



# **E-Facade TILT**

Designed to Stand Out. Built to Power Up.

**Energy Generating Building Materials:**  
eFacade TILT Product Datasheet

 **MITREX™**

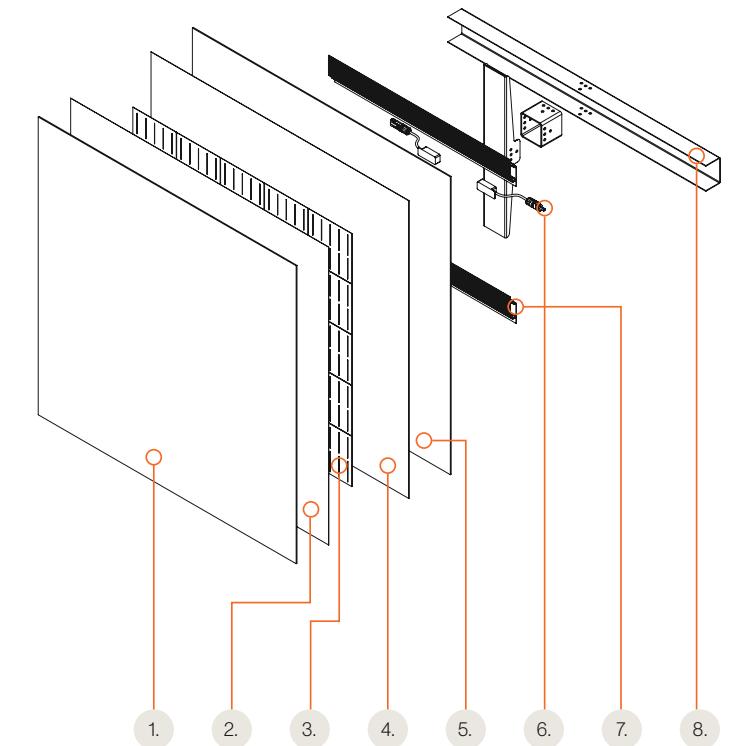
## ⚡ eFacade TILT

eFacade TILT by Mitrex utilizes building-integrated photovoltaics (BIPV) to create an angled rainscreen facade solution. Each 37 x 37 inch panel is tilted off the building face using custom mounting hardware that adds depth to the building envelope. The angular design introduces dynamic shadows across the wall—delivering powerful aesthetics and power generation in one integrated system.

eFacade TILT uses a dual-glass build consisting of a tempered glass facing layer with interchangeable colours, and a tempered glass backing. Between them are high-efficiency monocrystalline solar cells alaminated into a durable panel structure. Architects can specify any combination of the 23 available standard colors to create bold gradients, or uniform facades.



<p> <b>Energy</b></p> <p>Dual-glass monocrystalline solar modules generate up to 15 W/ft<sup>2</sup> (160 W/m<sup>2</sup>), with output varying by sun exposure, orientation, tilt, and local irradiance.</p>	<p> <b>Colors &amp; Sizes</b></p> <p>Offered in 23 colors and 37x37 in size, can be flat- or angle-mounted (2.6–6.7in depth) to add dimension and transform flat facades into dynamic design elements.</p>	<p> <b>Rainscreen System</b></p> <p>Custom mounting hardware enables quick installation, precise alignment, and durable rainscreen performance improving thermal efficiency, minimizing moisture, and enhancing building envelope longevity.</p>	<p> <b>Sustainability</b></p> <p>Combines on-site energy generation with recyclable components, low embodied carbon, and efficient material use to reduce the building's environmental footprint.</p>	<p> <b>Certifications</b></p> <p>Engineered to international codes and safety standards, including UL 61730 for solar, ASTM E1996 for impact, and ASTM E330 for wind performance.</p>
<p> <b>Fire Safety</b></p> <p>Meets stringent fire safety standards, including NFPA 285, EN 13501 A2-s1,d0, and S134, using non-combustible materials certified for global compliance.</p>	<p> <b>Performance</b></p> <p>Built with premium materials and tested for extreme weather, UV, and thermal stress—delivering long-lasting durability for high-performance buildings in any climate.</p>	<p> <b>Maintenance</b></p> <p>Self-cleaning glass, UV- and corrosion-resistant materials, and a lifetime warranty ensure long-lasting performance with minimal upkeep.</p>	<p> <b>Incentives</b></p> <p>Projects may qualify for sustainability incentives such as government rebates, green energy grants, and low-cost financing across North America.</p>	



### eFacade TILT Module Details

1. Glass / Customizable Facing - See page 4
2. Encapsulant
3. ⚡ Solar Cells
4. Encapsulant
5. Glass Backing
6. Junction Box
7. Interlocking Channel
8. Mounting Hardware

## Color Options

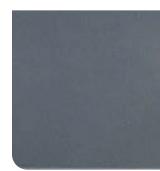
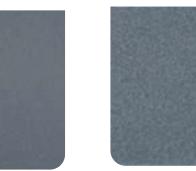
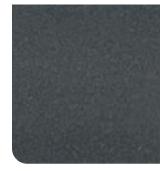
Finish
Modules feature satin glass, providing a smooth, low-reflective finish that enhances both aesthetics and performance.

Color Variety
Available in 23 Colors, featuring the Mitrex Exodus Series.

Module Sizing
Available in 37 x 37 in (940 x 940 mm).

### 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					



### ORDER A FREE SAMPLE!

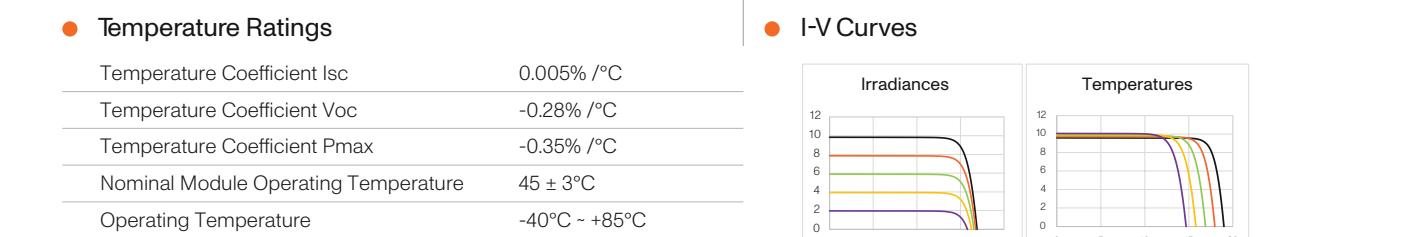
Experience the look and feel of our solar cladding. Scan the QR code or visit [www.mitrex.com](http://www.mitrex.com) to order your free Mitrex sample today.

## General Electrical And Mechanical Data

Standard Module Size: 940 x 940 mm (37 x 37 in)

Test	Specification	Engineering Drawing
<b>Test Conditions</b>	<b>STC</b>	
Module Power (Pmax)	Varies, See Page 18	
Maximum Power Voltage (Vpmax)	Varies, See Page 18	
Maximum Power Current (Ipmax)	Varies, See Page 18	
Open Circuit Voltage (Voc)	Varies, See Page 18	
Short Circuit Current (Isc)	Varies, See Page 18	
Module Efficiency	Varies, See Page 18	
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	
Measurement Conditions: STC 1000 W/m <sup>2</sup> - AM 1.5 - Temperature 25°C		

Mechanical Properties	Metric	Imperial
Module Weight	15 kg	33 lbs
Panel Dimensions (H x L x D)	940 x 940 x 7.5mm	37 x 37 x 0.3in
Maximum Surface Load (Wind / Snow)	2400Pa front load / 2400Pa rear load	50.1psf front load / 50.1psf rear load
Design Load	1600 Pa front load / 1600Pa rear load	33.4 psf front load / 33.4psf rear load
Hail Impact Resistance	Ø 25mm at 83 km/h	Ø 1in at 51.6 mph
Cells	32 [2(4x4)] Mono-crystalline (210 x 105mm)	32 [2(4x4)] Mono-crystalline (8.27 x 4.13in)
Front Glass	3.2mm tempered glass, high transmittance, anti-reflective coating	0.12in tempered glass, high transmittance, anti-reflective coating
Cables & Connectors (Refer to Installation Manual)	600mm - 4mm <sup>2</sup> , 12 AWG (UL) MC4 from Staubli	24in - 0.16in <sup>2</sup> , 12 AWG (UL) MC4 from Staubli
Back Glass	3.2mm tempered glass, high transmittance, black coating	0.12mm tempered glass, high transmittance, black coating
Panel Tilt	3°	
Bypass Diodes	2 diodes- QCM3045 (45V max DC blocking voltage, 30A max forward rectified current)	
Junction Box	IP68 rated, TUV and UL certified	
Fire Rating	Spread of flame A, Burning Brand A	

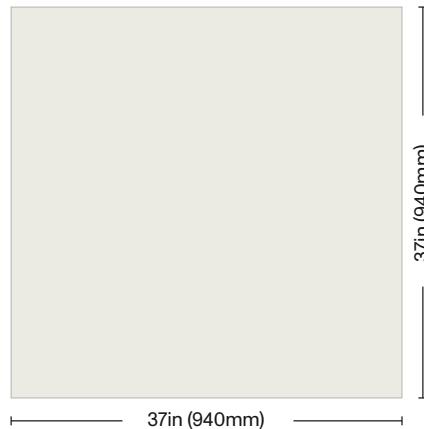


\*Varies, These graphics are based on a 130W panel

## Module Details

### Size Capabilities

Mitrex offers eFacade TILT panels in a unique 37" x 37" square format. For larger dimensions, please refer to Mitrex eFacade PRO+.



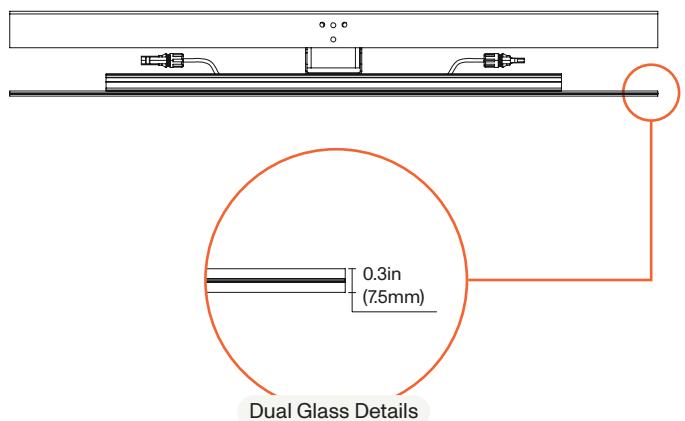
### Solar Glass Type

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

### Solar Glass Mechanical Data

	Imperial	Metric
Thickness	0.13 ± 0.012in	3.2 ± 0.3mm
Weight	1.54lb/SQFT	7.53KG/m <sup>2</sup>
Dimensional Tolerance	± 0.04in	± 1.0mm
Density	0.09lbs/in <sup>3</sup>	2.5gm/cm <sup>3</sup>
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
Iron Content (ASS)	<120ppm	
Edge	At least seamed	
Scratch Hardness (Mohs)	5	
Fragmented Particles in 50x50mm (if Tempered) (EN 12150-1:2015)	Min 40 pcs	

### Dual Glass Module Details



### Solar Glass Facing Certifications

Certification	Imperial	Metric
Absorption By Wt.	ASTM C373	0%
Compressive Strength	-	150,000psi
Flexural Strength (Dry)	ASTM C158	8,700psi
Modulus Rupture	ASTM C158	5,950psi
Hardness	ASTM C730	570KHN

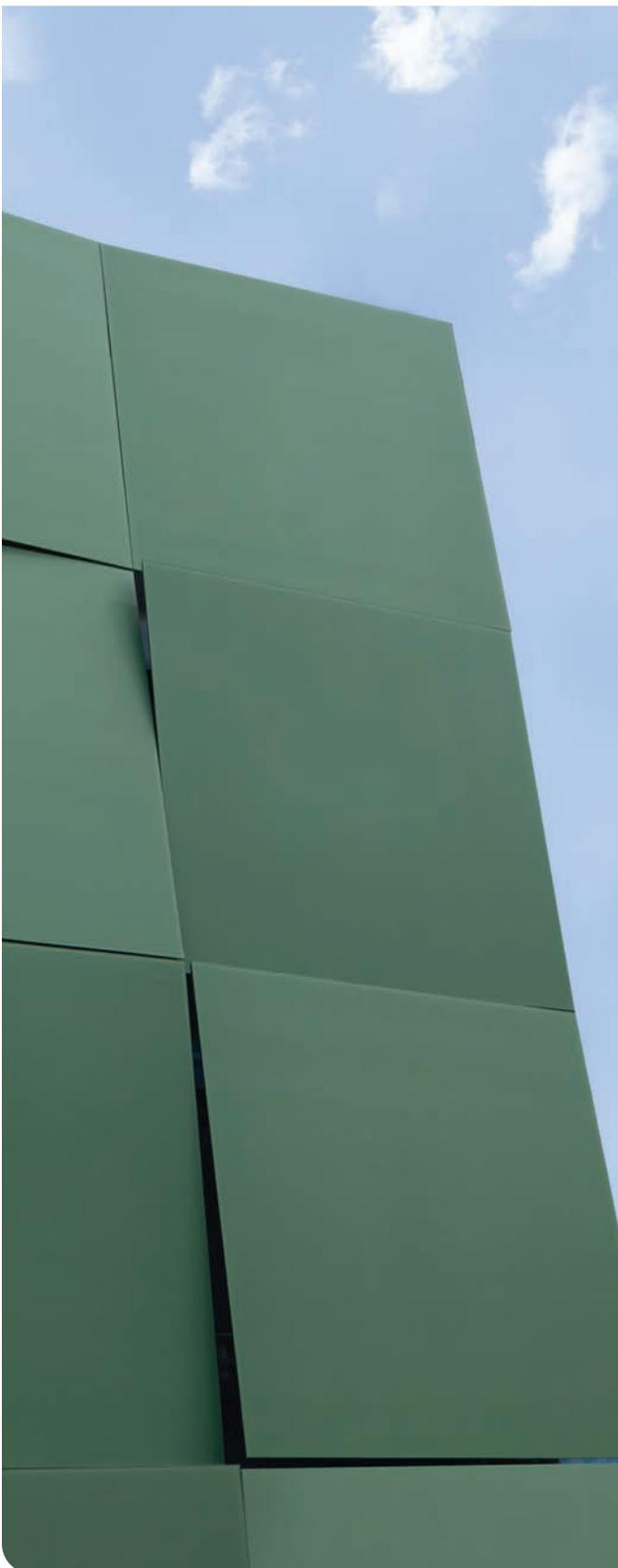
For further mechanical information about solar glass, please check Mitrex solar glass datasheet.

### Test

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

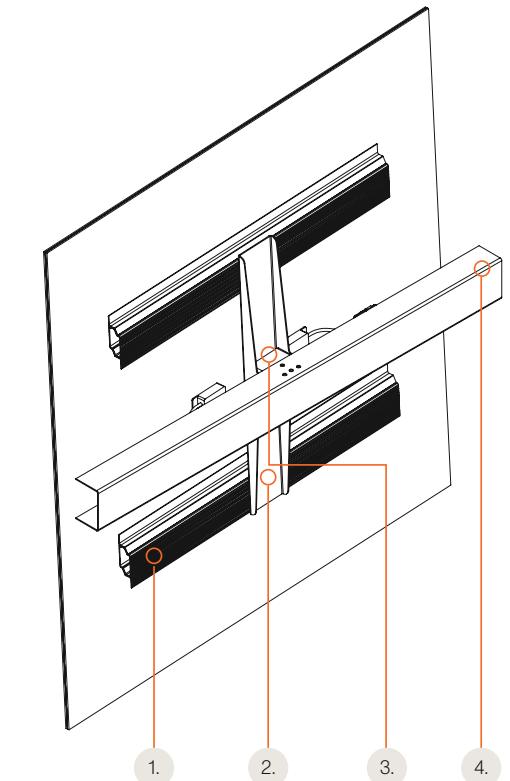
### Lifetime Warranty

- Mitrex 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.



## Mounting Hardware Details

Mitrex eFacade TILT modules feature a mounting mechanism that is engineered for seamless integration to any building facade. Durable, lightweight, and architecturally versatile, the tilted mounting system transforms vertical surfaces into high-performance solar assets.



1. Interlocking Channel

2. Connector Bracket

3. Connector Cube

4. Mounting C-Channel

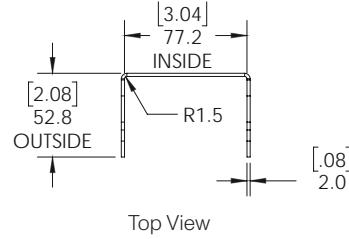
eFacade TILT Back View

### Interlocking Channel Details

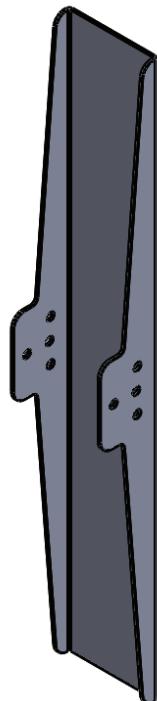
	Imperial	Metric
Weight	0.75lb/ft	0.34kg/m
Projection	0.5in	12.7mm
Height	3in (4in combined)	76.2mm (101.6 mm combined)
Thickness	0.06in	1.5mm
Lift Off	0.62in	15.75mm
Alloy Type	6063-T6	
Anodizing	Min. 15µm	

## Connector Bracket Details

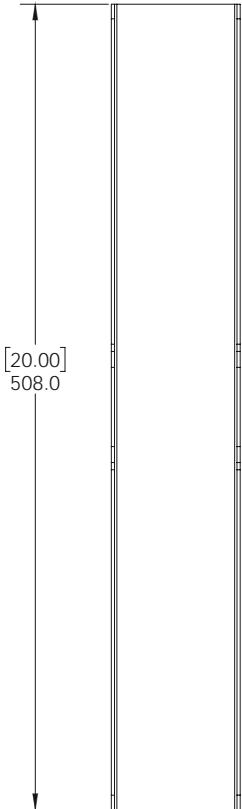
	Imperial	Metric
Weight	2.2 lb	1.0 kg
Dimensions	20.0 × 2.1 × 3.2 × 0.8in	508.0 × 52.8 × 81.2 × 2.0mm
Tensile Modulus	$29 \times 10^6$ psi	69 GPa
Tensile Yield Strength	$30 \times 10^3$ psi	207 MPa
Shear Yield Strength	$18 \times 10^3$ psi	124MPa
Material	Galvanized steel	



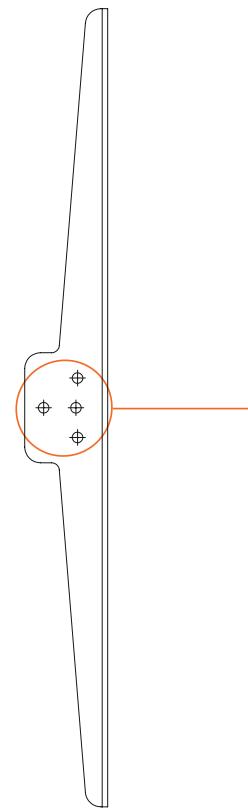
Top View



Isometric View



Front View

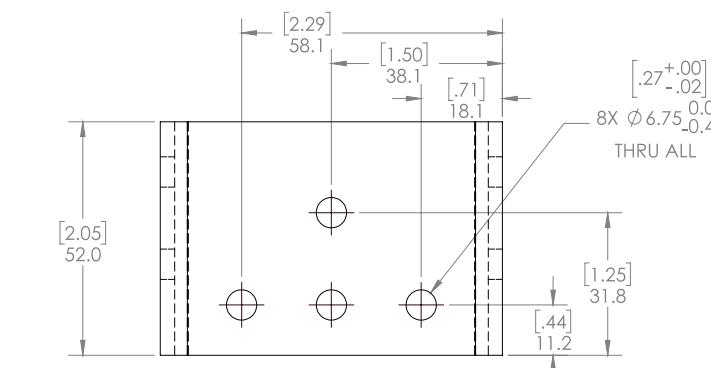


Side View

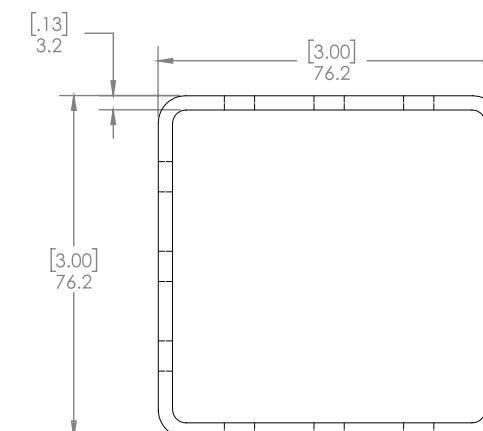
Connector Bracket Details

## Connector Cube Details

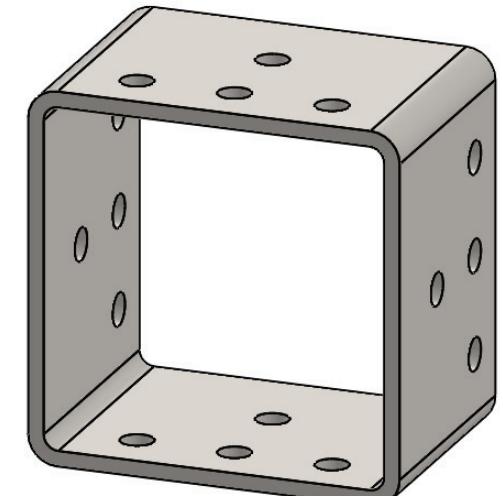
	Imperial	Metric
Weight	1.1 lb	0.5 kg
Dimensions	3.0 × 3.0 × 2.0 × 0.13in	76.2 × 76.2 × 52 × 3.2mm
Tensile Modulus	$29 \times 10^6$ psi	69 GPa
Tensile Yield Strength	$40 \times 10^3$ psi	275 MPa
Shear Yield Strength	$24 \times 10^3$ psi	165MPa
Material	HSS carbon steel	



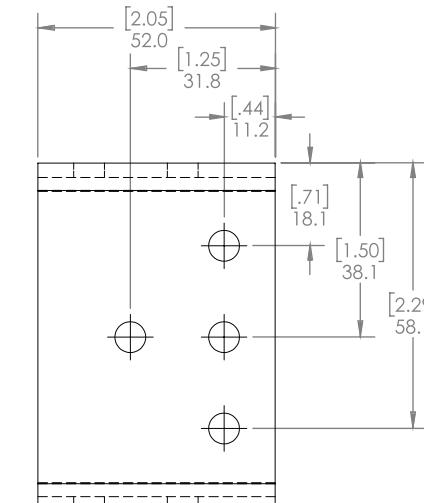
Top View



Front View



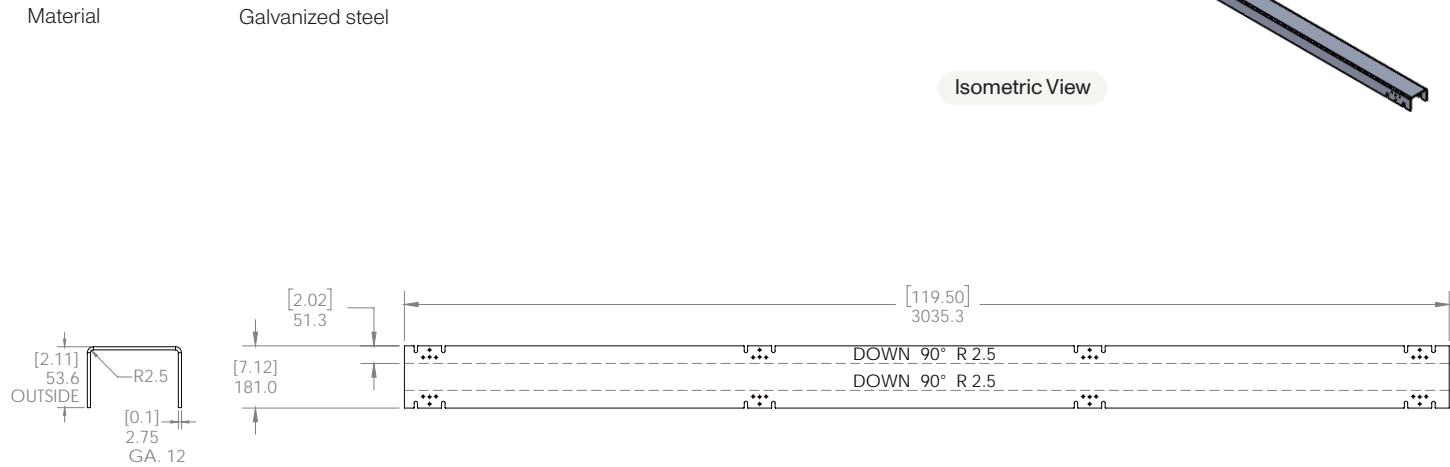
Dimetric View



Side View

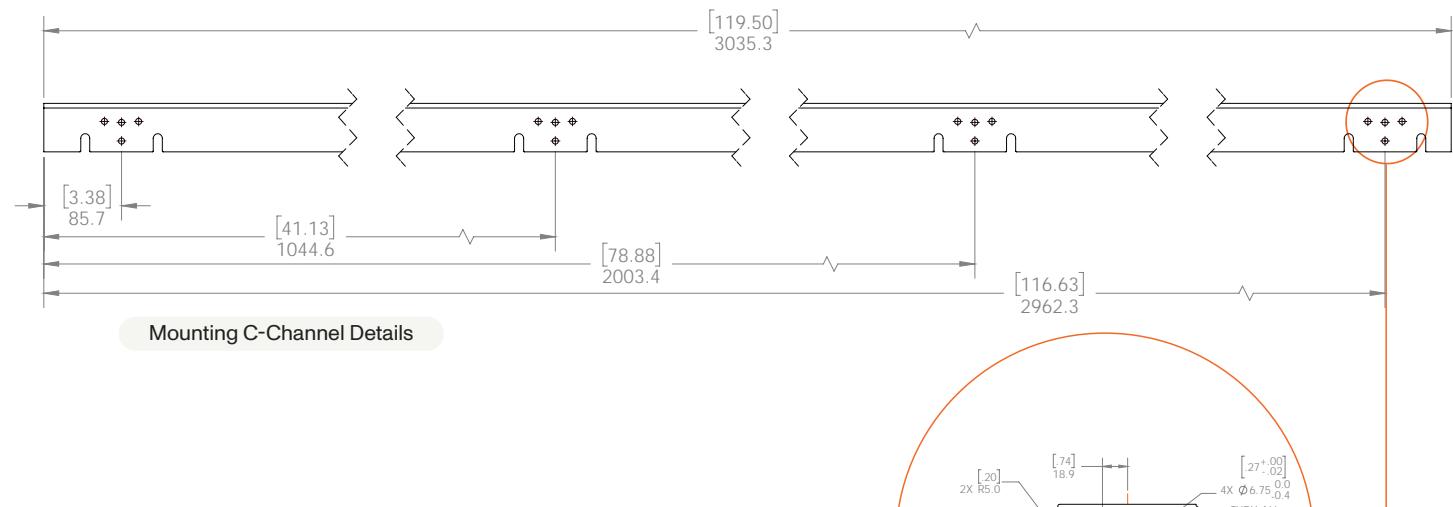
## Mounting C-Channel Details

	Imperial	Metric
Weight	26.2 lb	11.9 kg
Dimensions	2.1 x 7.12 x 2.1 x 0.1 in	53.6 x 181.0 x 53.6 x 2.75mm
	Length: 119.5 in	Length: 3035.3 mm
Tensile Modulus	$29 \times 10^6$ psi	69 GPa
Tensile Yield Strength	$30 \times 10^3$ psi	207 MPa
Shear Yield Strength	$18 \times 10^3$ psi	124 MPa
Material	Galvanized steel	



Side View

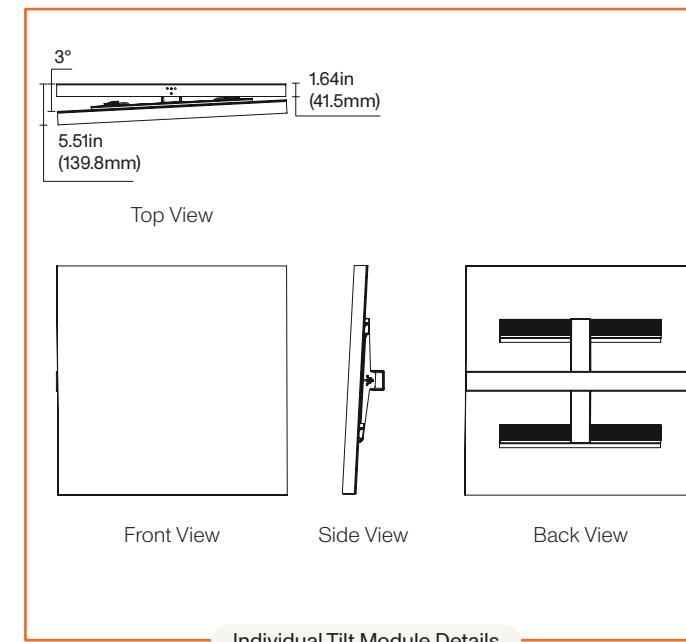
Top View



Mounting C-Channel Details

C-Channel Holes Details

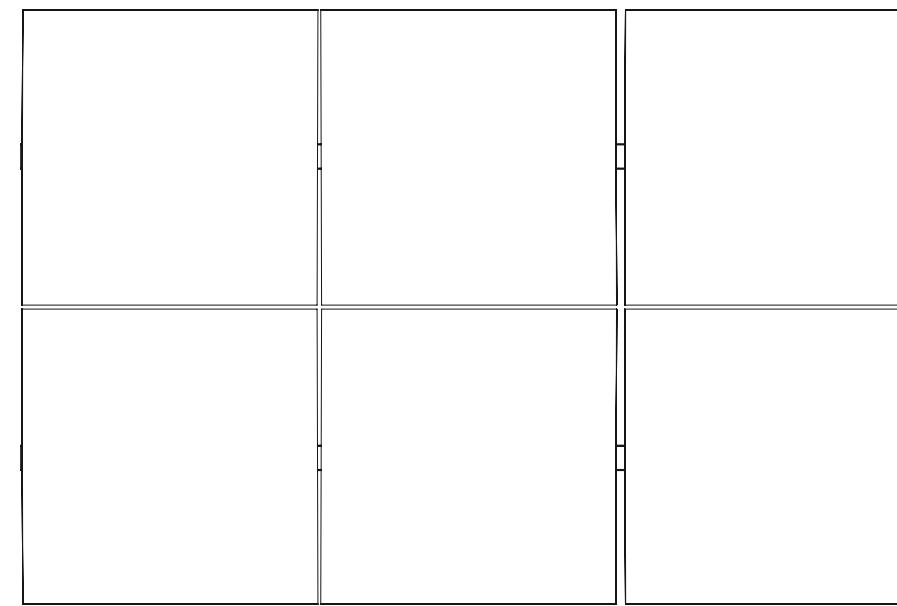
## System Visualization



Individual Tilt Module Details



Top View



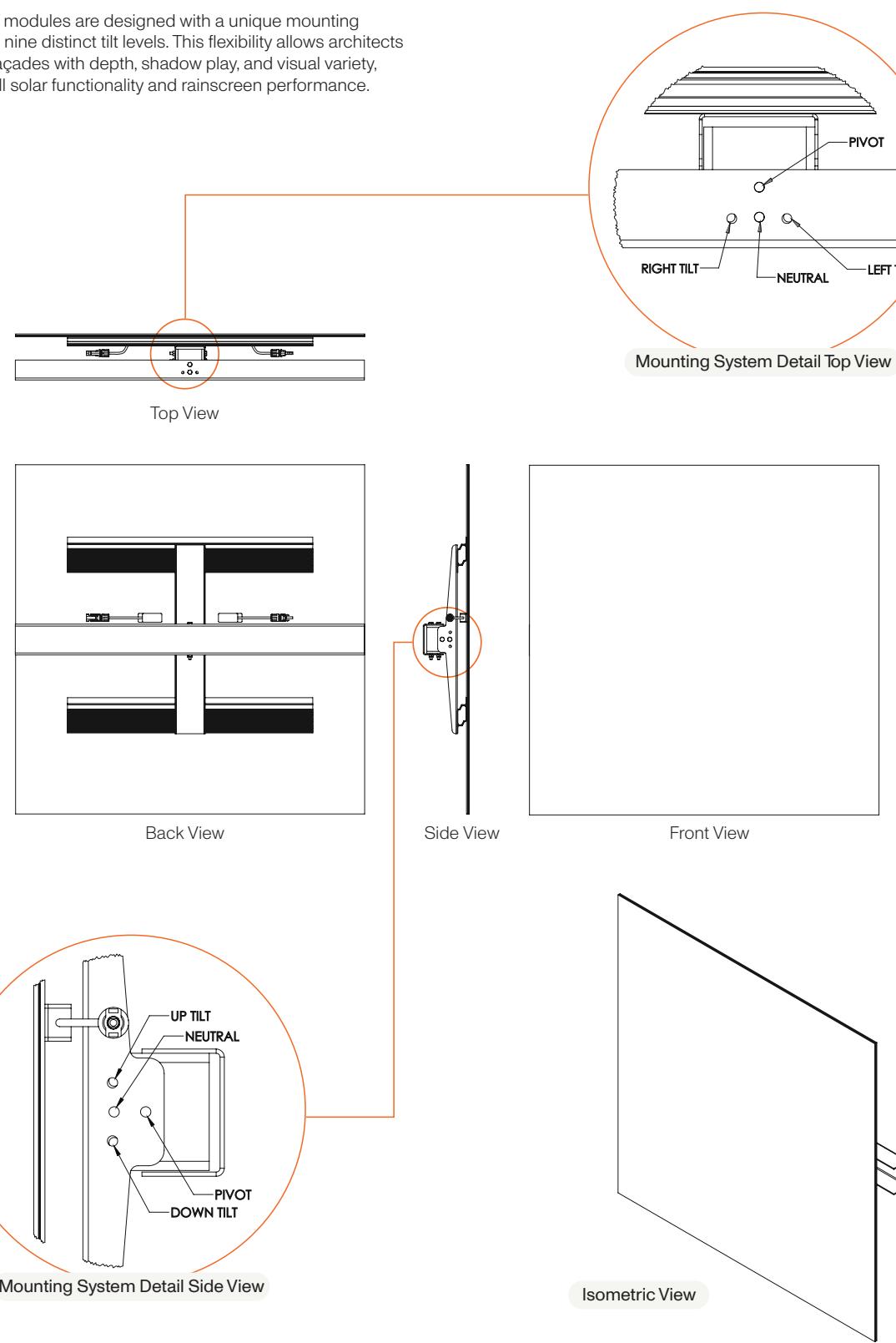
Front View



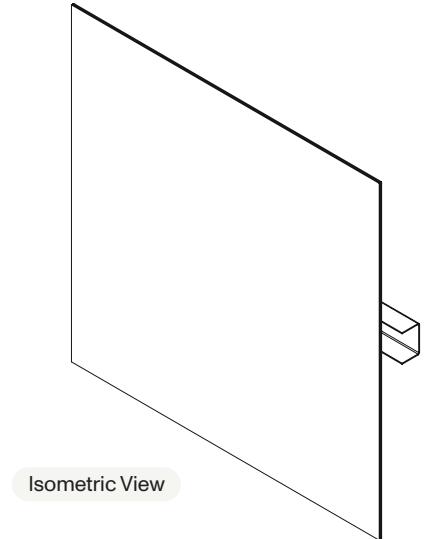
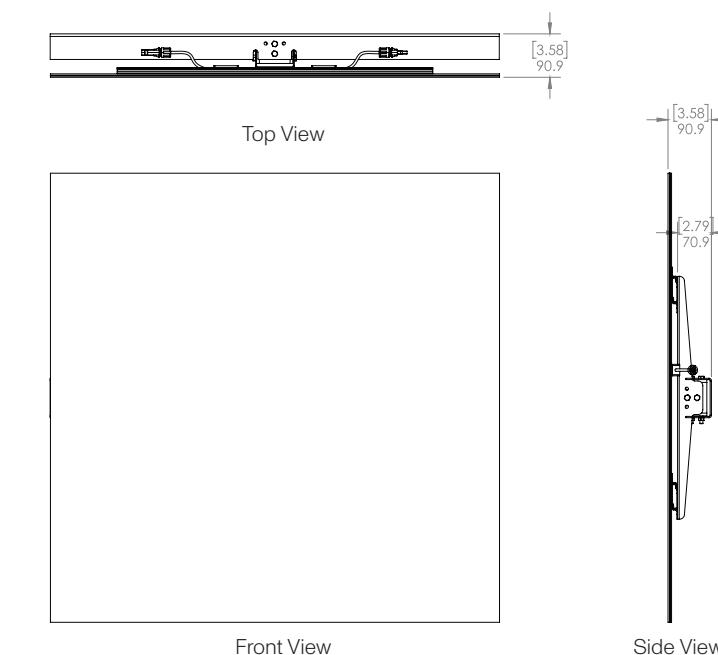
Side View

## Module Tilted Levels Details

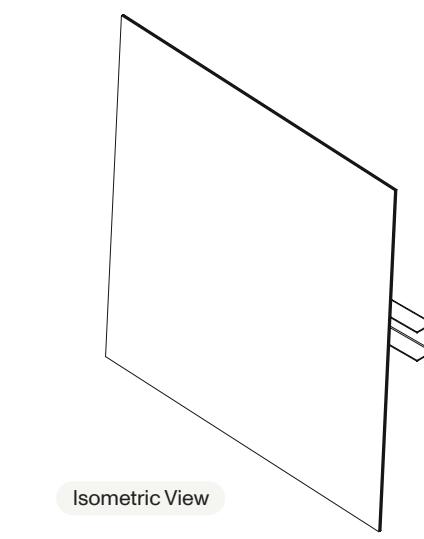
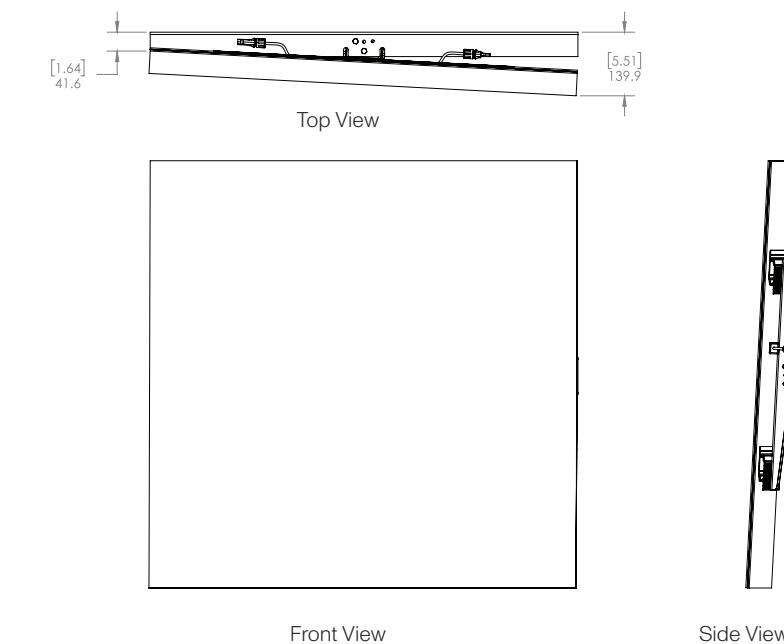
Mitrex eFacade TILT modules are designed with a unique mounting system that enables nine distinct tilt levels. This flexibility allows architects to create dynamic façades with depth, shadow play, and visual variety, while maintaining full solar functionality and rainscreen performance.



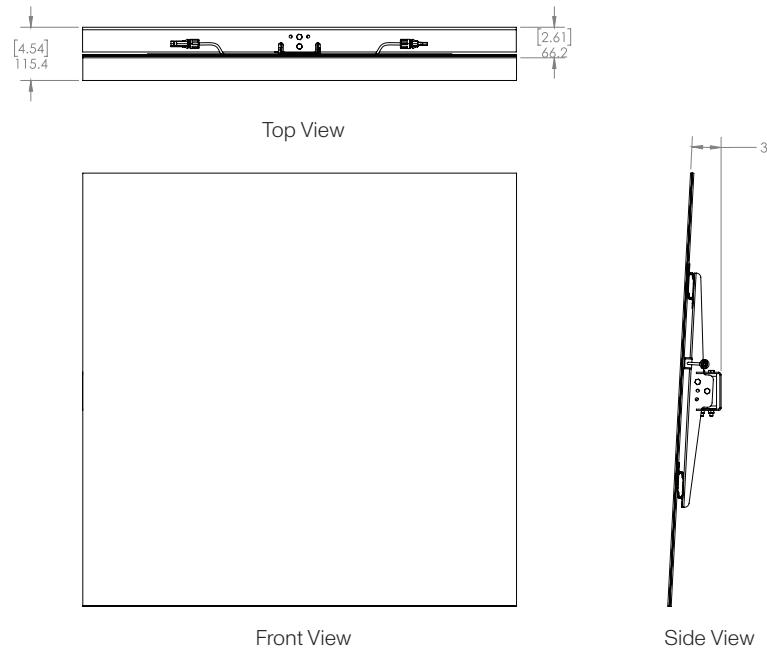
## eFacade TILT - A (Neutral position)



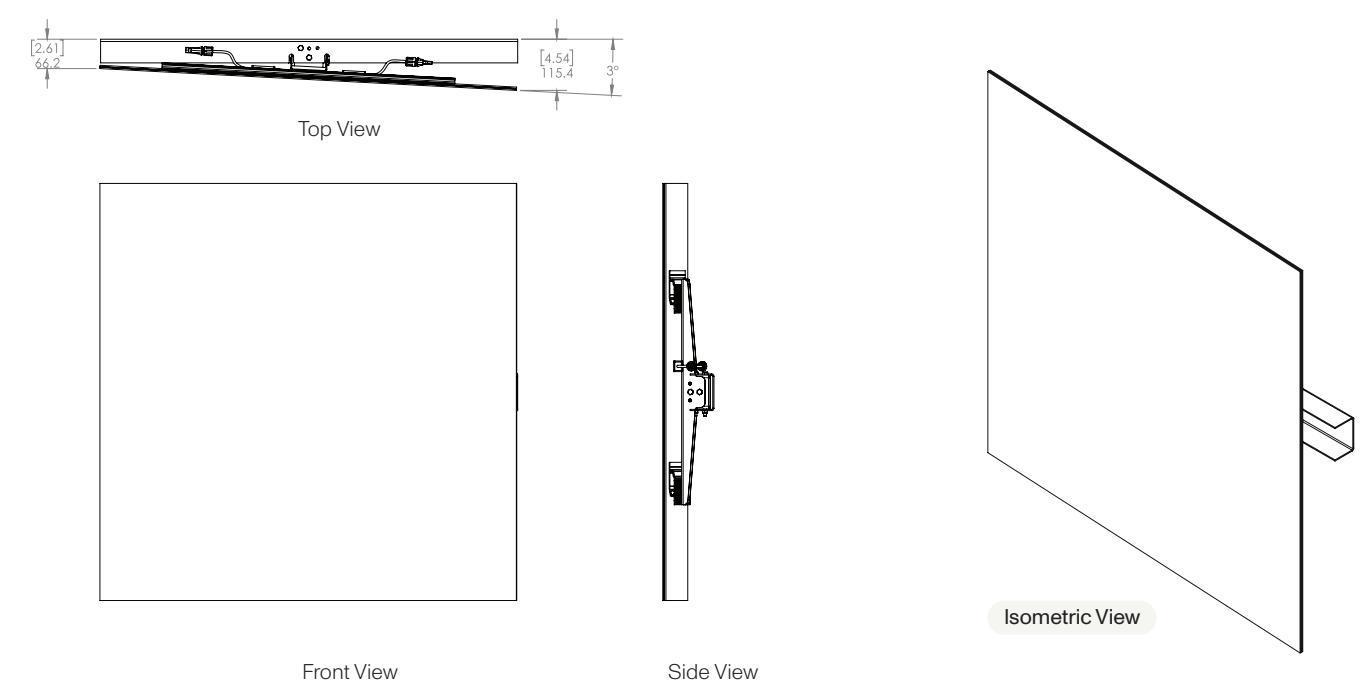
## eFacade TILT - B



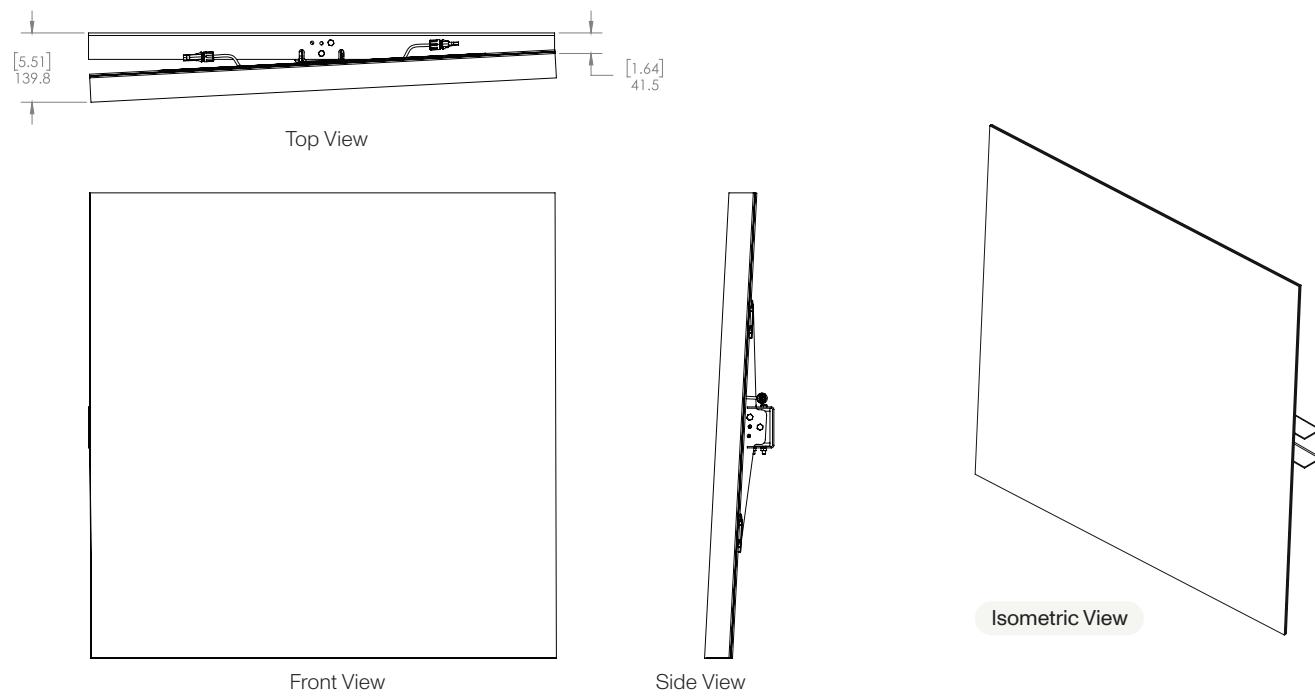
eFacade TILT - C



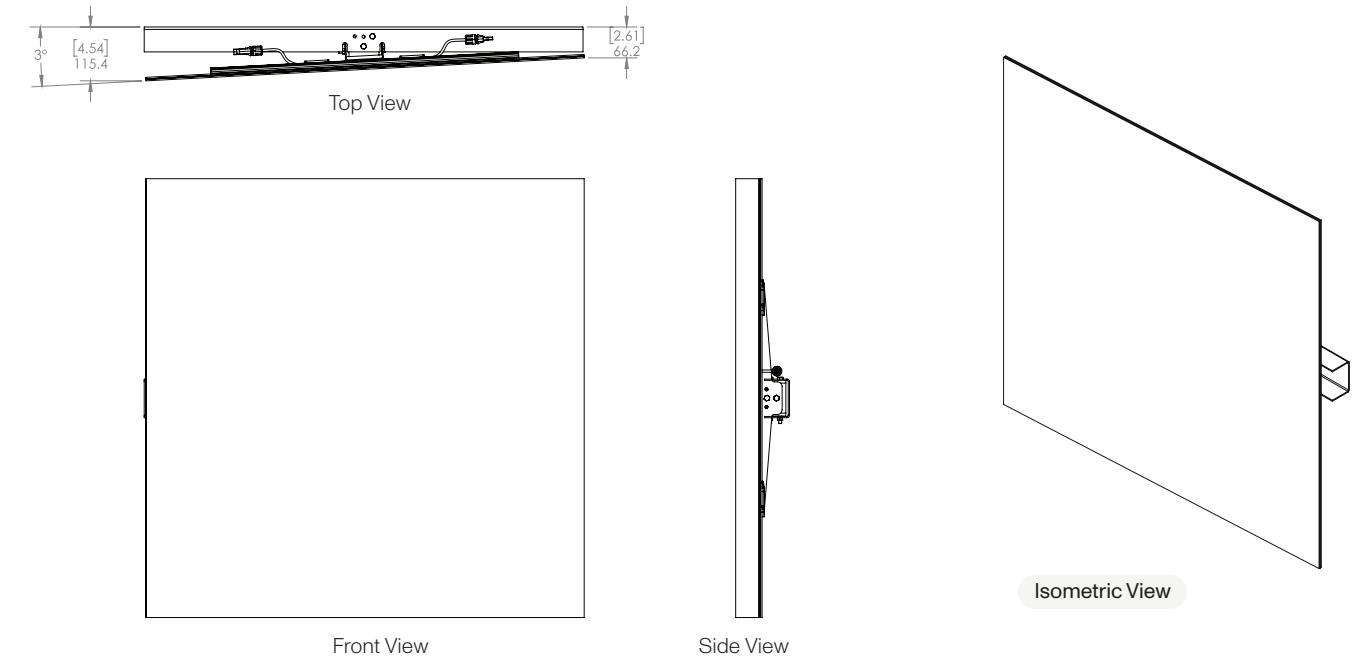
eFacade TILT - E



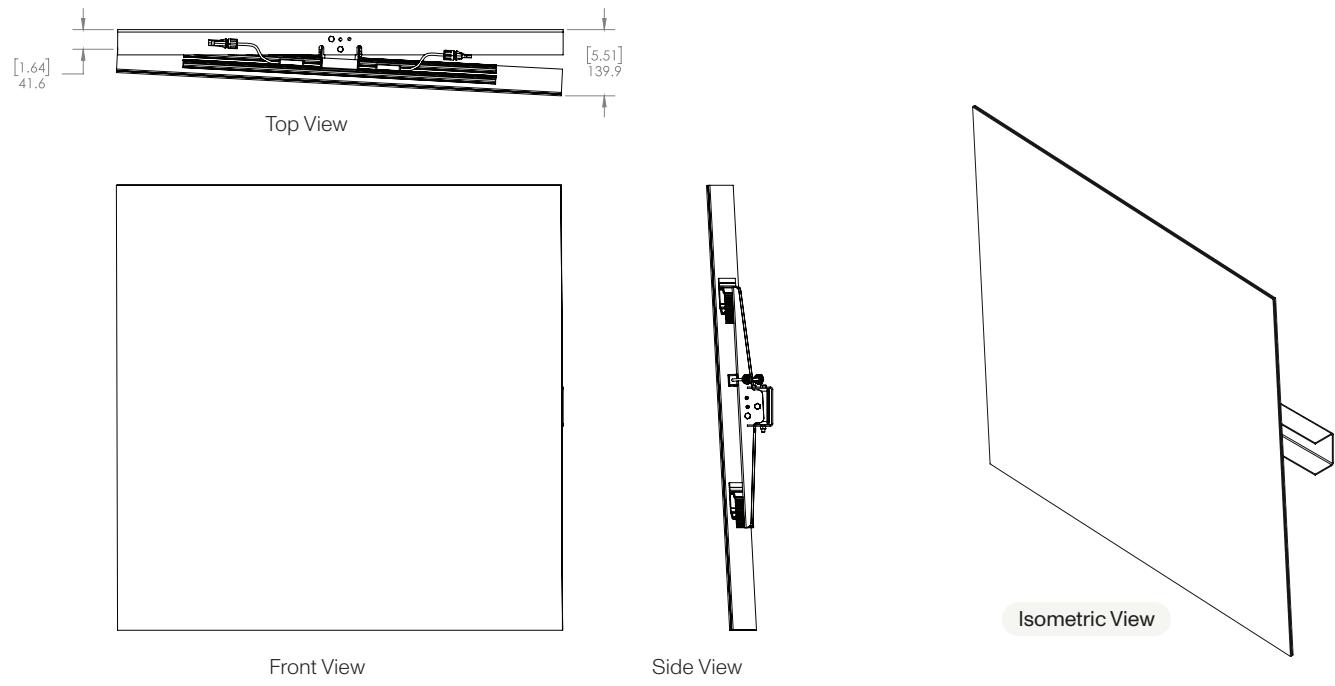
eFacade TILT - D



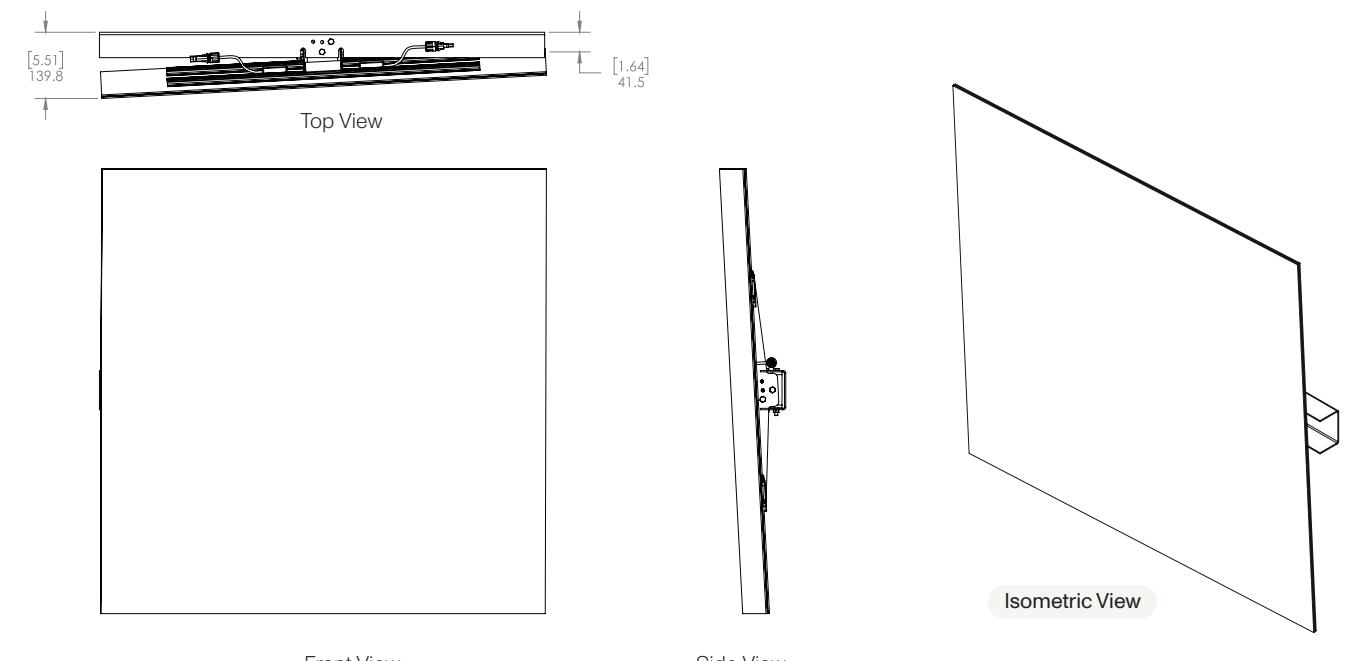
eFacade TILT - F



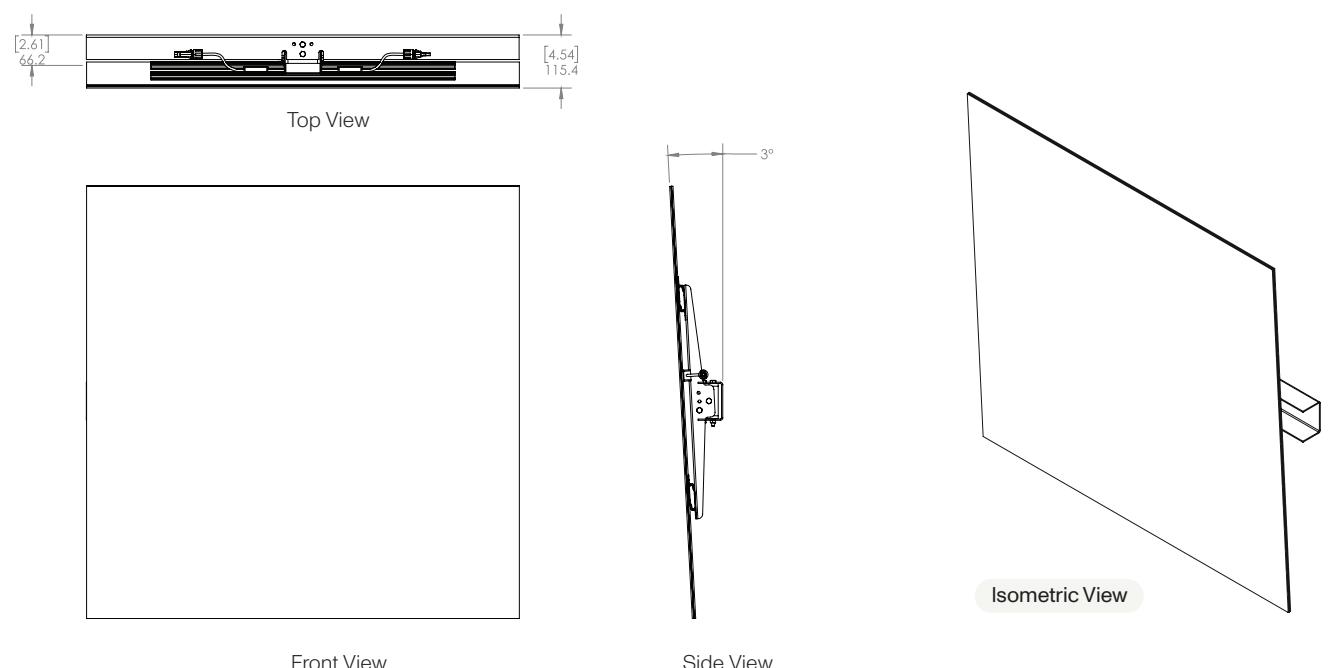
eFacade TILT - G



eFacade TILT - H



eFacade TILT - H



## 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
Environmental	Salt Spray Resistance	ASTM B117-16	No deleterious effects.
	Resistance to Rapid Freezing and Thawing	ASTM C666/C666M-15	No visible change to panel
	Air Leakage Resistance	ASTM E283-04 (2012)	$Q_{inf} = 0.031 \text{ cfm/ft}^2$ or $0.155 \text{ L/s-m}^2$ at 300 Pa; $Q_{ext} = 0.024 \text{ cfm/ft}^2$ or $0.122 \text{ L/s-m}^2$ 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
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 $\pm 2880 \text{ Pa}$ (60 psf), equivalent wind load of 165 mph.
Structural	Structural Performance	ASTM E330	$\pm 80 \text{ psf}$ or $\pm 3840 \text{ Pa}$ ; no failure
Thermal	Thermal Resistance	ASTM 1363-11	$0.20 \text{ m}^2 \cdot ^\circ\text{C/W}$ (1.12 hr·ft <sup>2</sup> ·°F/BTU)
	Linear Thermal Expansion	ISO 10545-8	$11.28 \times 10^{-6} / ^\circ\text{C}$
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



## Electrical Data

Model Name	Module Power (W/SF)	Max. Power Current - Imax (A)	Max. Power Voltage - Vmax (V)	Short Circuit Current - Isc (A)	Open Circuit Current - Voc (V)	Module Efficiency (%)
Apple Bloom	8	4.16	40.90	4.44	47.50	8%
Blue Jay	14	7.59	40.20	7.90	48.50	15%
Boulder	13	6.90	40.60	7.23	48.50	14%
Cocoa Bean	9	4.62	41.10	4.96	47.70	9%
Deep Ocean	15	8.17	40.40	8.55	48.70	16%
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%
Gun Smoke	13	7.00	40.70	7.36	48.60	14%
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%
Natural Grey	13	7.00	40.70	7.36	48.60	14%
Nobel Grey	10	5.20	40.40	5.45	47.90	10%
Ocean	15	7.94	40.30	8.29	48.60	16%
Pine Cone	13	6.77	40.60	7.10	48.50	14%
Purple	13	6.90	40.60	7.23	48.50	14%
Sea	14	7.48	40.10	7.77	48.40	15%
Silver 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%
Wet Sand	12	6.44	40.40	6.71	48.30	13%

## Mitrex eFacade Products Comparison

Mitrex offers three distinct solar cladding solutions—eFacade TILT, 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 TILT	• eFacade LITE	• eFacade PRO+
Colors & Patterns	23 color options	5 color options	Unlimited customizable colors & patterns
	Finish: Satin glass Thickness: 2 x 0.12in (3.2mm)	Finish: Satin glass Thickness: 0.24in (6mm)	Finish: Super satin, satin, matte, glossy, wood grain, aqualite, and more. Thickness: 0.12-0.47in (3.2-12mm)
Sizes & Weight	Fixed size: 37 x 37 in (940 x 940 mm)	2 size options: 73 x 36 in (1854 x 922 mm) 73 x 18 in (1854 x 456 mm)	Customizable single piece sizes up to 125 x 80 in (3175 x 2032mm). Preassembled pieces up to 420 inches (10.7m) long.
	Weight: 4.05 lb/SQFT (19.8 kg/sqm)	Weight: 3.87 lb/SQFT (18.9 kg/sqm)	Weight: 3.1 - 4.7 lb/SQFT (15.4-23.1 kg/sqm)
	Dual glass module with panel thickness of 0.3in (7.5mm)	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: Square	Shapes: rectangle	Customizable Shapes: rectangle, triangle, circle, and more
Systems	Ventilated rainscreen system	Ventilated rainscreen system, eFacade LITE system	Customizable rainscreen, unitized or prefabricated system options
	System Thickness: 2.6 in (66.2mm) - 5.5 in (139.8mm)	System Thickness: 3.78 in (96mm)	System Thickness: 1.42 in (36mm) - 4.33in (110mm)
	MOQ of 5,000 SQFT (464.5 sqm)	MOQ of 5,000 SQFT (464.5 sqm)	MOQ of 25,000 SQFT (2,322.5 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](http://mitrex.com) or email us at [info@mitrex.com](mailto:info@mitrex.com)



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