



- Facade PRO

Architectural solar facades, reimagined

Energy Generating Building Materials:
eFacade PRO Product Datasheet

 MITREX™

⚡ eFacade PRO

eFacade PRO by Mitrex is a high-performance solar facade solution that blends aesthetics with cutting-edge building-integrated photovoltaic (BIPV) technology. This ventilated rainscreen system features an invisible extruded aluminum profile encasing high-efficiency solar cells, paired with a customizable facing available in 48 colors.

Now available in sizes up to 39×80 inches for optimal cost efficiency, eFacade PRO is engineered for durability, energy performance, and architectural versatility. The facing acts as a design canvas—allowing your building to come to life—seamlessly integrating solar power into your building envelope.

For even more customization, including unlimited sizes, colors, and textures, explore Mitrex eFacade PRO+.



Energy

Generates 7–18W/SF of clean energy while maintaining durability, reducing carbon emissions, and supporting net-zero energy goals.



Colors & Sizes

With 48 standard colors and custom sizes up to 39×80 inches, this system combines high solar performance with flexible design options across a range of finishes.



Rainscreen System

Features ventilated rainscreen system improving thermal performance, reducing moisture, and enhancing energy efficiency.



Sustainability

Supports lower carbon footprints through clean energy generation, recyclable components, and efficient, low-carbon materials.



Certifications

Meets safety standards including UL 61730, UL 61215, ASTM E1996 for impact resistance, and ASTM E330 for wind load performance.



Fire Safety

Meets global fire safety standards, including NFPA 285 and EN 13501 A2-s1,d0, and is built with non-combustible materials.



Performance

Built with premium materials and tested for durability, this system withstands extreme weather, UV exposure, and thermal stress—ideal for high-performance buildings in any climate.



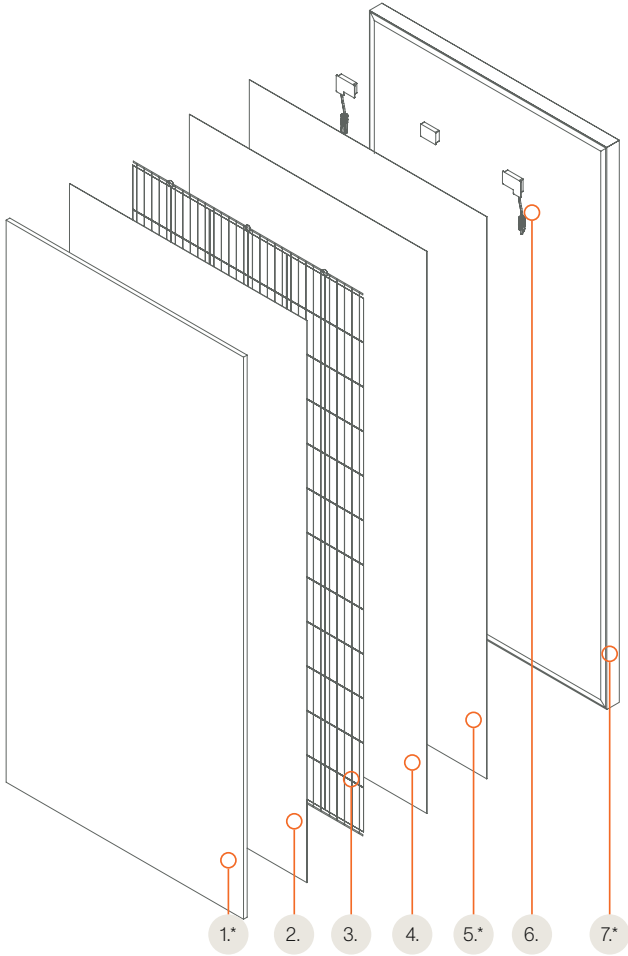
Maintenance

Designed for longevity, this system features self-cleaning, UV-resistant panels that resist dirt, fading, and corrosion—requiring minimal upkeep and backed by a 25-year performance warranty.



Incentives

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



eFacade PRO Module Layers

- 1. Glass / Customizable Facing - * See page 8
- 2. and 4. Encapsulant
- 3. ⚡ Solar Cells
- 5. Back Sheet - *See page 8, Section Solar Backsheet Capabilities
- 6. Junction Box
- 7. Extruded Aluminum Profile - * See page 8




Myron and Berna Garron Health Sciences Complex (SAMIH)
at University of Toronto Scarborough - Toronto, ON, Canada


General Electrical And Mechanical Data
Standard Module Size: 2034 × 994 mm (80 × 39.1 in)


● Test	● Specification	● Engineering Drawing																								
<table><tr><th>Test Conditions</th><th>STC</th></tr><tr><td>Module Power (Pmax)</td><td>Varies, See Page 12-13</td></tr><tr><td>Maximum Power Voltage (Vpmax)</td><td>Varies, See Page 12-13</td></tr><tr><td>Maximum Power Current (Ipmax)</td><td>Varies, See Page 12-13</td></tr><tr><td>Open Circuit Voltage (Voc)</td><td>Varies, See Page 12-13</td></tr><tr><td>Short Circuit Current (Isc)</td><td>Varies, See Page 12-13</td></tr><tr><td>Module Efficiency</td><td>Varies, See Page 12-13</td></tr><tr><td>Cell Efficiency</td><td>22.5% - Monocrystalline Solar Cell</td></tr><tr><td>Maximum System Voltage (VDC)</td><td>1000V (IEC/UL)</td></tr><tr><td>Series Fuse Rating</td><td>20A</td></tr><tr><td>Power & Other Electrical Specification Tolerance</td><td>5%</td></tr><tr><td>Application Classification</td><td>Class A</td></tr></table> <p>Measurement Conditions: STC 1000 W/m² - AM 1.5 - Temperature 25°C</p>		Test Conditions	STC	Module Power (Pmax)	Varies, See Page 12-13	Maximum Power Voltage (Vpmax)	Varies, See Page 12-13	Maximum Power Current (Ipmax)	Varies, See Page 12-13	Open Circuit Voltage (Voc)	Varies, See Page 12-13	Short Circuit Current (Isc)	Varies, See Page 12-13	Module Efficiency	Varies, See Page 12-13	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	
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● Mechanical Properties	● Metric																									
Module Weight	36kg																									
Dimensions (H x L x D)	2034 × 994 × 34mm																									
Maximum Surface Load (Wind / Snow)	8000Pa rear load / 8000Pa front load																									
Design Load	5400Pa rear load / 5400Pa front load																									
Hail Impact Resistance	ø 25mm at 83 km/h																									
Cells	72 [12×6] Mono-crystalline (158.75 × 158.75mm)																									
Glass	6mm tempered glass, high transmittance, anti-reflective coating																									
Cables & Connectors	1200mm - 4mm², 12 AWG (UL), MC4 from Staubli																									
Backsheet	High durability, UV resistant, PV backsheet																									
Frame	Extruded aluminum profile																									
Bypass Diodes	3 diodes- 30SQ045T (45V max DC blocking voltage, 30A max forward rectified current)																									
Junction Box	IP68 rated, TUV and UL certified																									
Fire Rating	Type II																									
● Temperature Ratings	● I-V Curves																									
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																									

*Varies, These graphics are based on a 345W panel

Colors and Patterns
















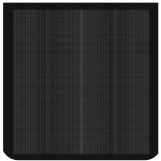



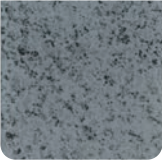




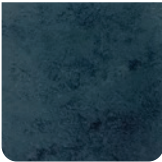
 **Finish**
Modules feature satin glass, providing a smooth, low-reflective finish that enhances both aesthetics and performance.

 **Color Variety**
Available in 48 colours and patterns, organized into two distinct solar series: Genesis and Exodus.

 **Design Flexibility**
Available in a variety of module sizes, ranging from a maximum of 80 × 39 in (2,034 × 994 mm) to a minimum of 27 × 49 in (686 × 1,245 mm).
























Mitrex Genesis Series

Mitrex Genesis 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.

 Icy White ⚡ 5W/SQFT	 Polaris ⚡ 9W/SQFT	 Ash Beige ⚡ 11W/SQFT	 Gravel Grey ⚡ 11W/SQFT	 Smokey Grey ⚡ 10W/SQFT	 Charcoal Grey ⚡ 10W/SQFT	 Navy Blue ⚡ 11W/SQFT
 Turquoise ⚡ 7W/SQFT	 Peridot ⚡ 5W/SQFT	 Dull Yellow ⚡ 6W/SQFT	 Dull Orange ⚡ 5W/SQFT	 Brown ⚡ 9W/SQFT	 Red ⚡ 9W/SQFT	 Pale Rose ⚡ 7W/SQFT
 Beige ⚡ 5W/SQFT	 Core Black ⚡ 18W/SQFT	 Blackout ⚡ 16W/SQFT	 Arcturus - Limestone ⚡ 12W/SQFT	 Astra - Limestone ⚡ 11W/SQFT	 Moonstone - Granite ⚡ 10W/SQFT	 Carbo - Granite ⚡ 15W/SQFT
 Orbit - Marble ⚡ 16W/SQFT	 Rocksalt - Marble ⚡ 11W/SQFT	 Cassia - Metal ⚡ 14W/SQFT	 Cobaltic - Metal ⚡ 13W/SQFT			

Mitrex Exodus 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.

 Nobel Grey ⚡ 10W/SQFT	 Silver Grey ⚡ 10W/SQFT	 Ironside Grey ⚡ 13W/SQFT	 Monsoon ⚡ 13W/SQFT	 Boulder ⚡ 13W/SQFT	 Natural Grey ⚡ 13W/SQFT	 Iron Filings ⚡ 14W/SQFT
 Storm Grey ⚡ 13W/SQFT	 Gun Smoke ⚡ 13W/SQFT	 Ebony Grey ⚡ 13W/SQFT	 Ocean ⚡ 15W/SQFT	 Deep Ocean ⚡ 15W/SQFT	 Blue Jay ⚡ 14W/SQFT	 Sea ⚡ 14W/SQFT
 Purple ⚡ 13W/SQFT	 Apple Blossom ⚡ 8W/SQFT	 Irish Coffee ⚡ 12W/SQFT	 Cocoa Bean ⚡ 9W/SQFT	 Wet Sand ⚡ 12W/SQFT	 Gold ⚡ 11W/SQFT	 Espresso Martini ⚡ 10W/SQFT
				 Storm Dust ⚡ 8W/SQFT	 Pine Cone ⚡ 13W/SQFT	

Panel Sizes

Size Capabilities

Mitrex offers eFacade PRO panels in a wide range of sizes, with a maximum size of 80 × 39 inches. For larger dimensions, please refer to Mitrex eFacade PRO+.

Facing Details

Solar Glass Type

Mitrex offers eFacade PRO with Satin Glass. For other glass options, please refer to Mitrex eFacade PRO+.

Solar Glass Mechanical Data

	Imperial	Metric
Thickness (0.23in / 6mm)	0.23 ± 0.012in	6 ± 0.3mm
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 (EN 12150-1:2015)	0.16in / 39.37in	4.0mm/M / 990mm/M
Local Warp (EN 12150-1:2015)	0.002in / 11.81in	0.5mm / 300mm/M
Bending Strength (EN 12150-1:2015) (0.13in / 3.2mm)	516.06lbs/in	90N/mm
Bending Strength (EN 12150-1:2015) (0.23in / 6mm)	685.21lbs/in	120N/mm
Iron Content (ASS)	<120ppm	
Edge	At least seamed	
Scratch Hardness (Mohs)	5	
Fragmented Particles in 50×50mm (If Tempered) (EN 12150-1:2015)	Min 40 pcs	

Backing Details

Extruded Aluminum Profile 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	





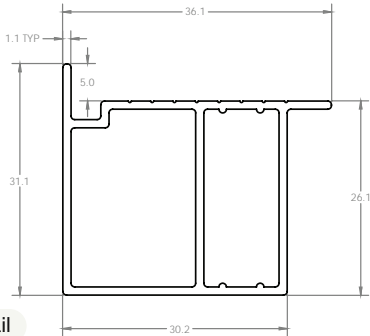
Solar Glass Facing Specification

	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 (Dry)	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.

Solar Backsheet Capabilities

Backsheet	High durability, UV resistant, PV backsheet
Colour	<div><div>Black Backsheet</div><div>White Backsheet</div></div>



Module Frame Detail

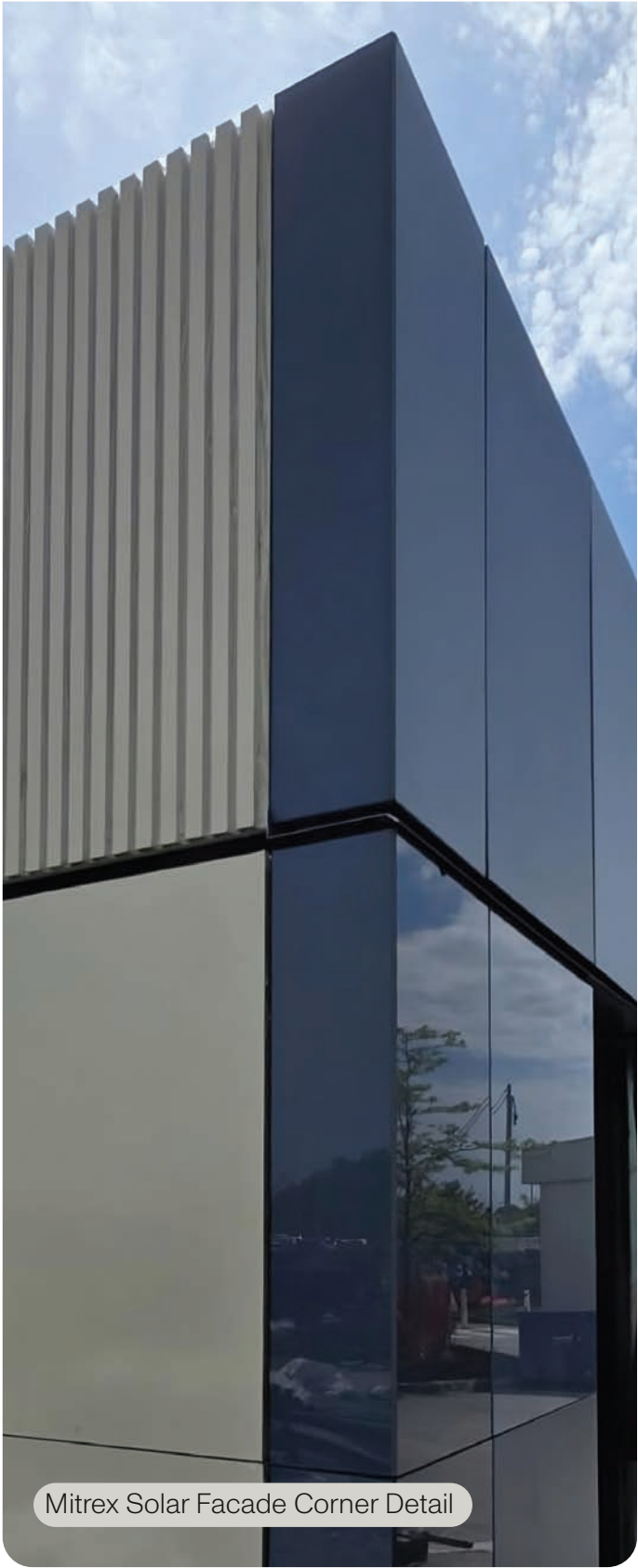
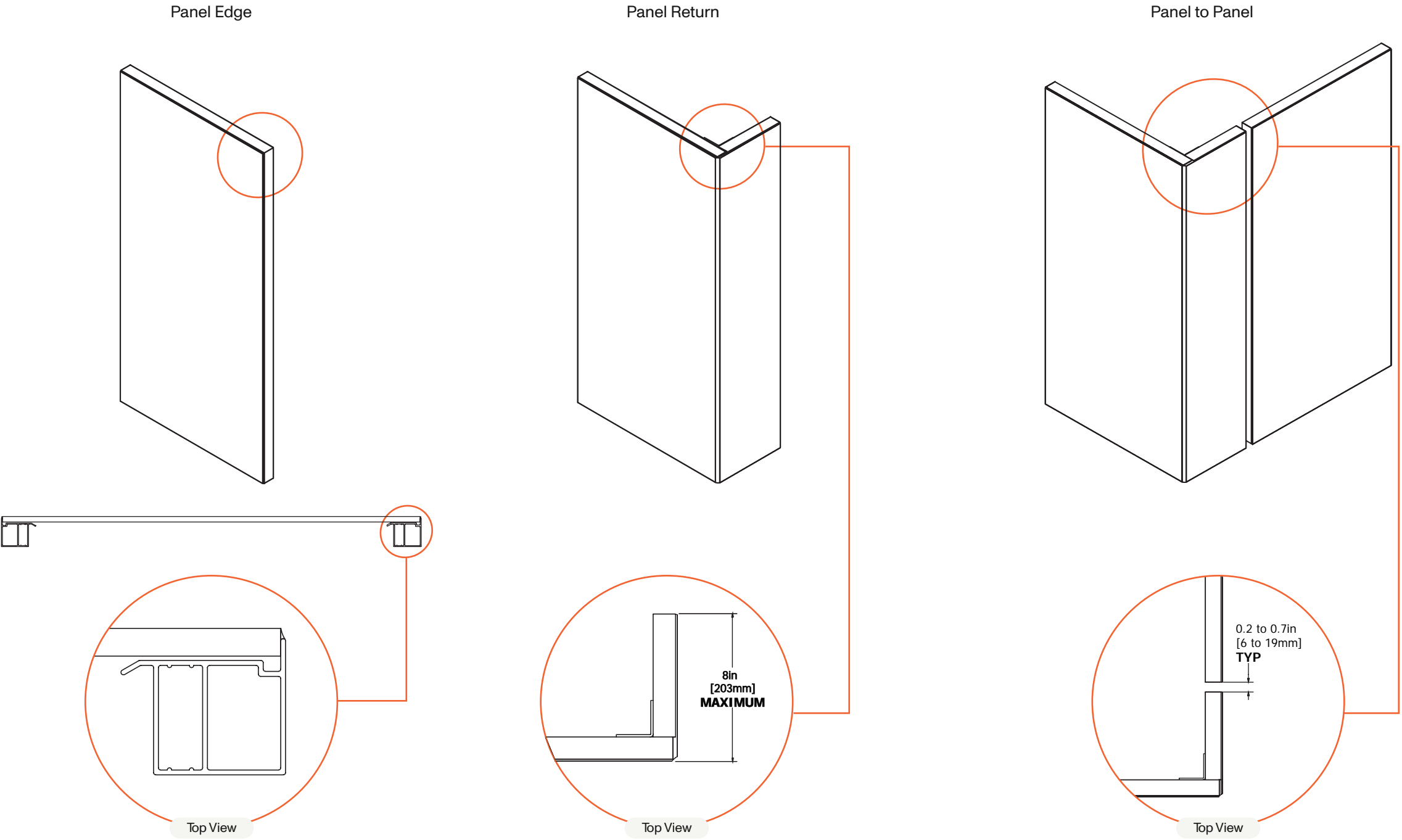
Testing and Certifications

Category	Test Name	Test Specification	Result
Acoustic	Sound Transmission Loss	ASTM E90	Sound Transmission Rating: CladiShield Rainscreen: 34; Claditized Unitized: 35; CladiFab Prefab: 55
	Salt Spray Resistance	ASTM B117-16	No deleterious effects.
Environmental	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
	Water Penetration Resistance	ASTM E331	No water infiltration at 15 psf or 720 Pa
Fire Safety	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
	Large Missile Impact Test	ASTM E1996 / TAS 201	Passed
Impact / Safety	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.
	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)
Mechanical	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 Performance	ASTM E330	+/-80 psf or +/- 3840 Pa; no failure
Structural	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
Thermal	Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval	IEC/UL 61215	Passed
PV Quality	Standard for Photovoltaic (PV) Module Safety	IEC/UL 61730	Passed
PV Safety			



Corners & Edges Details

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



System Details

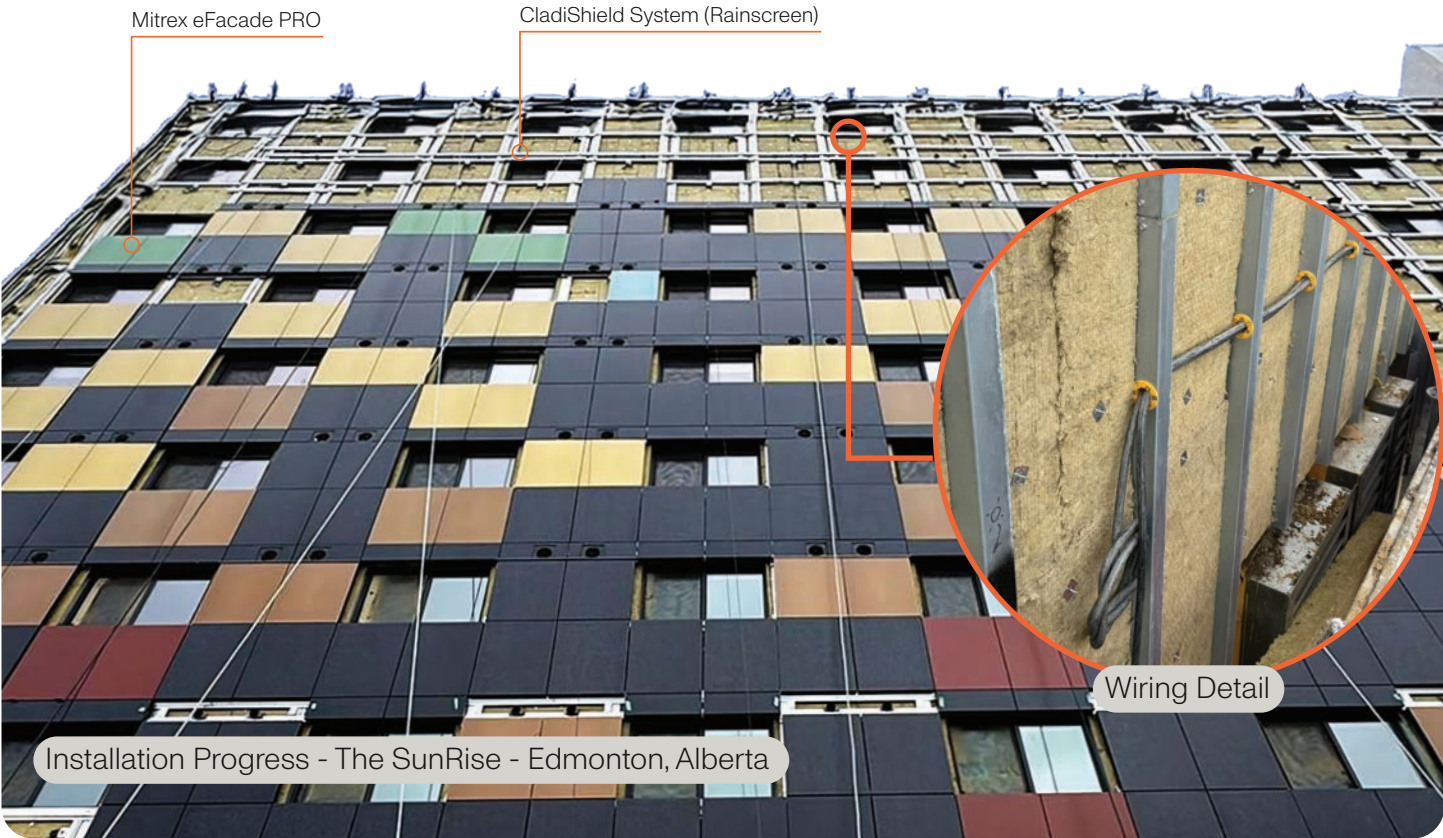
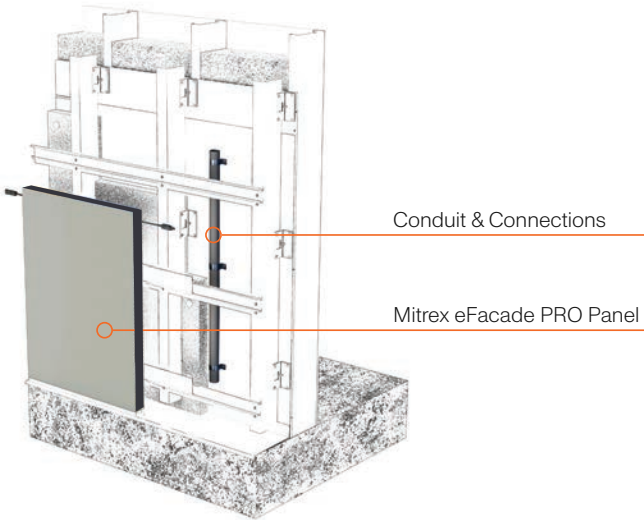
Cladishield Rainscreen System

With CladiShield Rainscreen system, you don't just get cladding panels—you get a complete wall solution. Provided by Mitrex's sister company, Cladify, the system is a comprehensive package that includes a high-performing air and moisture barrier, continuous insulation, adjustable sub-framing systems, and, of course, our exceptional multi-facing cladding.

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

Tolerances Details

	Imperial	Metric
Dimensional Variation Length	± 0.07in	± 2mm
Dimensional Variation Width	± 0.07in	± 2mm
Thickness Tolerance	± 0.03in	± 1mm
Diagonal Difference	± 0.19in	± 5mm



Electrical Data

● Model Name	● Model Power (W/SQFT)	● Max. Power Current - Imax (A)	● Max. Power Voltage - Vmax (V)	● Short Circuit Current - Isc (A)	● Open Circuit Current - Voc (V)	● Module Efficiency (%)
Apple Blossom	8	4.16	40.90	4.44	47.50	8%
Arcturus	12	6.26	42.30	7.36	48.40	13%
Ash Beige	11	5.20	40.40	5.45	47.90	11%
Astra	11	6.92	42.60	8.20	48.70	12%
Blackout	16	8.62	40.60	9.07	48.90	17%
Blue Jay	14	7.59	40.20	7.90	48.50	15%
Boulder	13	6.90	40.60	7.23	48.50	14%
Brown	9	4.62	41.10	4.96	47.70	9%
Carbo	13	6.85	41.60	7.12	48.10	14%
Cassia	14	7.32	41.00	7.74	48.60	15%
Cobaltic	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	15	7.95	40.90	8.34	48.60	16%
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	47.70	9%
Rocksalt	11	5.74	41.80	6.17	48.30	12%
Sea	14	7.48	40.10	7.77	48.40	15%

Electrical Data

● Model Name	● Model Power (W/SQFT)	● Max. Power Current - Imax (A)	● Max. Power Voltage - Vmax (V)	● Short Circuit Current - Isc (A)	● Open Circuit Current - Voc (V)	● Module Efficiency (%)
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	13%



Mitrex and Cladify Projects

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.

	● eFacade LITE	● eFacade PRO	● eFacade PRO+
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 x 994mm). Minimum size of 49 × 27 in (1245 x 686 mm).	Customizable single piece sizes up to 125 x 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.
Systems	Shapes: rectangle	Shapes: rectangle	Customizable Shapes: rectangle, triangle, circle, and more
	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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