

ACRYETE: The Living Facade

Sculpting Light and Structure for
the Future of Commercial and
Residential Architecture.



info@domistat.com

Erasing the Compromise

For generations, exterior facades demanded a choice: the heavy security of opaque concrete, or the fragile transparency of glass. We are erasing that compromise.

ACRYETE transforms structural pre-cast concrete into a dynamic canvas for light. By precisely integrating block optics directly into the formwork, the exterior wall becomes an active participant in the building's lighting design.

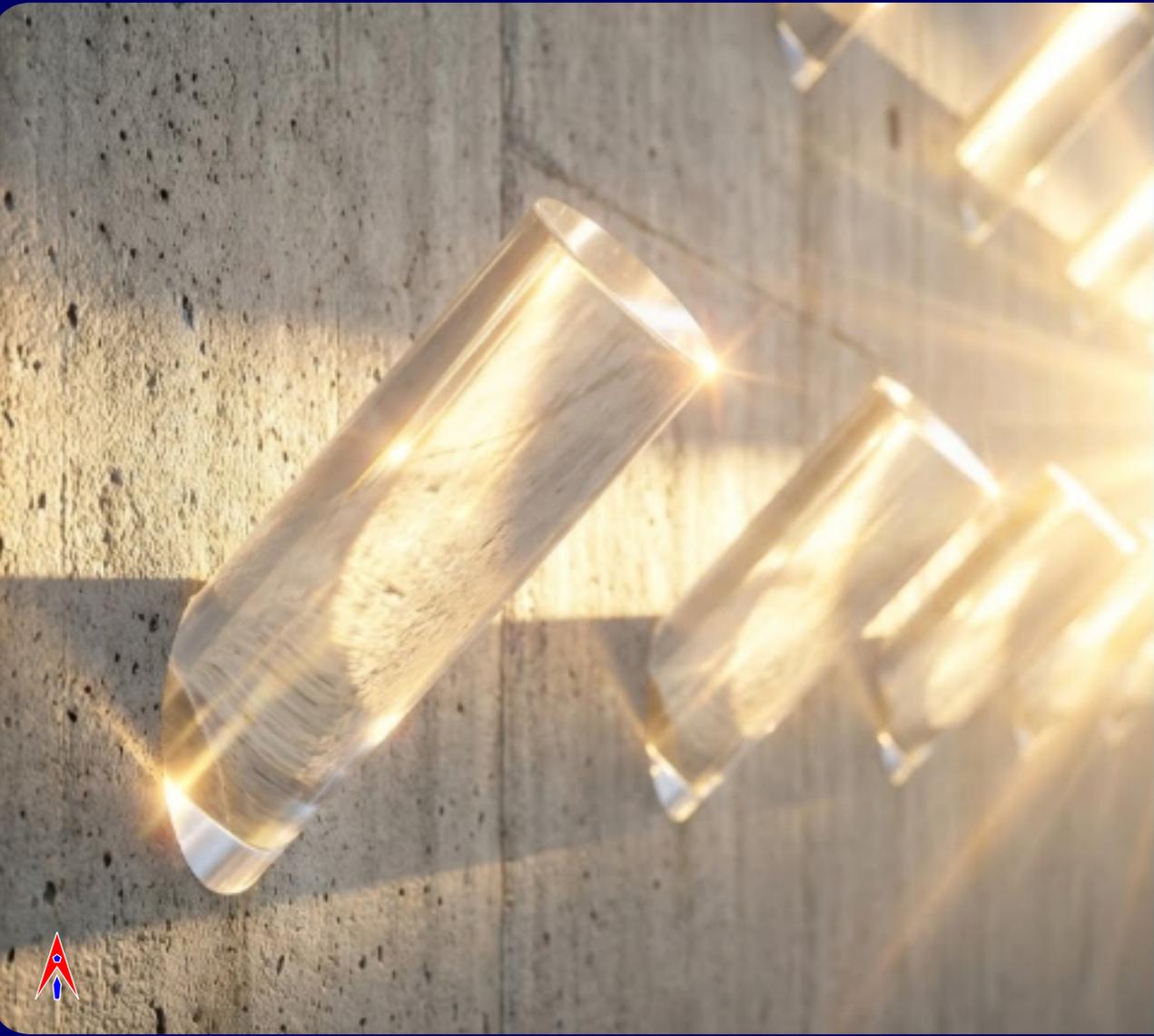


The Modular Foundation

The aesthetic revolution is built on a foundation of logistical efficiency.

ACRYETE is deployed as a pre-cast modular wall panel system. The interlocking system allows for rapid, secure assembly on commercial and residential job sites. Because panels arrive pre-finished, on-site work and material waste are drastically minimized.





The 45-Degree Advantage

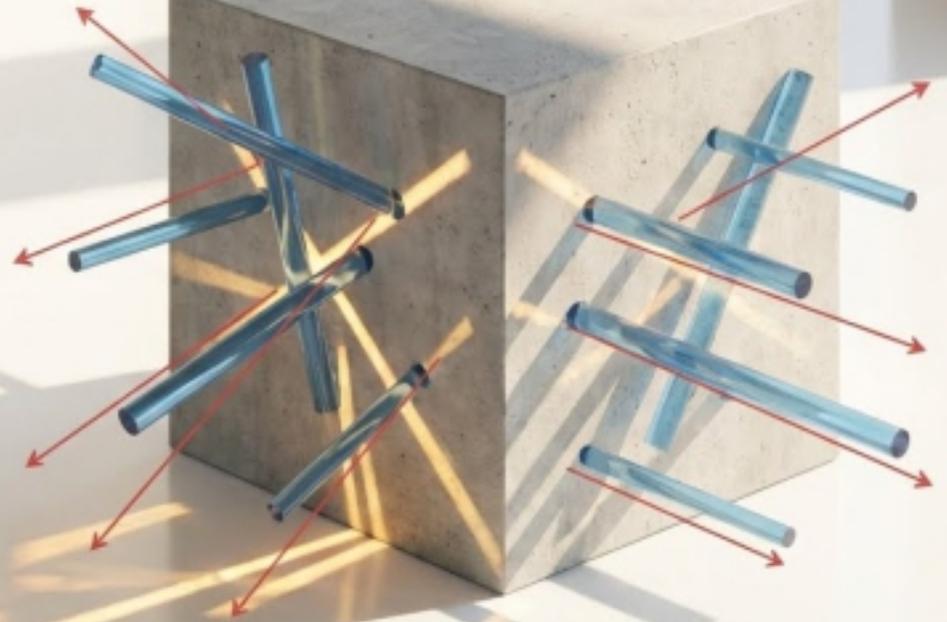
We do not just let light in; we direct it. Clear acrylic rods are cut, polished, and integrated into the concrete surface.

- Conforms to the precise properties of block optics to transmit light deeply into the building.
- The preferred baseline angle is exactly 45 degrees.
- This 45-degree angle maximizes light transmission without altering the thermal or insulation properties of the wall.
- Rods are oversized to indicate direction and can range from 1/8th inch to 3 inches in diameter.



Activating the Living Facade

By using varied rod diameters and strategic angles, designers can achieve dynamic lighting patterns that physically shift based on the sun's position. The facade responds to the environment in real-time, creating a living exterior that projects moving light paths across interior commercial lobbies or residential living spaces.



Simulating the Shift

True design freedom requires absolute predictability. Custom software simulates these dynamic light effects prior to installation, allowing architects to perfectly map the sun's trajectory against the building's orientation.

- Rods are often cut at 45 degrees, creating a distinctly elongated aesthetic on the finished surface.
- Angles other than 45 degrees can be incorporated into the design matrix.
- Mixing different angles within a single panel results in highly complex, overlapping lighting patterns.



Beyond the Cylinder: Custom Geometries

The physical shape of the light transmission channel is completely customizable. Specialist profiles allow for unlimited creative freedom in rod profile design, moving far beyond standard circular channels.



CIRCULAR



HEXAGONAL



TRIANGULAR



STAR



TEARDROP



U-SHAPE



The S-Profile and Complex Profiles

Why settle for standard geometries when the building itself can carry your signature? Specialist molds allow for the creation of intricate shapes, including star patterns, teardrops, U-shapes, and sweeping S-profiles.

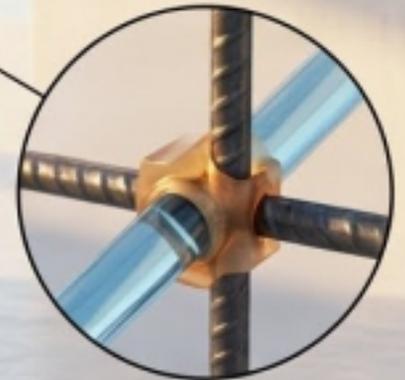
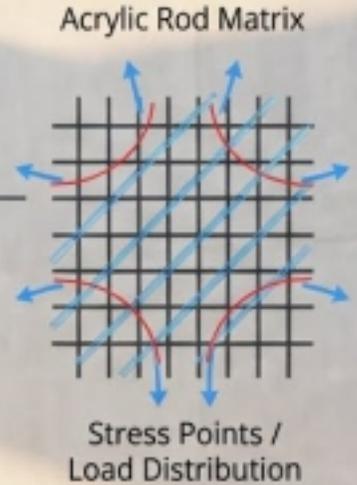
- Complex shapes maintain high clarity and exceptional light transmission properties.
- Designs can reflect personal residential taste, incorporate corporate logos, or spell client names directly into the structural concrete.
- Production volume dictates the feasibility of extremely complex custom shapes.



Uncompromising Structural Integrity

The aesthetic beauty of ACRYETE relies on brutal, unforgiving structural strength. The specialized acrylic rods are placed precisely within the rebar grid matrix. They are engineered to route through the structural reinforcement, not realit, not replace it.

- Rods are placed seamlessly between the rebar cage.
- Load tests confirm superior compressive strength identical to solid paneling.
- Stress points utilize specialized sealing compounds for load distribution.

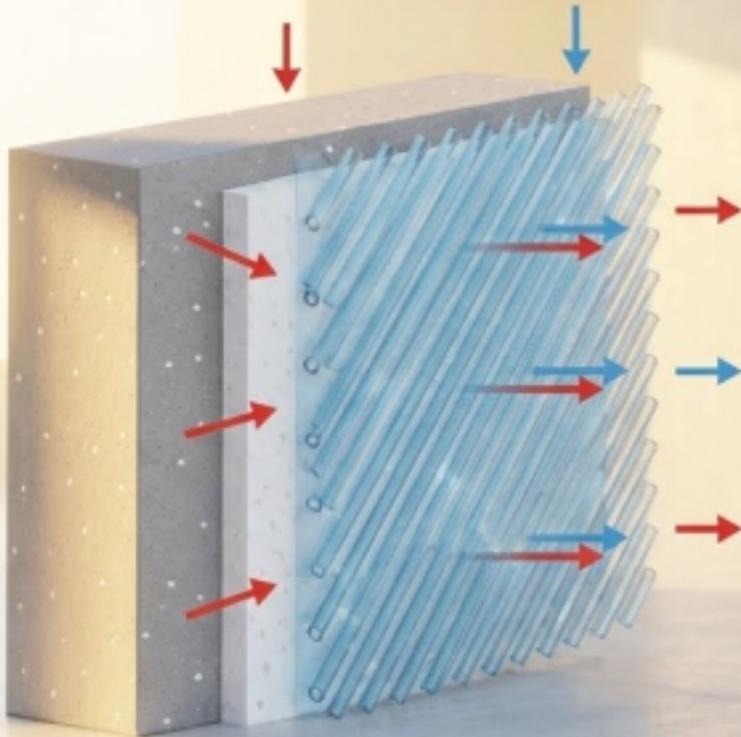


Sealing Compound

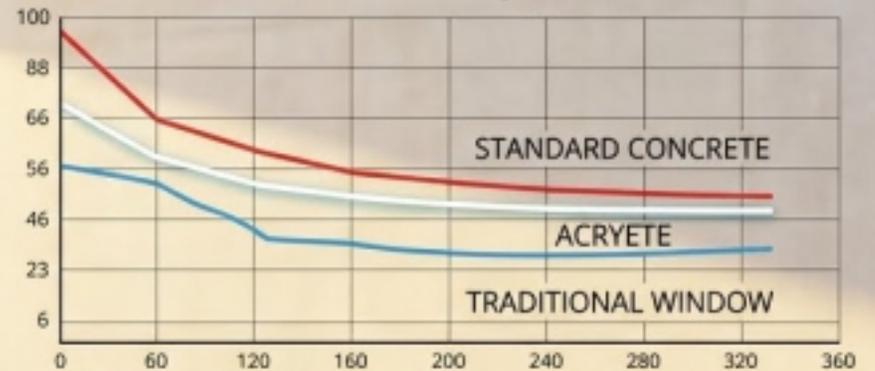


Thermal Performance Verified

High light transmission does not equal high energy loss. ACRYETE is optimized for high insulation values, comparable to standard insulated concrete structures.



Thermal Performance Comparison



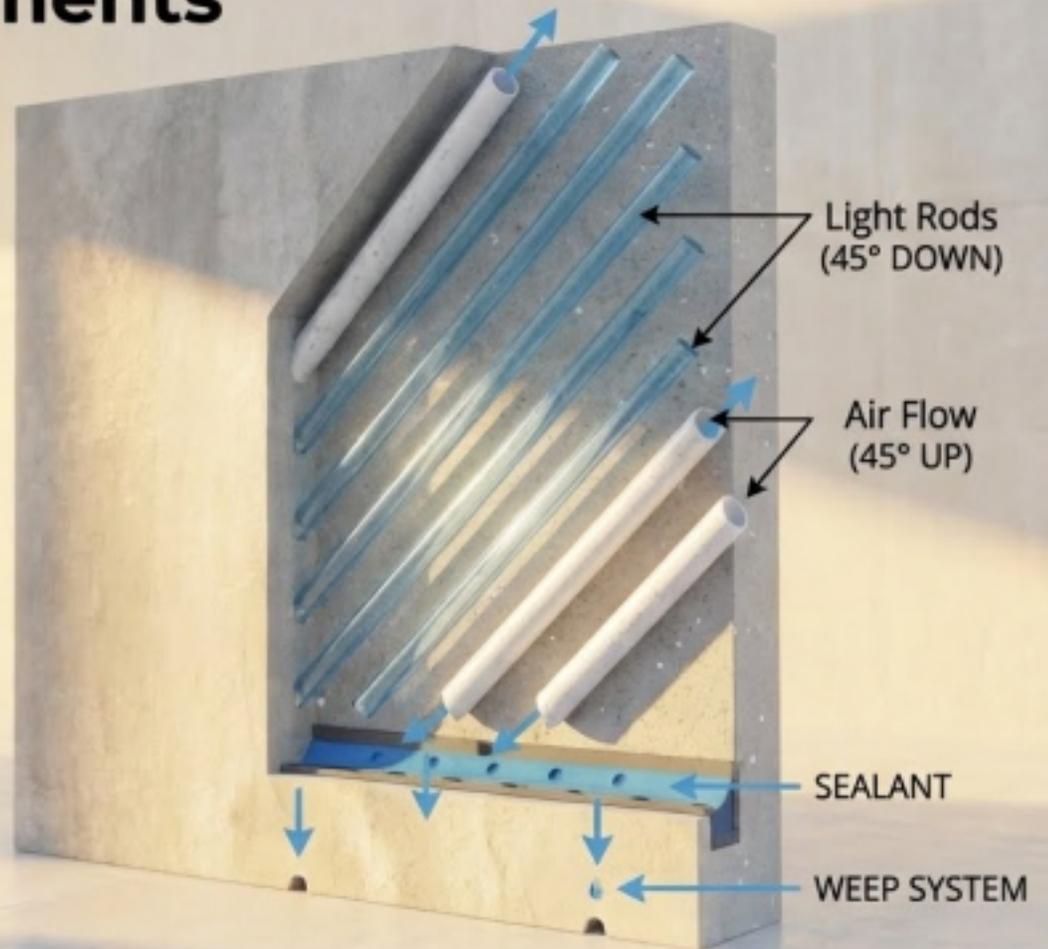
- The 45-degree rod angle is mathematically engineered for light transmission while maintaining the wall's core R-value.
- Thermal performance vastly outperforms traditional glass windows, maintaining an unbroken insulation layer alongside the rod matrix.



Mastery Over the Elements

Designed specifically for exterior commercial and residential applications, the panels feature an integrated drainage system. Proper sealant and weep systems are vital for performance, ensuring the long-term clarity and structural integrity of the light-transmitting rods by preventing water penetration.

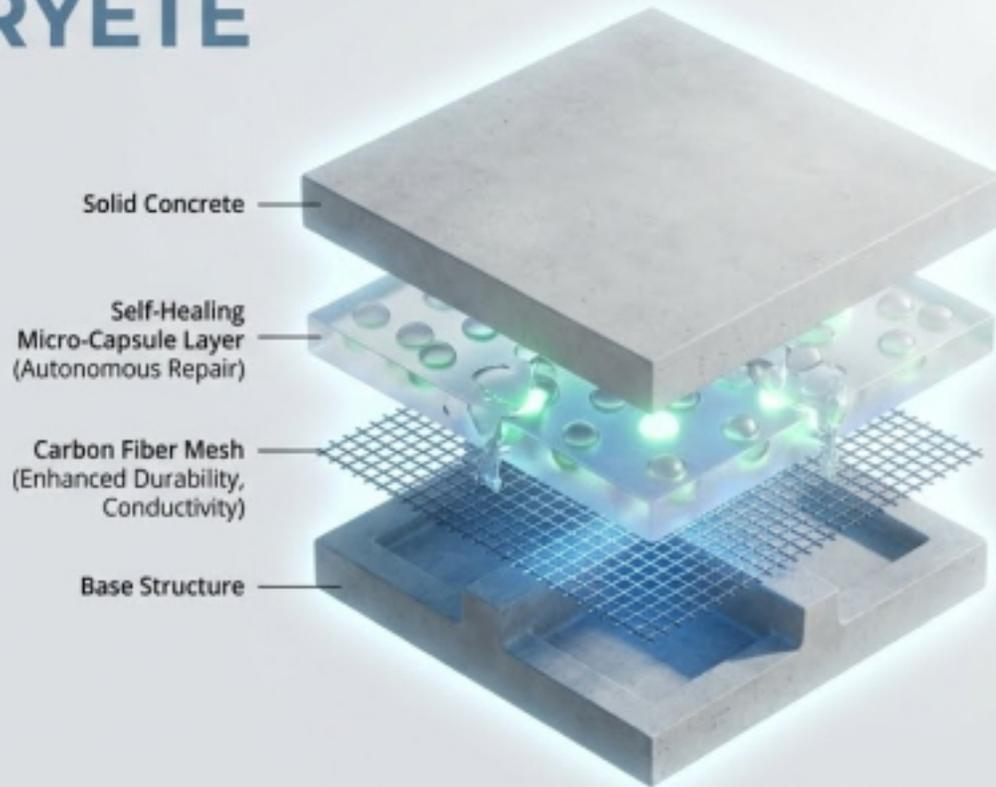
- Permanent Air Flow: PVC pipes can be inserted into the pre-cast to provide semi-permanent air flow.
- Dual Angling: Air flow PVC tubes slope up at 45 degrees to keep out dust, leaves, and rainfall, while moisture is actively drained down at 45 degrees.
- Can integrate hinged fascia capping, insect screening, and damper control.



Urban Fusionconcrete Resilience **ACRYETE**

To guarantee decades of flawless performance, **ACRYETE** panels utilize advanced self-healing composite concrete technology.

- **Autonomous Repair:** Micro-capsules rupture upon micro-cracking, releasing a polymer that automatically seals fissures.
- **Enhanced Durability:** A carbon fiber mesh provides structural flexibility and conductivity for monitoring.



ELECTRICAL
CONDUCTIVITY



AUTONOMOUS
REPAIR



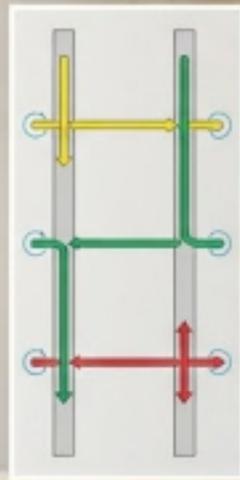
ENHANCED
DURABILITY



Integrated Infrastructure

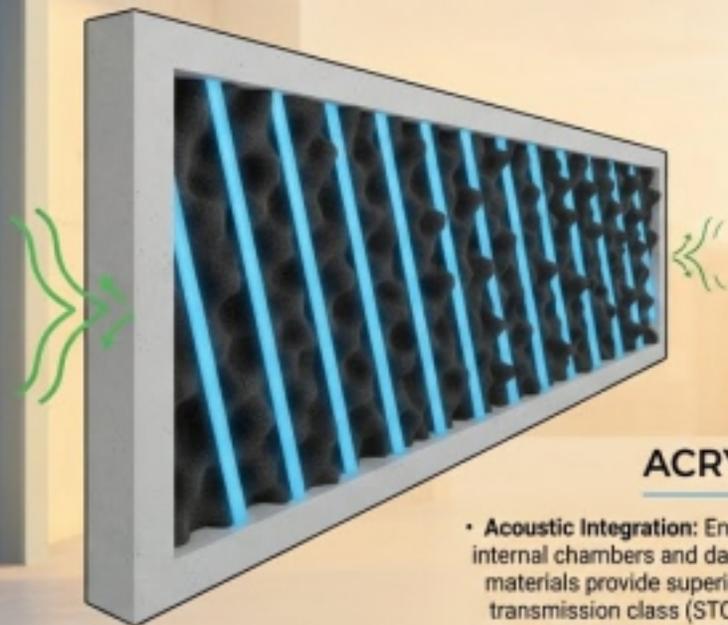
The system simplifies on-site construction by arriving with pre-run utility pathways. This protects sensitive infrastructure from environmental factors while accelerating the build timeline.

- Dedicated, separated conduits for Electrical, Data/Fiber Optic, and Plumbing lines.
- Conduits are strategically placed to route around the acrylic matrix, avoiding any compromise to structural reinforcement.



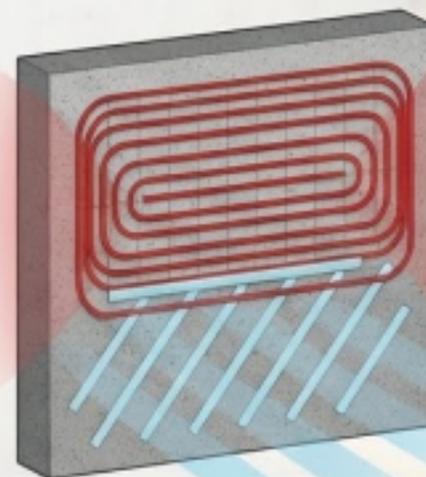
Acoustic and Thermal Control

ACRYETE goes beyond visual and structural performance to enhance the physical comfort of the space.



ACRYETE

- **Acoustic Integration:** Engineered internal chambers and dampening materials provide superior sound transmission class (STC) ratings without sacrificing light flow. Ideal for multi-family residential and commercial applications.



ACRYETE RADIANT HEATING SYSTEM

- **Radiant Heating:** A radiant heating grid can be integrated during the pre-cast process, providing energy-efficient, uniform temperature regulation without affecting structural integrity or light paths.



Tailoring the Exterior Finish

The exterior concrete face is just as customizable as the acrylic light channels. The structural facade can be finished to match any architectural context, from sleek commercial high-rises to warm residential exteriors.



Polished Concrete



Aggregate Finish



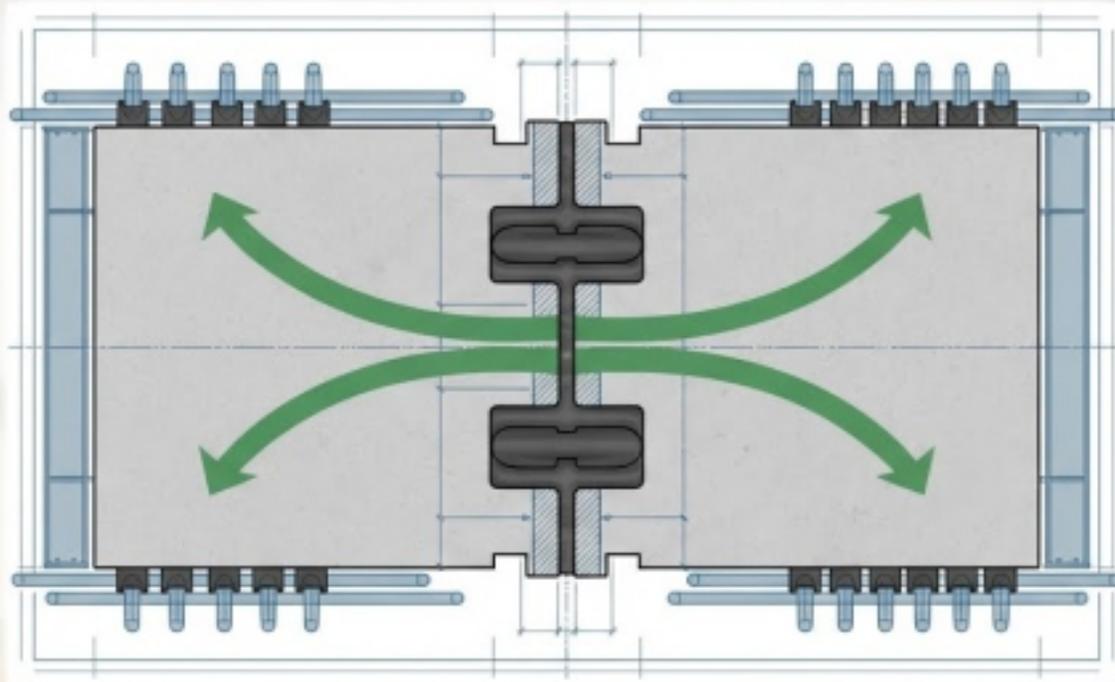
Smooth Stucco
Look



Seismic and Thermal Resilience

As buildings shift and temperatures fluctuate, the facade must adapt.

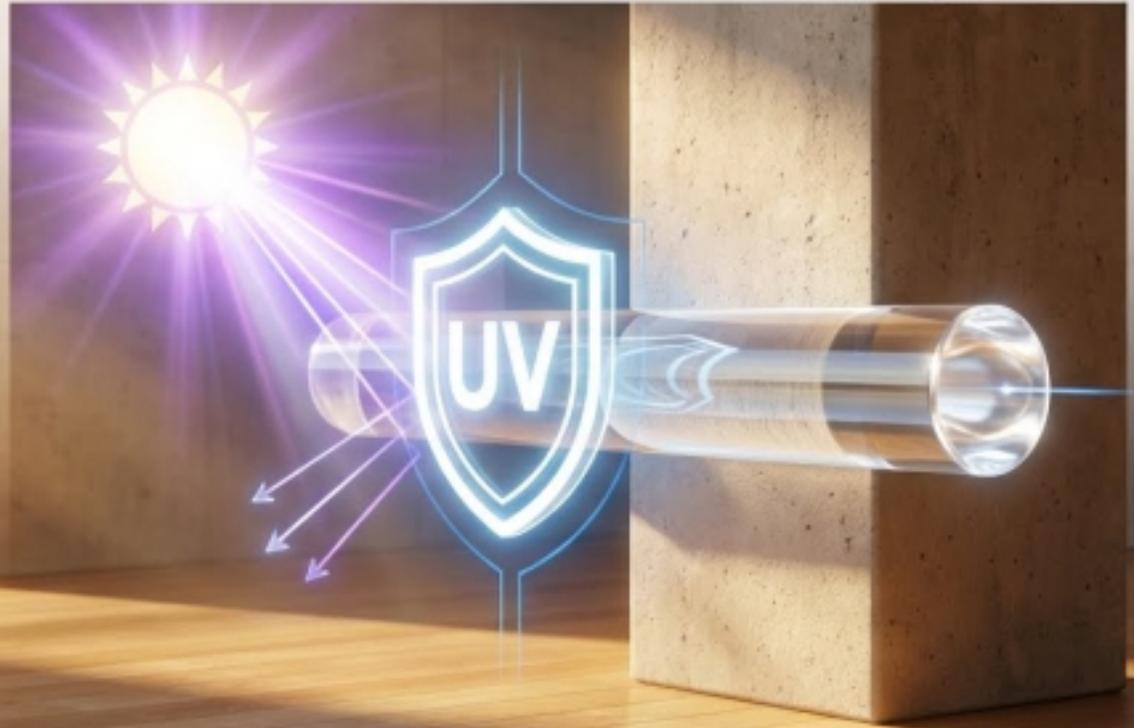
- Panels feature integrated expansion joints.
- Utilizes high-density elastomer to actively manage seismic stress and thermal expansion.
- Ensures long-term structural resilience and stability at the panel control points.



Engineered for Decades of Clarity

A living facade must maintain its brilliance over the lifetime of the building. We utilize only high-grade acrylic formulated specifically for rigorous exterior exposure.

- **UV Protection:** The acrylic matrix includes advanced UV inhibitors to prevent yellowing or structural degradation over time, ensuring absolute light clarity for decades.



Simplified Facade Maintenance

Maintaining an ACRYETE facade requires no highly specialized equipment. It is designed for straightforward, predictable upkeep.



Routine Cleaning

Use mild detergent and soft brushes to clean the surface. Abrasive chemicals that could damage the acrylic rods are strictly avoided.



Periodic Inspection

Periodically check for micro-cracks or damage around the rod ends. Standard architectural sealants should be applied every five years.



Redefining the Interior Experience

While the engineering is complex, the human impact is profoundly simple.

By adding dynamic, moving light transmission directly through structural concrete walls, rooms feel fundamentally less confining.

For occupants remaining in residential or commercial spaces for extended periods, ACRYETE completely transforms the psychological relationship with the exterior environment.



ILLUMINATE THE SOLID FORM

Architecture is no longer bound by the opacity of stone. With custom S-profiles, dynamic 45-degree light paths, and uncompromising structural strength, the future of exterior design is here.

