	Backing: Extruded aluminum profile with panel thickness of 1.3in (34mm)	Backing: Extruded aluminum profile with panel thickness of 1.3in (34mm). Aluminum honeycomb with 1 or 2 in (25 or 50mm) thickness excluding facing.
	Shapes: rectangle	Shapes: rectangle	Customizable Shapes: rectangle, triangle, circle, and more
Systems	Ventilated rainscreen system, eFacade LITE system	Ventilated rainscreen system (interlocking channel or anchor plate)	Customizable rainscreen, unitized or prefabricated system options
	MOQ of 150 SQFT (13.9 sqm)	MOQ of 500 SQFT (46.4 sqm)	MOQ of 5,000 SQFT (464.5 sqm)
Testing	3rd party tested	3rd party tested	3rd party tested
	Code-compliant & safety tested	Code-compliant & safety tested	Code-compliant & safety tested
	Fire tested	Fire tested	Fire tested

For more information about Mitrex eFacade products, visit mitrex.com or email us at info@mitrex.com

Mitrex and Cladify Projects



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