MODERNITE
BY CARBONFUTUREX GROUP

Modernité
By CarbonFutureX® Group

SolarInn® Railing Glass

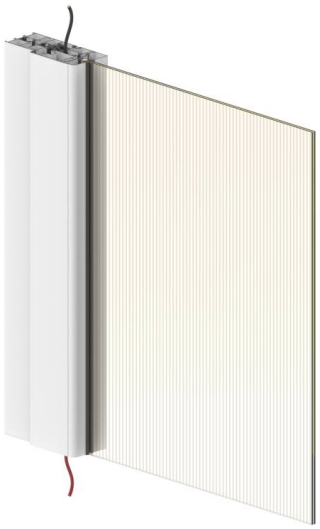


Our Transparent Photovoltaic Railing is an innovative fusion of safety, aesthetics, and solar power generation, designed for modern residential and commercial buildings. By integrating semi-transparent thin-film solar modules into balcony railings, terraces, and stairway barriers, this solution allows buildings to harness solar energy without compromising views or architectural design.

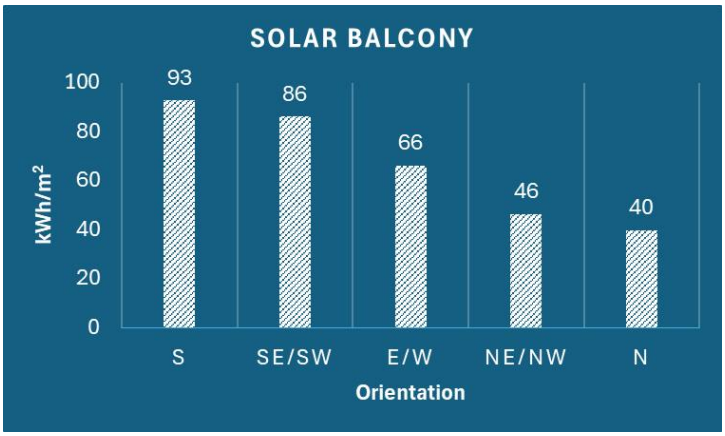
The beauty of SolarInn Ultra-Slim is its ability to integrate BIPV seamlessly into balustrade design, offering both transparency and solar energy capture. All electrical components are neatly concealed, preserving a clean architectural look. Whether for new builds or retrofits, SolarInn Ultra-Slim transforms balcony railings into a stylish source of sustainable energy.

QUALITY MANAGEMENT ISO 9001:2015 CERTIFIED COMPANY
TÜVRheinland® CERTIFIED
CE
UKCA
UKAS MANAGEMENT SYSTEMS
MCS CERTIFIED

Products



Annual Power Generation - UK Average (under 30% transparency)



Specifications

Structure (mm)	8T+1.52PVB+3.2CdTe+1.52PVB+8T	**Thickness (mm)**	22.24
Standard Dimensions	1200mm height × 1600mm width		
Weight (kg)	98.5	**Nominal Peak Power Output (Wp)**	200
Conversion efficiency under 200W/m2 solar radiation (25°C, AM1.5)	10.9%	**Conversion efficiency under 1000W/m2 solar radiation (25°C, AM1.5)**	10.4%
Visible light transmittance	30%	**g-value**	0.172
IR light block rate	85.6%	**UV light block rate**	95.7%
Glass Type	Toughened Glass + Laminated Glass	**Acoustic Reduction (dB)**	41
Power generation performance guarantee	85% performance remaining after 25 years	**Lifespan**	25-30 years

Transparency and vision comparison











Electrical Specifications
Standard test conditions (STC): 1000W/m², 25°C, AM1.5

Model Types (Specifications Standard test conditions(STC):1000W/m², 25°C, AM1.5)	SolarInn® Ultra slim
Standard Size (mm)	1200✕1600
Standard transparency	30%
Maximum Power Pm(W)	200
Open Circuit Voltage Vdc(V)	183
Short Circuit Current Isc(A)	1.41
Peak Power Voltage Vmp(V)	143
Peak Power Current Imp(A)	1.40
Maximum Series Fuse Rating Icf(A)	2.11
Maximum System Voltage Vsys(V)	1000
Temperature Coefficients of Isc Tkα(%/°C)	+0.061
Temperature Coefficients of Voc Tkβ(%/°C)	-0.396
Temperature Coefficients of Pm Tkγ(%/°C)	-0.189
Operating Temperature Range(°C)	-40 to +85

Regulations compliance

IEC 61215-1 / -1-2 / -2:2021
IEC 61730-1 / -2:2018
EN 12600:2002
ISO 12543-3 / -4 / -5 / -6 :2021
EN 410:2011
IEC 61730-1 / -2:2016
EN 14449:2005
EN 12150-1:2015+A1:2019
ISO 14067:2018
PAS 2050:2011

Other Features

- **Ultra-low Carbon Footprint (Embodied Carbon Intensity)**

Producing 1W of CdTe solar glass generates only 0.29 kg CO_2e – an ultra-low carbon footprint.

- **Ultra-low Carbon Intensity of Power Generation (Emission Factor)**

Generating 1 kWh of electricity with CdTe solar releases just 0.011 kg CO_2e – far cleaner than average UK power station (0.280kg CO_2e) and silicon PV(0.067kg CO_2e)

- **Thermal Durability**

Thermal cycling (-40°C to +85°C, 200 cycles, ≤5% power degradation)

- **Fire Safety**

Passed the A-level fire test, the highest fire rating in Europe and the USA

- **Outstanding Hail Impact Resistance**

Tested under 25 mm ice ball at 23 m/s, IEC 61215 compliant

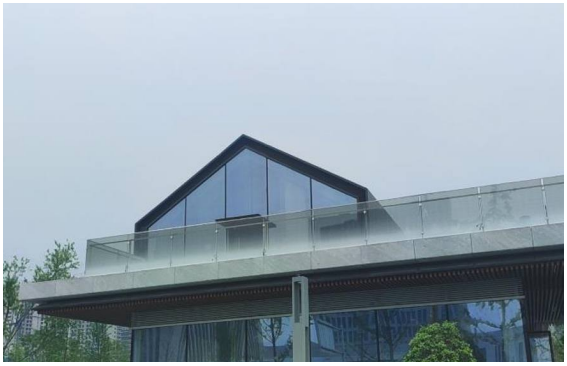
- Excellent wind and snow load resistance

1）1200×1600 mm, four-edge supported: withstands 5.5–6.5 kPa uniform load
2）1200×1200 mm, four-edge supported: withstands 6.5–7.5 kPa uniform load
Fully compliant with IEC 2400 Pa wind load and 5400 Pa snow load standards

Portfolio



Location: Urban Education Practice Base in Chengdu Park
Installed capacity：130kW
Application: Photovoltaic railing



Location: Railing of Xixian Central Park
Installed capacity：1.4kW
Application: Photovoltaic railing



Location: Metro station entrance pavilion
Installed capacity：3.6kW
Application: safety railing glass



Location: Boao Near Zero Carbon Demonstration Zone
Installed capacity：162.65kW
Application:Balcony railing

WHERE THERE IS LIGHT, THERE IS POWER

Contact

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