

FUTURE

Tomorrow starts today

Revolutionary Electro Polarization Performance



FutureX | Eclipse™

German Pavilion - Expo 2020 Dubai

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Project Name: German Pavilion Expo 2020 Dubai "*Campus Germany*"
Project Location: World Expo 2020 Dubai, UAE
Building Owner: German Federal Ministry for Economic Affairs and Energy
Architect: LAVA Architects, Berlin
Facade Contractor: Future Glazing LLC, UAE
Main Contractor: ARGE Deutscher Pavillon Expo 2020 Dubai GbR
Installation Date: June 2021
Exhibition Period: 6 months with over 3 million international visitors
Total Pavilion Area: 4,600 m²
FutureX Eclipse™ Intelligent Glazing Area: 113 m²





ABOUT THE CLIENT

One of the most prestigious national pavilions at Expo 2020 Dubai, The German Pavilion, represented the Federal Republic of Germany's commitment to innovation and sustainability. Designed by renowned Berlin-based LAVA Architects, this 4,600 m² architectural showcase demonstrated Germany's leadership in environmental technology and intelligent building solutions through its unique "forest of steel poles" design.

THE CHALLENGE

Future Glass was tasked with creating intelligent facade elements that would perform flawlessly in Dubai's extreme desert climate while maintaining perfect environmental control for millions of international visitors. The architects required a building envelope that could respond instantly to rapidly changing conditions including sandstorms, intense solar radiation, and temperatures exceeding 45°C.

The project demanded breakthrough glazing technology that could eliminate mechanical shading systems while providing instant environmental adaptation. The design called for individual glass panels to operate independently whilst maintaining overall design coherence across the pavilion's complex geometry. Additionally, the system needed to be maintenance-free, withstand sandstorm conditions, and deliver consistent performance throughout the six-month exhibition period without any mechanical intervention.

Given the prestigious nature of this international exhibition space, any failure or performance degradation would have significant reputational impact, making reliability and consistent operation absolutely critical.

German Pavilion Expo 2020 Dubai



CAMPUS GERMANY



THE OUTCOME

The FutureX Eclipse™ installation delivered exceptional environmental control, enabling Campus Germany to maintain perfect occupant comfort for international visitors while showcasing German innovation in intelligent building technology. The electropolarization system responded instantly to Dubai's challenging environmental conditions, providing seamless transitions between maximum transparency and sophisticated solar protection in one second or less.

The installation demonstrated zero mechanical shading requirements across the entire facade system, with individual 1.5-meter wide rotatable glass elements operating flawlessly throughout the exhibition period. The success of this project established new benchmarks for intelligent glazing performance in extreme climatic conditions and proved that breakthrough electropolarization technology could transform architectural vision into responsive, high-performance building envelopes.

The pavilion's environmental control system impressed over 3 million visitors and received international recognition for its innovative integration of intelligent building technology with sophisticated architectural design.

PRODUCTS USED

ECLIPSE

FutureX Eclipse™ Electropolarization Switchable Glass System:

Surface Area: 113 m² of intelligent glazing elements

Quantity: 61 individual switching units

Geometry: Rectangular configurations with rotational capability

Configuration: 28 fixed glass panels, 4 standard doors, and 29 intelligent folding door elements

Switching Speed: ≤1 second response time

Performance: Neutral colour throughout all switching states

Technology: Eclipse® electropolarization switching layer with controlled electrical field modulation

Control System: Individual panel control with building automation integration

Environmental Rating: Designed for extreme desert climate operation including sandstorm resistance





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Other Creation Products:

VIVIDVIEW

Mesh in-filled glass

SOLERA

Imagery in laminated glass

SPECTROVIEW

Colour laminated glass

VISIONCONTROL

Expressions In Glass

SWITCHVIEW

Smart privacy glass

DIGIVIEW

Digitally Painted glass

TIMBERVIEW

Wood embedded in glass

SOLARVIEW

Photovoltaic glass

ONYXVIEW

Onyx laminated glass

CHROMVIEW

Laminated units with interlayers

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