



Polysolar

PRODUCT GUIDE



Architectural **Building Integrated Photovoltaics**

Polysolar is a recognised global leader in the development, design and delivery of Building Integrated Photovoltaic (BIPV) solutions, producing a range of innovative photovoltaic technologies for the built environment.

TELEPHONE

+44 (0) 1223 911534

EMAIL

info@polysolar.co.uk

WEB

polysolar.co.uk



Solar glass that does the work of a building material

BIPV means integrating the photovoltaics into the building envelope as a multifunctional material. The modules replace conventional cladding, glazing and roofing, so a single material weatherproofs the building, controls temperature and light, and generates electricity.

Where roof space is limited, BIPV is often the only practical way to meet renewable energy and carbon targets. Polysolar manufactures façades, skylights, canopies, carports and other structures. Our standard and bespoke products are fully IEC and MCS certified and warranted.



Solar electricity



Sound protection



Spectra control



Weatherproofing



Structural design



Return on investment



Thermal control



Low-light yield

Thermal and energy performance

With a g-value of 0.2, the glass blocks most of the solar heat ordinary glazing lets through, so interiors stay cooler without blinds or heavy cooling plant. U-values below 1 W/m²K are better than triple glazing. (Both figures apply to the insulated units.) Yield holds up in low light and across a wide temperature range.

Regulation and compliance

BIPV is a direct route to Part L compliance. On-site generation counts towards the target emission rate and target primary energy rate, so a scheme can pass without over-specifying insulation or plant elsewhere. The low g-value helps with Part L solar gain limits and, in housing, Part O overheating. BREEM ratings improve too.

Design freedom and solar shading

Every panel is made to order, so the glass follows the architectural intent: we match size, transparency, colour, finish and glass type to your drawings. And because it cuts solar gain and glare, you can save money on shading materials.

Cost and durability

The glass is priced against the cladding or glazing it replaces, so the added cost is modest. It pays back twice: in electricity generated and in bills saved. Less solar gain means smaller cooling loads, while the insulating build-up cuts winter heat loss. Modules are toughened and laminated.

Countless ways to build power into a structure

Wherever a building has an exposed surface, it can generate. Our bespoke panels suit new build and retrofit alike, from transport hubs and schools to car parks and public spaces, enabling architectural freedom with practical function. Some of the most common applications are shown below.



LIVERPOOL SOUTH PARKWAY STATION

01 Façades & skylights

Frameless PV glass for façades, skylights and glasshouses, performing well even at non-optimal angles. Transparency up to 50%, compatible with curtain walling and bonded rainscreen systems. We work with leading glazing companies to deliver the full installation.



LONDON STADIUM

02 Lightweight solutions

At just 3 kg/m², these frameless panels bond straight to the roof with tested adhesives, so there are no metal mounts. They suit low-load and membrane roofs, curved surfaces, façades and agrivoltaics, where standard modules cannot be installed.



WEST BROMWICH MARKET STALLS

03 Canopies & structures

Canopies and walkways cover large areas that generate nothing. PV glazing turns them into an energy asset, and the dual-sided panels raise the yield further. Suitable for bus shelters, service stations, market halls, swimming pools and public spaces.



TEWKESBURY CARPORT

04 Carports & EV charging

A carport frame is well suited to PV: it is structurally strong and free to face the optimum orientation. Combined with EV charge points and battery storage, it becomes on-site charging infrastructure for homes, workplaces and public car parks.

Our technology

We supply four photovoltaic technologies, each chosen to suit the surface it replaces. In our glass products the active layer sits between two sheets of laminated glass with transparent conductive coatings.

Panels are an unframed, heat-strengthened glass laminate with an edge or back-mounted bypass diode junction box and standard solar connectors. Bespoke design covers size, glass type, insulated units, transparency, colour and surface finish.



CdTe

CADMIUM TELLURIDE

True see-through glass, opaque to 80% light transmission, in bespoke sizes up to 3m.



c-Si

MONOCRYSTALLINE SILICON

Black cells in a semi-transparent laminate. Our highest efficiency, from 20% or 210 Wp/m².



CIGS

COPPER INDIUM GALLIUM SELENIDE

Flexible stick-on thin film at 2.4 kg/m². No mounting frame, and strong in ambient light.



Lightweight

MONO TOPCON, BONDED

2.7 kg/m² and 3mm thick, bonded direct to low-load, membrane and curved roofs.



Performance at non-optimal angles

Vertical and shallow-pitch installations still yield well.



Efficiency in low light

Thin film continues to generate under UK cloud cover.



Superior heat tolerance

Output is maintained as module temperature rises.



CAMBRIDGE SOUTH STATION