

# 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.

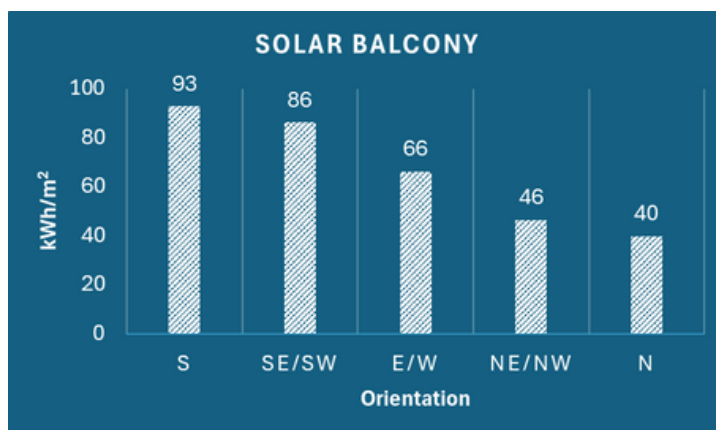
The beauty of SolarInn Ultra-Slim is its ability to integrate BIPV seamlessly into balustrade design, offering both transparency and solar energy capture. All electrical components are neatly concealed, preserving a clean architectural look. Whether for new builds or retrofits, SolarInn Ultra-Slim transforms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



# 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/m<sup>2</sup>, 25°C, AM1.5

Model Types (Specifications Standard test conditions(STC):1000W/m <sup>2</sup> , 25°C, AM1.5)	SolarInn <sup>®</sup> Ultra slim
Standard Size (mm)	1200×1600
Standard transparency	30%
Maximum Power P <sub>m</sub> (W)	200
Open Circuit Voltage V <sub>dc</sub> (V)	183
Short Circuit Current I <sub>sc</sub> (A)	1.41
Peak Power Voltage V <sub>mp</sub> (V)	143
Peak Power Current I <sub>mp</sub> (A)	1.40
Maximum Series Fuse Rating I <sub>cf</sub> (A)	2.11
Maximum System Voltage V <sub>sys</sub> (V)	1000
Temperature Coefficients of I <sub>sc</sub> Tk <sub>α</sub> (%/°C)	+0.061
Temperature Coefficients of V <sub>oc</sub> Tk <sub>β</sub> (%/°C)	-0.396
Temperature Coefficients of P <sub>m</sub> Tk <sub>γ</sub> (%/°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<sub>2</sub>e – 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<sub>2</sub>e – far cleaner than average UK power station (0.280kg CO<sub>2</sub>e) and silicon PV(0.067kg CO<sub>2</sub>e)

- **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

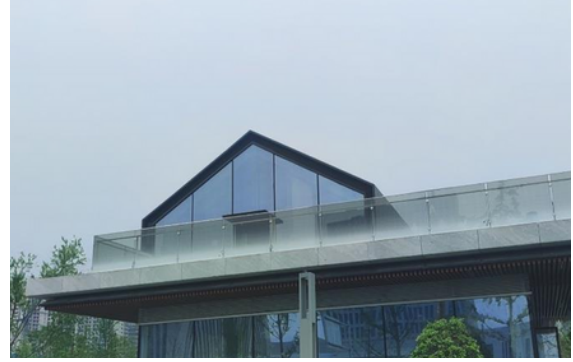
Fully compliant with IEC 2400 Pa wind load and 5400 Pa snow load standards



# 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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