

# Solar Vision Glass



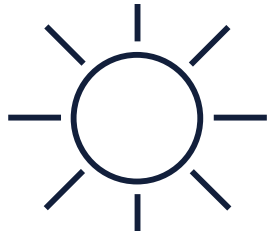
*ClearVue<sup>PV</sup> Vision Glass supports sustainable building operations by providing energy generation that significantly offsets operational energy requirements.*

*What were once Insulated Glass Units (IGUs) that were an area of energy losses, can now be a source of clean, renewable energy.*

*Now it is possible to generate energy from truly transparent glass building surfaces.*

# Solar Vision Glass

*ClearVue<sup>PV</sup> Vision Glass facilitates clean energy generation into the very fabric of the modern building envelope.*



**Clear Glass**  
solar glazing



**Clean Energy**  
generation offsets building  
energy requirements



**Saves**  
on building heating and  
cooling costs

ClearVue<sup>PV</sup> Vision Glass combines several patented, proprietary technologies to generate clean, renewable energy from clear building glazing surfaces. ClearVue is compatible with the majority of glass compositions.

## Benefits

- Generates up to 3 Watts/ft<sup>2</sup> peak
- Reduction of Solar Heat Gain coefficient (SHGC)
- Fire certified by TÜV SÜD under the EN 13501-1:2018 A2-s1, d0 classification rating for combustibility
- Provides maximum natural lighting with transparency that is the same as standard glazing products
- Decreases use of traditional energy sources and offsets energy use with renewable solar energy
- Compatible with most glass compositions and low emissive (low-e) coating technologies
- Compatible with most standard curtain wall and framing systems
- IGU seal equivalent to standard IGUs (Certified by Insulating Glass Certification Council)
- Project-specific sizes available (up to 5.25ft x 11.5ft)
- Connected reporting supported



# ClearVue<sup>PV</sup> Vision Glass Specifications

ClearVue<sup>PV</sup> Vision Glass allows visible light to pass through the glass at up to 70% visible light transmission (VLT) for maximum daylight. ClearVue prevents unwanted solar radiation from penetrating the building envelope while generating energy utilizing custom-shaped solar cells along the perimeter. ClearVue optimizes on site energy generation by making large expanses of building façade glass into renewable energy powerhouses.

## The ClearVue<sup>PV</sup> Vision Glass System is comprised of:

- Silicon solar collectors
- Extruded support frame and connection system
- Fully sealed power system
- Proprietary PVB with photo luminescent nanoparticles



## Internal IGU solar collection delivers enhanced reliability

- All electrical connections are solid metal for enhanced reliability
- All electrical connections are within the desiccated IGU cavity forming a completely airtight, dry environment
- Friction assembly system delivers a high quality and fast production rate, streamlining mass production that is comparable with standard IGUs
- Power exit is via an IP67-certified system that is waterproof to 1m of depth for 30 minutes



ClearVue<sup>PV</sup> Vision Glass meets stringent construction-grade fire safety requirements and is approved for high rise buildings. TÜV SÜD certified that ClearVue<sup>PV</sup> Vision Glass meets high performance classification criteria making it safe for building façades.

## TECHNICAL PROPERTIES

Vision Glass Unit Specifications Size: 4ft x 4ft

Parameters	Values
Maximum Power Output	Up to 3 Watts peak per ft <sup>2</sup>
Visible Light Transmission	Up to 70%
U Value	Dependent on glass composition
SHGC	Dependent on glass composition
Voltage Open Circuit $V_{oc}$	58V
Ampere Short Circuit $I_{sc}$	0.95A
Maximum Power Voltage $V_{mp}$	49V
Maximum Power Current $I_{mp}$	0.87A
Tolerance	±5%



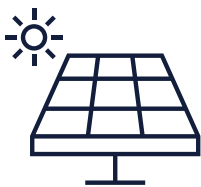


# Quality Control & Quality Assurance



## Testing & Inspection

Visual inspection of solar cells and testing for quality & performance



## Electroluminescence

Inspection and testing of interlayer and solar wafers



## Environmental & Stress Testing

Water infiltration, weight bearing, impact, heat, cold, and humidity



## Safety & Fire Testing

PV safety, fire classification, fire performance of external cladding

*We are dedicated to delivering high-performance, high-quality, long-lasting, and safe façade solutions.*

## Quality and Safety

ClearVue<sup>PV</sup> Vision Glass, Spandrel, Skylight, Balustrade, and Cladding products are engineered to meet and/or exceed industry standards for quality, lifespan, and safety.

By undergoing rigorous testing, compliance, and certifications, our solar façade solutions demonstrate the reliability and suitability for deployment in diverse building envelope applications. This ensures optimal energy production, fire resistance, and thermal efficiency. Adherence to these standards underscores our commitment to deliver high-quality, dependable products that contribute to sustainable and resilient built environments.



# Certifications & Compliance

## ClearVue<sup>PV</sup> Vision Glass

- 30-year linear power performance warranty
- 10-year product component warranty
- High resistance to high temperatures, high humidity, sand, acid, and alkali environmental conditions
- Fire certified by TÜV SÜD under the EN 13501-1:2018 A2-s1, d0 classification rating for combustibility
- Reliable IGU seal and IP67 connectors



## QUALITY & SAFETY TESTING

EN 1279-2	Long term test method and requirements for moisture penetration. Intertek Europe (June 2024)
EN 1279-3	Long term test method and requirements for gas leakage and for gas concentration tolerance. Intertek Europe and SQI (Q3 2024)
ASTM E2190	Insulating Glass Unit Performance and Evaluation. Testing completed and certified by Insulating Glass Certification Council (IGCC)
IEC 61730 and IEC 61215	Electrical Safety Testing by TÜV SÜD
Underwriters Laboratories (UL) UL 61730	PV module safety testing for electrical and mechanical operation by Underwriters Laboratories (Q4 2024)
EN 13501-1	For vertical wall application. by TÜV SÜD Classified as A2-s1, d0 rating; Can be deployed on buildings over 18M high and high-risk environments like hospitals, schools, hotels, etc.

## COMPLIANCE & CERTIFICATIONS





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