



- 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 × 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.



Energy

Dual-glass monocrystalline solar modules generate up to 15 W/ft² (160 W/m²), with output varying by sun exposure, orientation, tilt, and local irradiance.



Colors & Sizes

Offered in 23 colors and 37×37 in size, can be flat- or angle-mounted (2.6–6.7in depth) to add dimension and transform flat facades into dynamic design elements.



Rainscreen System

Custom mounting hardware enables quick installation, precise alignment, and durable rainscreen performance improving thermal efficiency, minimizing moisture, and enhancing building envelope longevity.



Sustainability

Combines on-site energy generation with recyclable components, low embodied carbon, and efficient material use to reduce the building’s environmental footprint.



Certifications

Engineered to international codes and safety standards, including UL 61730 for solar, ASTM E1996 for impact, and ASTM E330 for wind performance.



Fire Safety

Meets stringent fire safety standards, including NFPA 285, EN 13501 A2-s1,d0, and S134, using non-combustible materials certified for global compliance.



Performance

Built with premium materials and tested for extreme weather, UV, and thermal stress—delivering long-lasting durability for high-performance buildings in any climate.



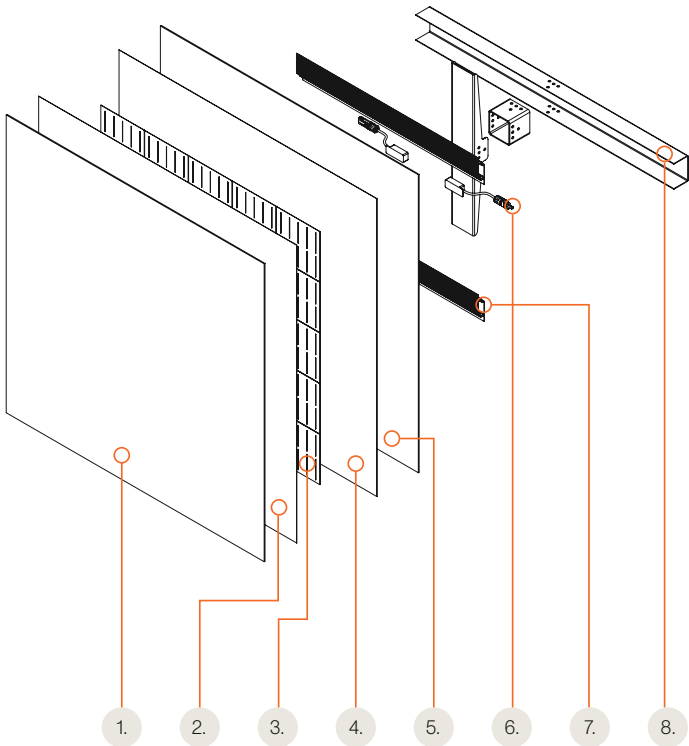
Maintenance

Self-cleaning glass, UV- and corrosion-resistant materials, and a lifetime warranty ensure long-lasting performance with minimal upkeep.



Incentives


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





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 × 37 in (940 × 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

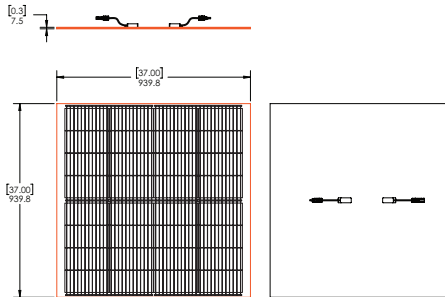


ORDER A FREE SAMPLE!

Experience the look and feel of our solar cladding. Scan the QR code or visit www.mitrex.com to order your free Mitrex sample today.

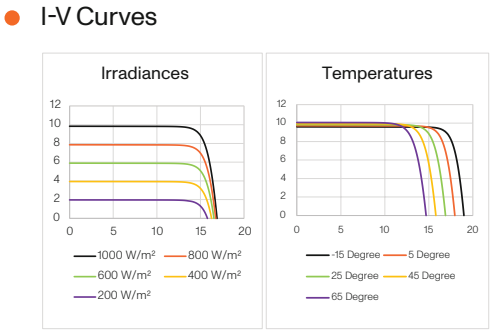
General Electrical And Mechanical Data

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

| ● Test | ● Specification | ● Engineering Drawing |
|---|------------------------------------|---|
| Test Conditions | | STC |
| 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/m² - AM 1.5 - Temperature 25°C | | |

| ● Mechanical Properties | ● Metric | ● Imperial |
|--|--|--|
| Module Weight | 15 kg | 33 lbs |
| Panel Dimensions (H x L x D) | 940 × 940 × 7.5mm | 37 × 37 × 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(4×4)] Mono-crystalline (210 × 105mm) | 32 [2(4×4)] Mono-crystalline (8.27 × 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 - 4mm2, 12 AWG (UL) MC4 from Staubli | 24in - 0.16in2, 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 | |

| ● Temperature Ratings | |
|--------------------------------------|---------------|
| Temperature Coefficient Isc | 0.005% /°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 |

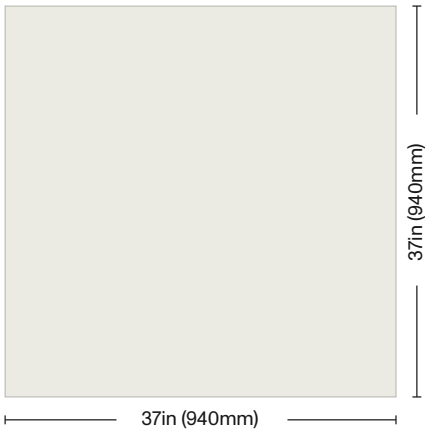


*Varies. These graphics are based on a 130W panel

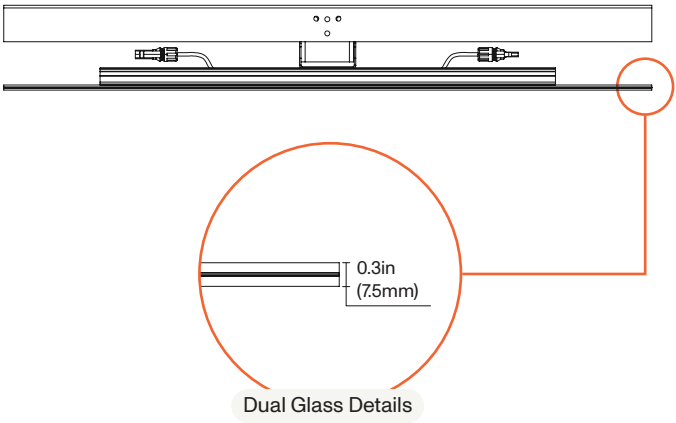
Module Details

Size Capabilities

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



Dual Glass Module Details



Solar Glass Facing Certifications

| | Certification | Imperial | Metric |
|-------------------------|---------------|------------|----------|
| 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.

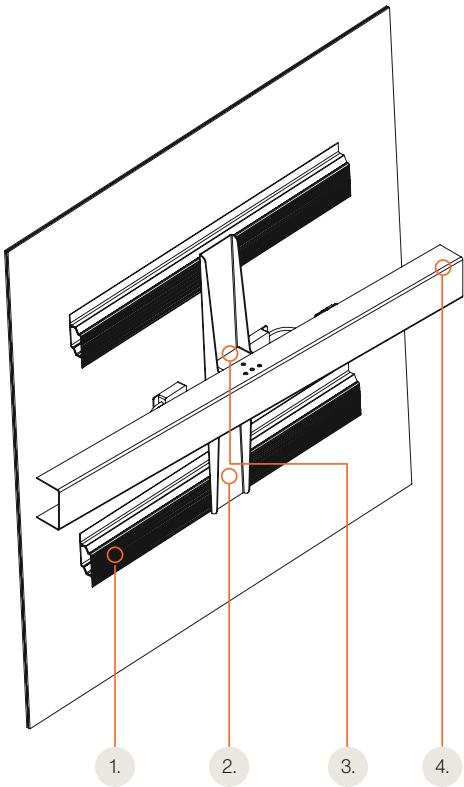
| Test | Rating |
|---|---------|
| Smoke And Flame Spread (ASTM E84) | Class A |
| Sound Transmission Coefficient (ASTM E90) | 34 |

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.



eFacade TILT Back View

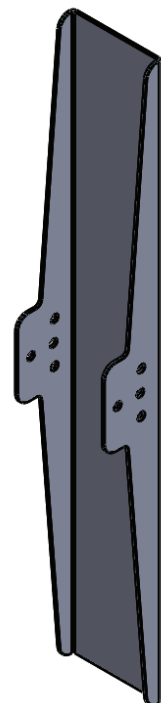
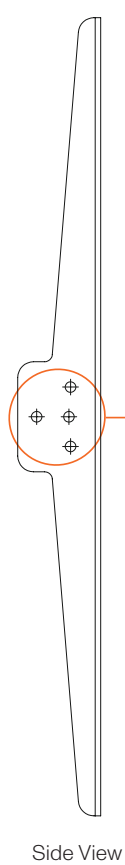
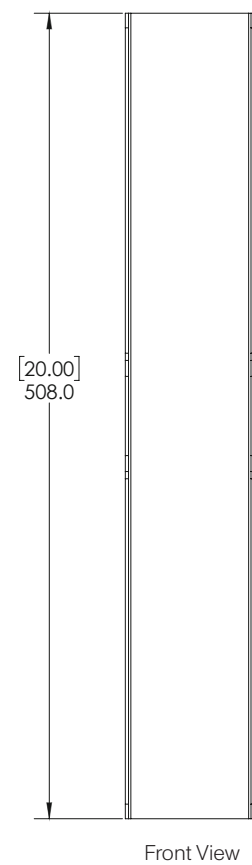
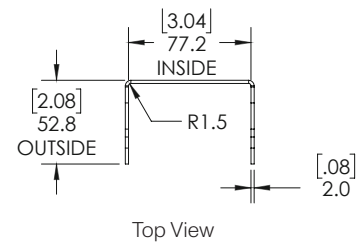
- Interlocking Channel
- Connector Bracket
- Connector Cube
- Mounting C-Channel

Interlocking Channel Details

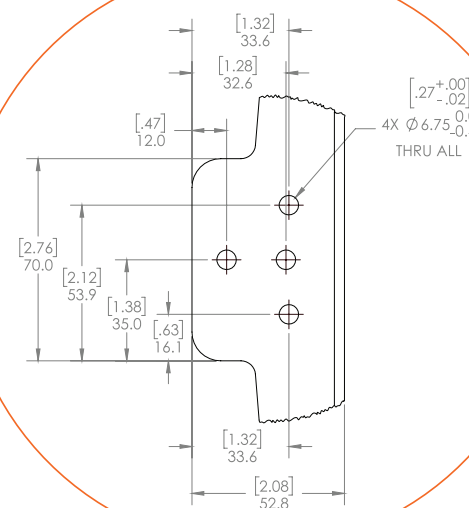
| | Imperial | Metric |
|------------|--------------------|----------------------------|
| Weight | 0.75lb/ft | 0.34kg/m |
| Projection | 0.5in | 12.7mm |
| Height | 3in (4in combined) | 76.2mm (101.6 mm combined) |
| Thickness | 0.06in | 1.5mm |
| Lift Off | 0.62in | 15.75mm |
| Alloy Type | 6063-T6 | |
| 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 × 10 ⁶ psi | 69 GPa |
| Tensile Yield Strength | 30 × 10 ³ psi | 207 MPa |
| Shear Yield Strength | 18 × 10 ³ psi | 124MPa |
| Material | Galvanized steel | |



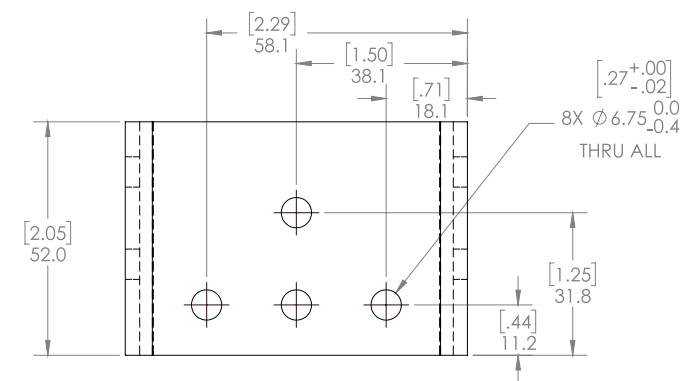
Isometric View



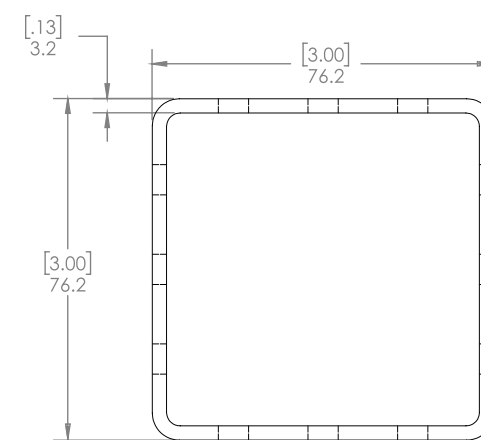
Connector Bracket Details

Connector Cube Details

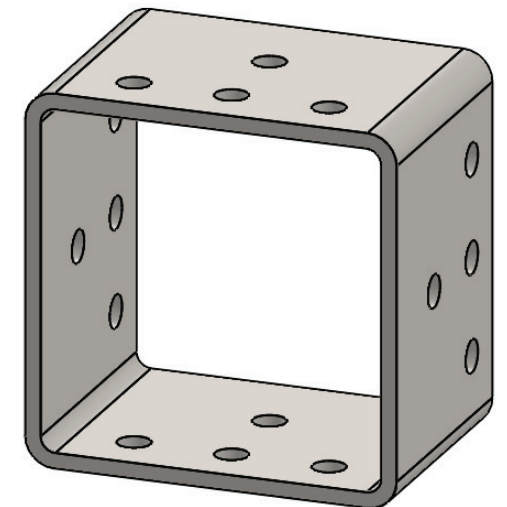
| | Imperial | Metric |
|------------------------|--------------------------|--------------------------|
| Weight | 1.1 lb | 0.5 kg |
| Dimensions | 3.0 × 3.0 × 2.0 × 0.13in | 76.2 × 76.2 × 52 × 3.2mm |
| Tensile Modulus | 29 × 10 ⁶ psi | 69 GPa |
| Tensile Yield Strength | 40 × 10 ³ psi | 275 MPa |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



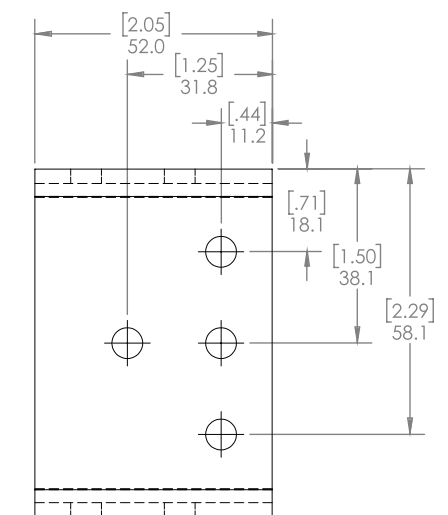
Top View



Front View



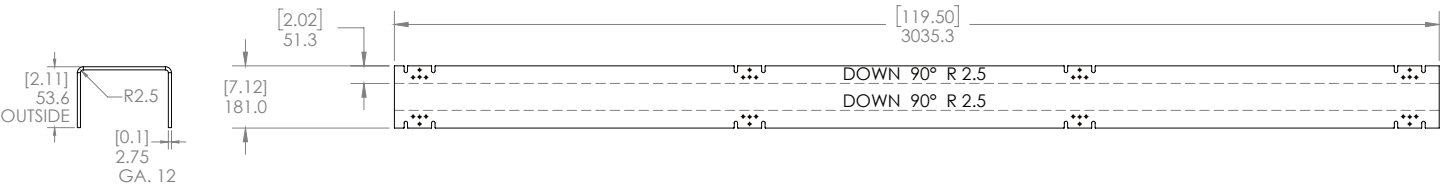
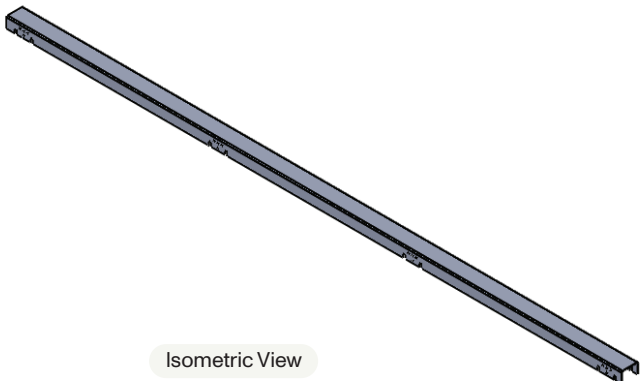
Dimetric View



Side View

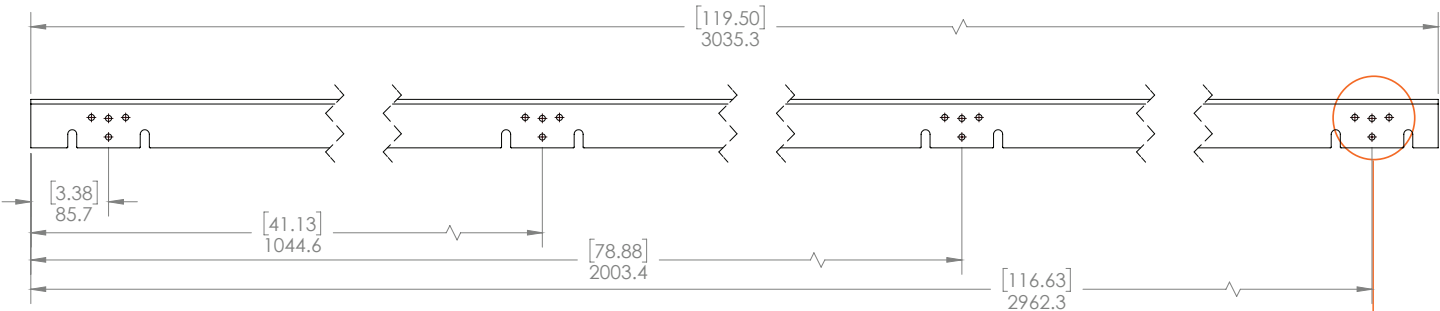
Mounting C-Channel Details

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

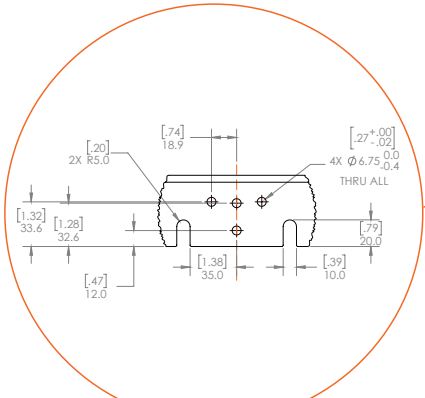


Side View

Top View

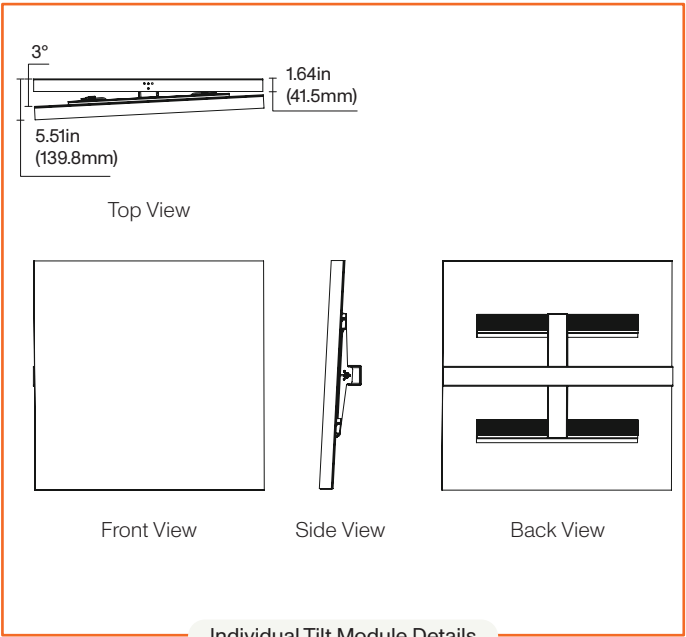


Mounting C-Channel Details

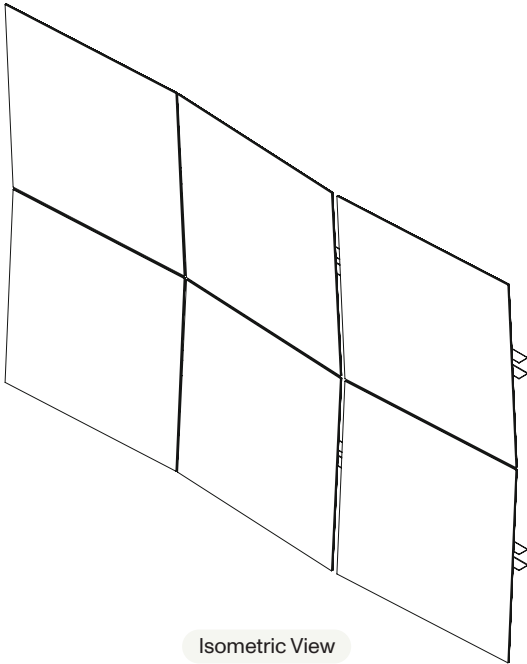


C-Channel Holes Details

System Visualization



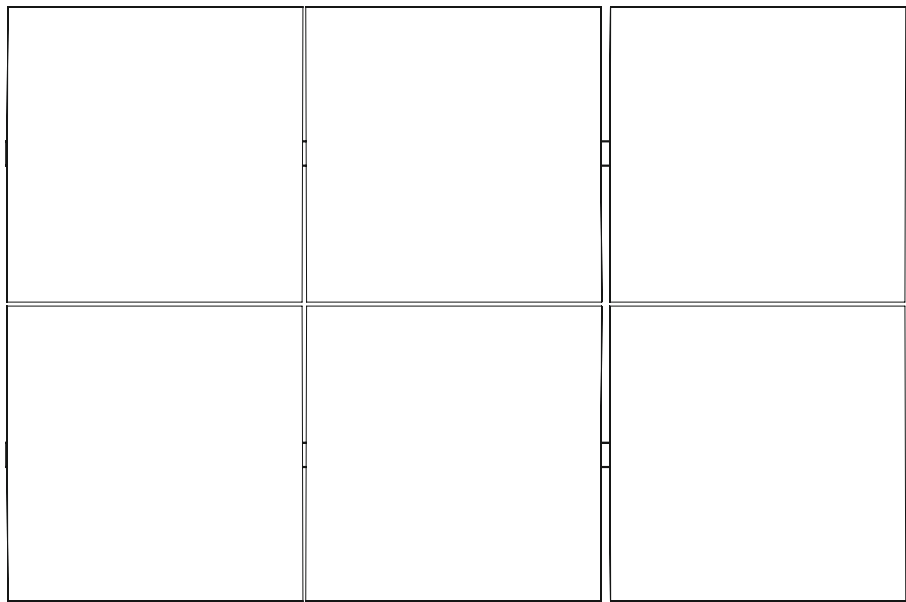
Individual Tilt Module Details



Isometric View



Top View

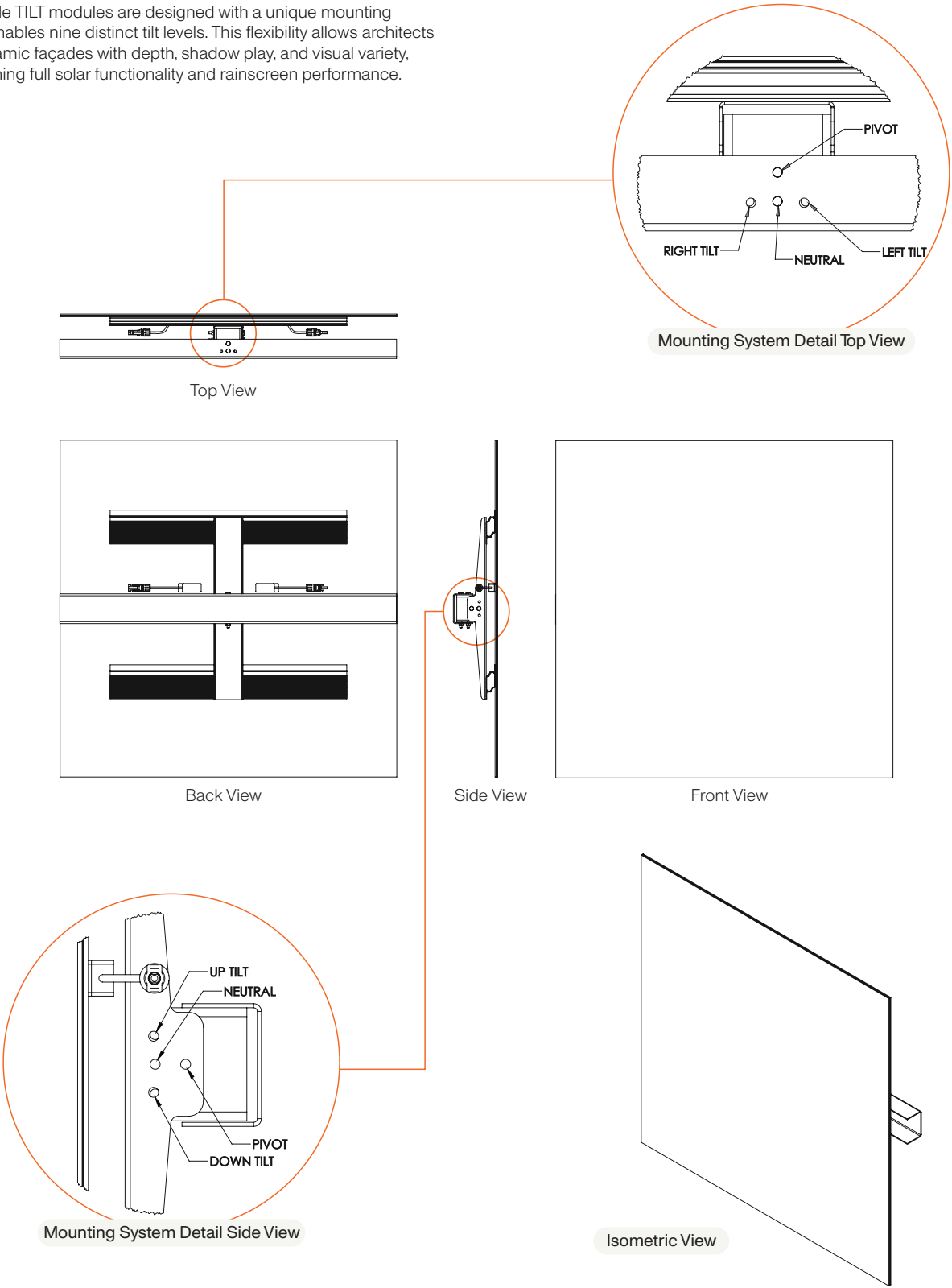


Front View

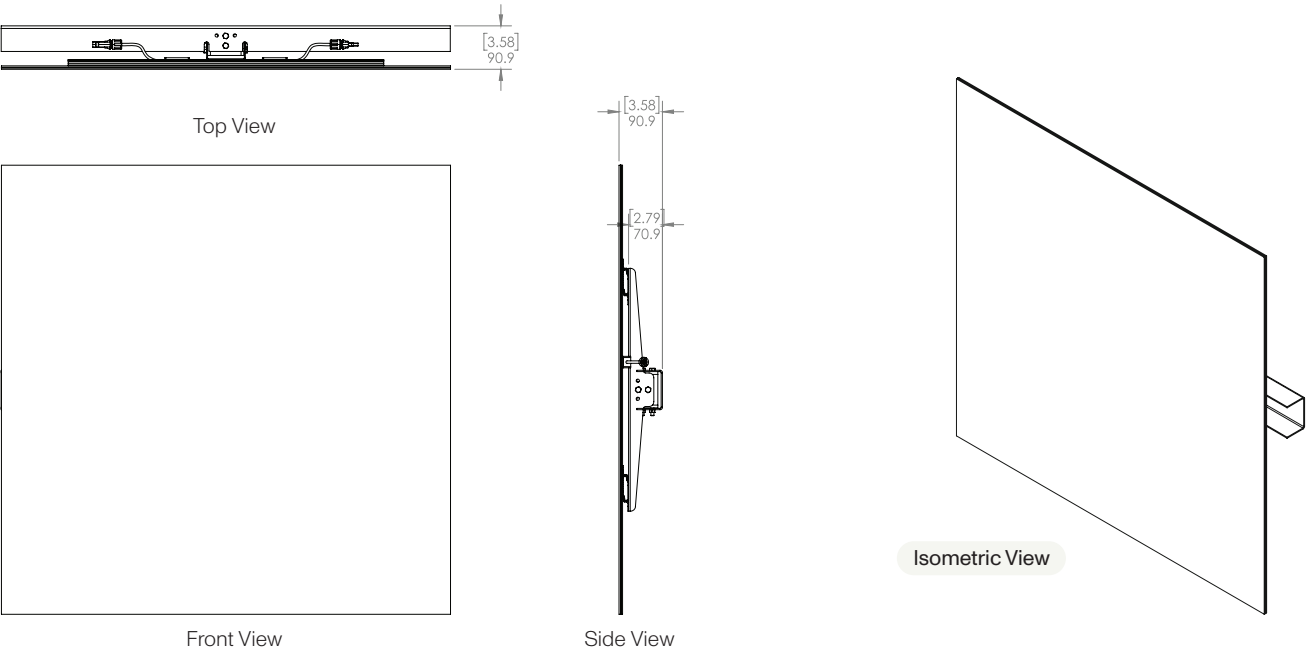
Side View

Module Tilted Levels Details

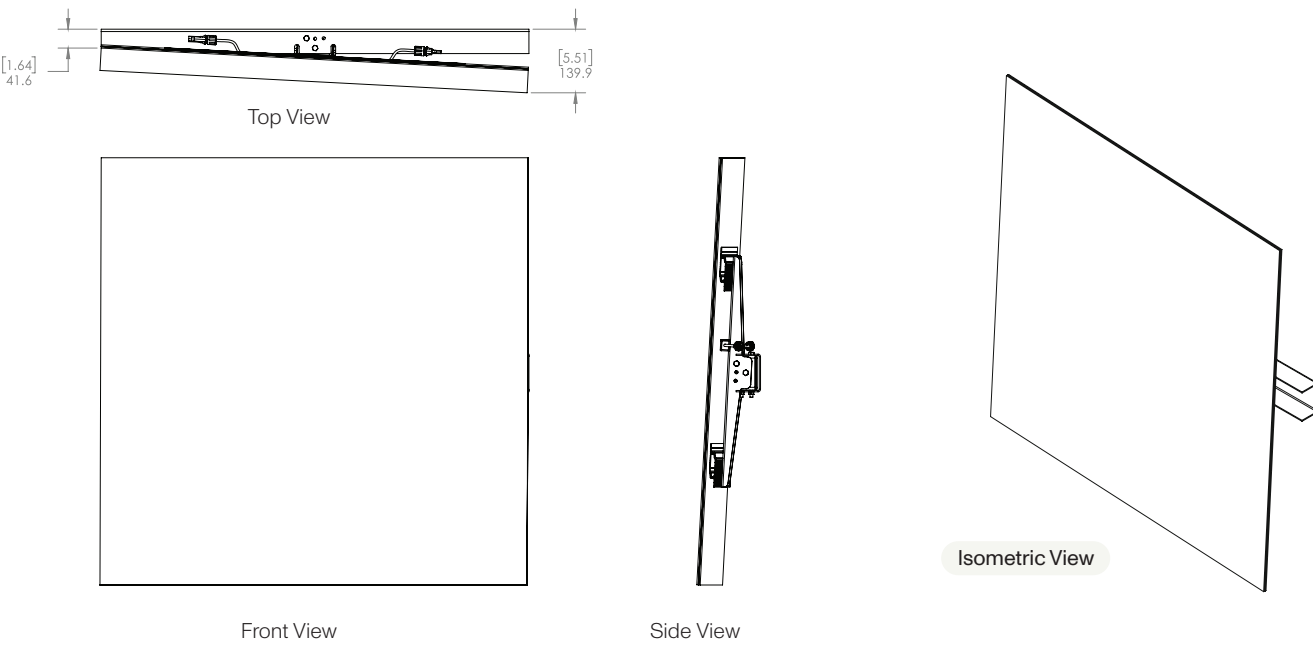
Mitrex eFacade TILT modules are designed with a unique mounting system that enables nine distinct tilt levels. This flexibility allows architects to create dynamic façades with depth, shadow play, and visual variety, while maintaining full solar functionality and rainscreen performance.



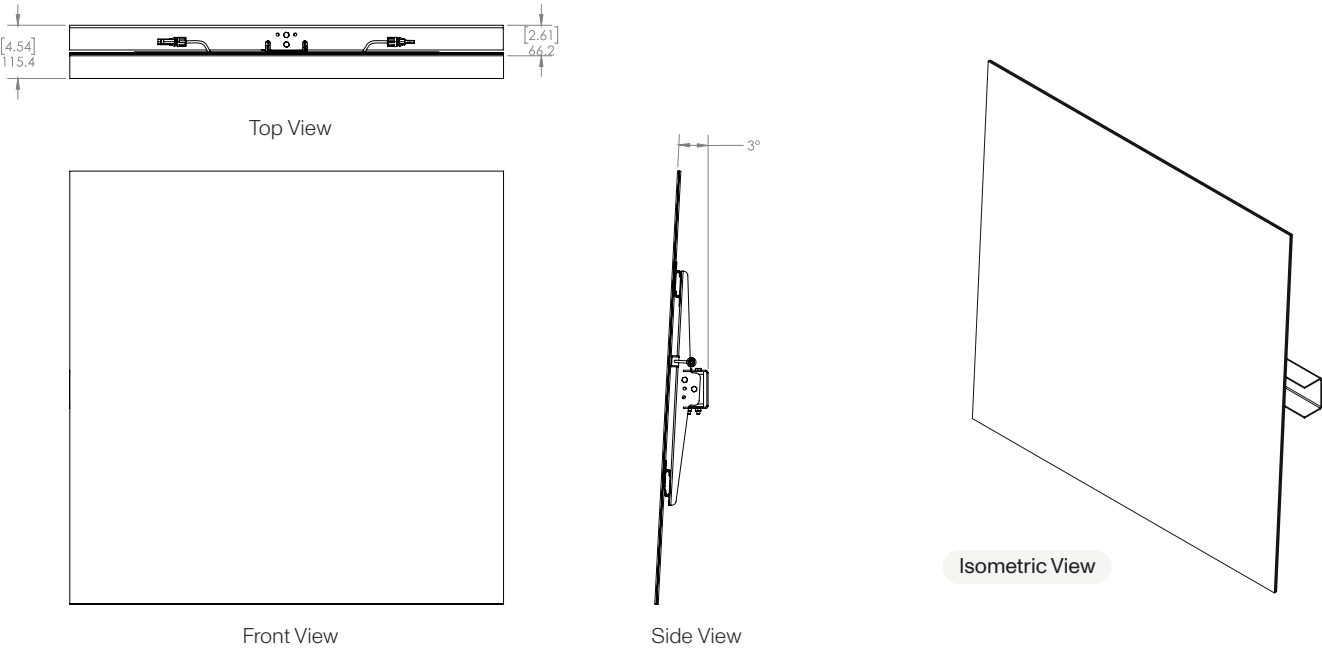
eFacade TILT - A (Neutral position)



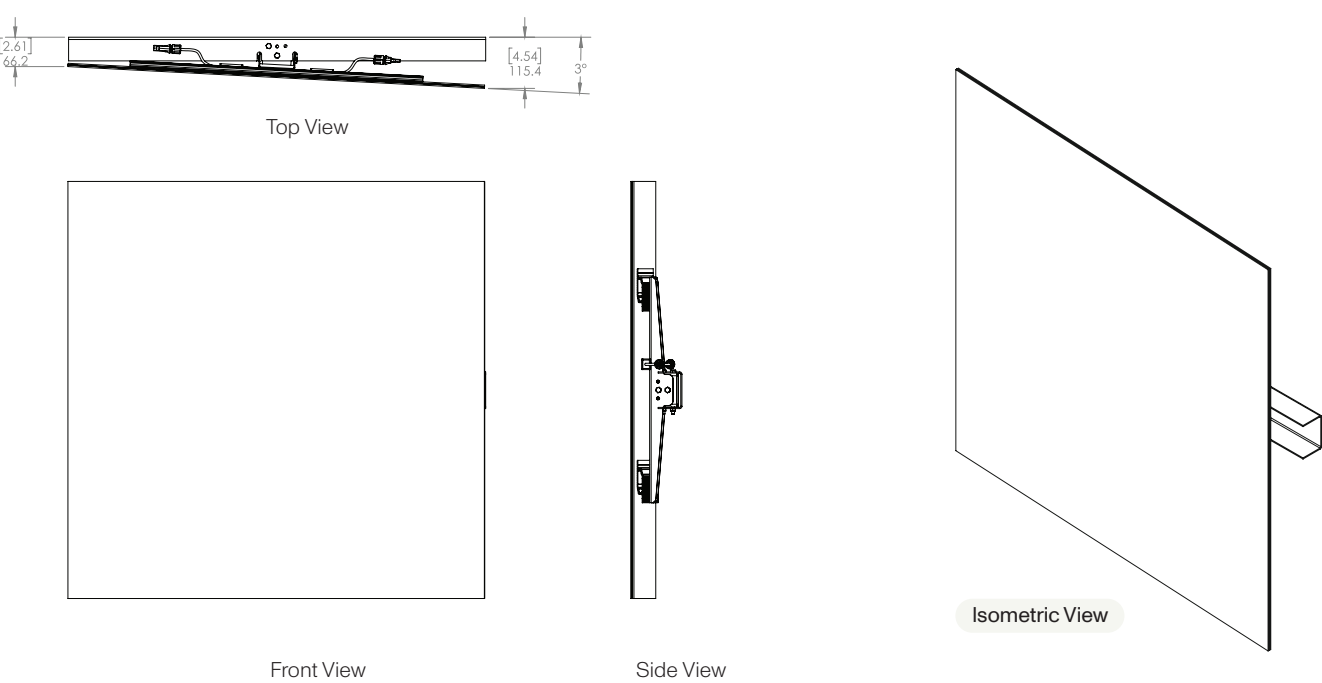
eFacade TILT - B



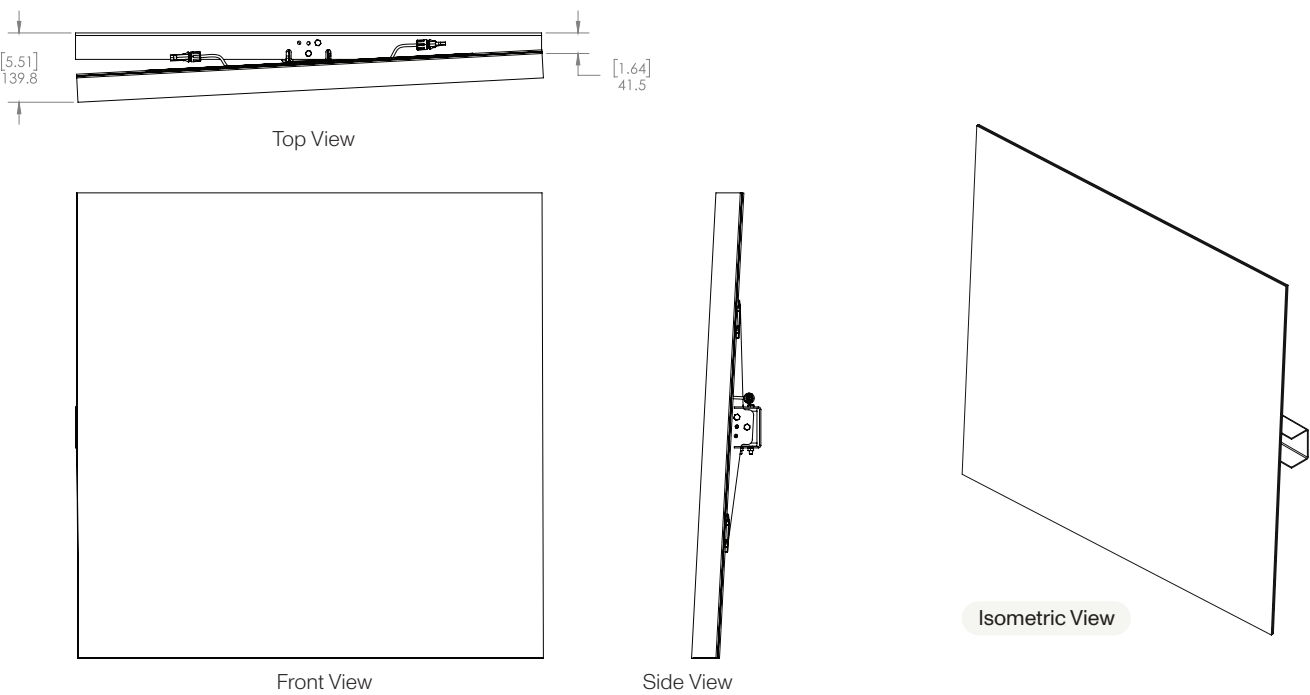
eFacade TILT - C



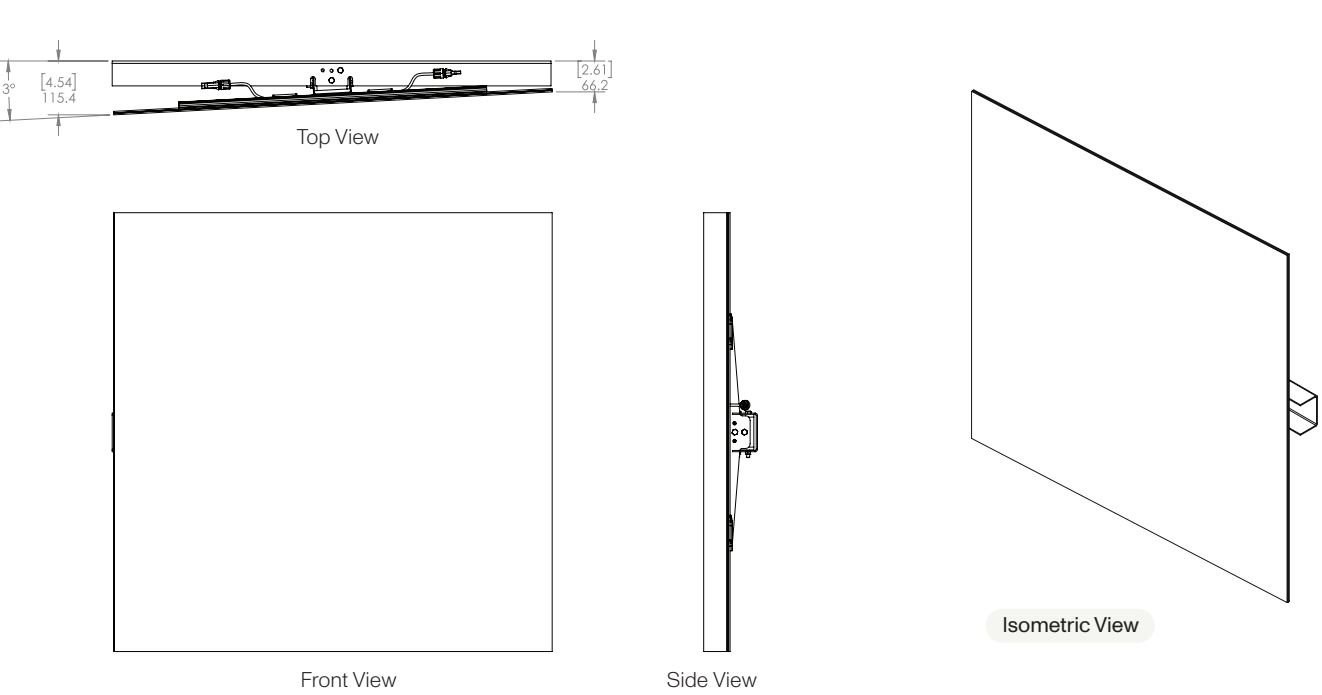
eFacade TILT - E



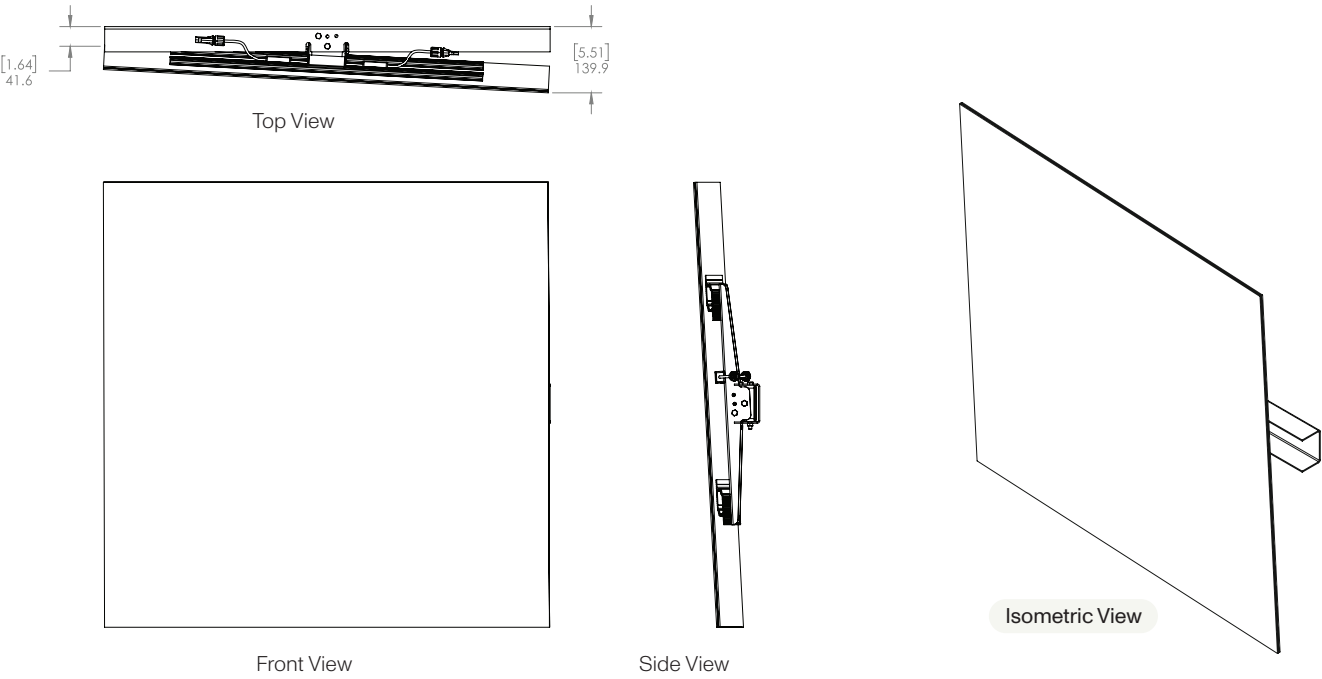
eFacade TILT - D



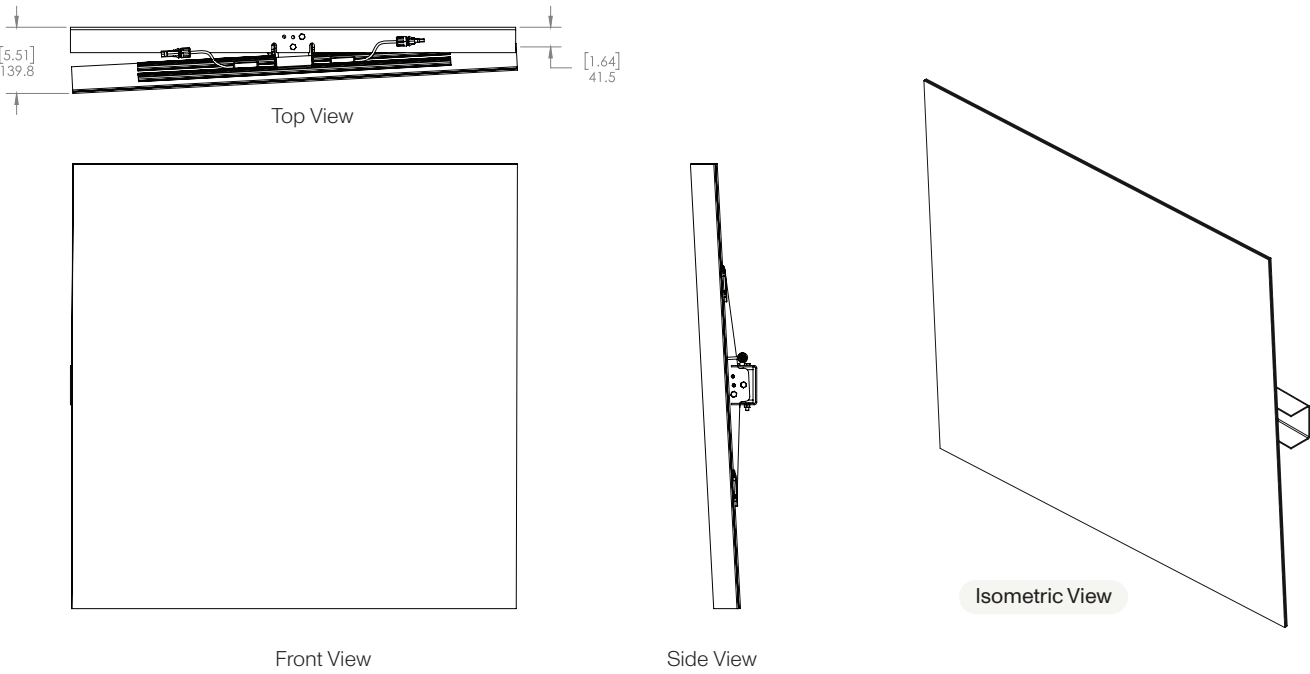
eFacade TILT - F



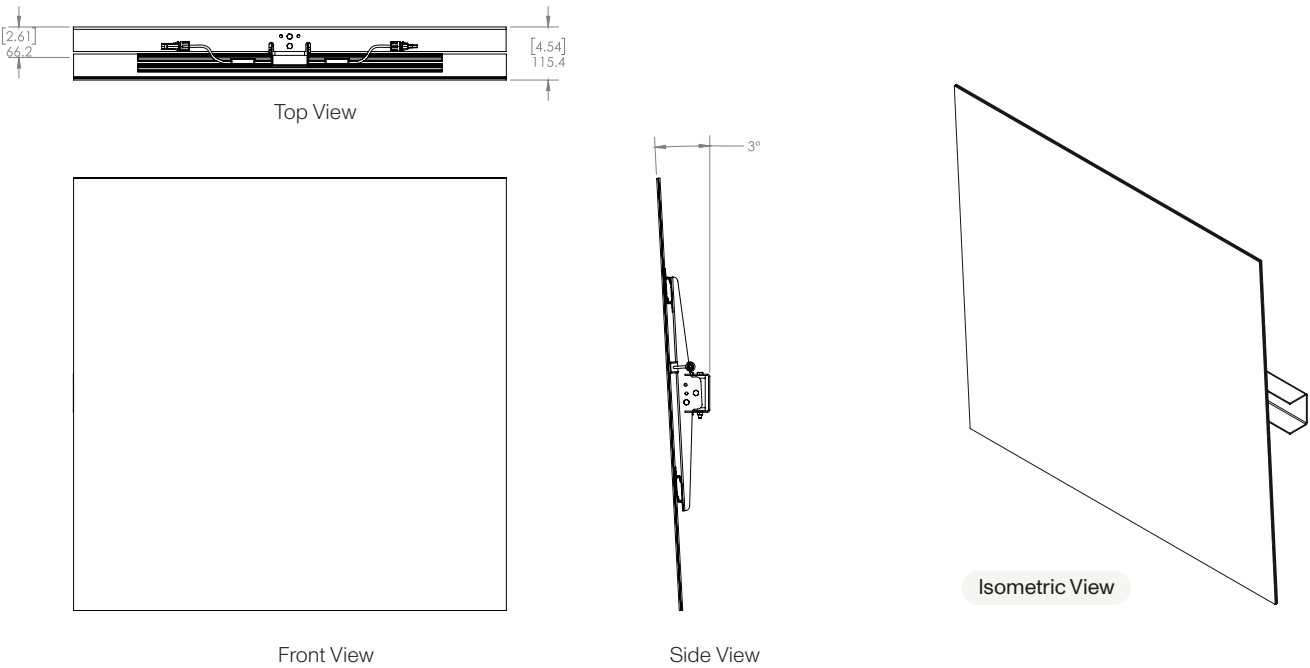
eFacade TILT - G



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 |
| | Salt Spray Resistance | ASTM B117-16 | No deleterious effects. |
| Environmental | 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 |
| 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. |
| 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 |



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 Blossom | 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 × 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 × 37 in (940 × 940 mm) | 2 size options: 73 × 36 in (1854 × 922 mm) 73 × 18 in (1854 × 456 mm) | Customizable single piece sizes up to 125 × 80 in (3175 × 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 760 SQFT (70 sqm) | MOQ of 150 SQFT (13.9 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



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• Headquarters
41 Racine Rd, Toronto, ON M9W2Z4, Canada
+1 (416) 497 7120

• USA Office
Chrysler Building, 405 Lexington Avenue Floor 26, New York, USA, 10174
+1 (646) 583 4486

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