



POWERPLY

Single Ply Photovoltaic Roofing Solution

Achieve top energy output and improved eco-performance with a TPO Photovoltaic laminated membrane.

BIPVco is a British manufacturer of solar integrated roofing products, utilising market leading technology and processes to make Building Integrated Photovoltaics (BIPV) from conventional building materials; the BIPV functionalised roof works as a building product, whilst converting the building envelope from a liability into an asset by using the roof to generate low carbon electricity.

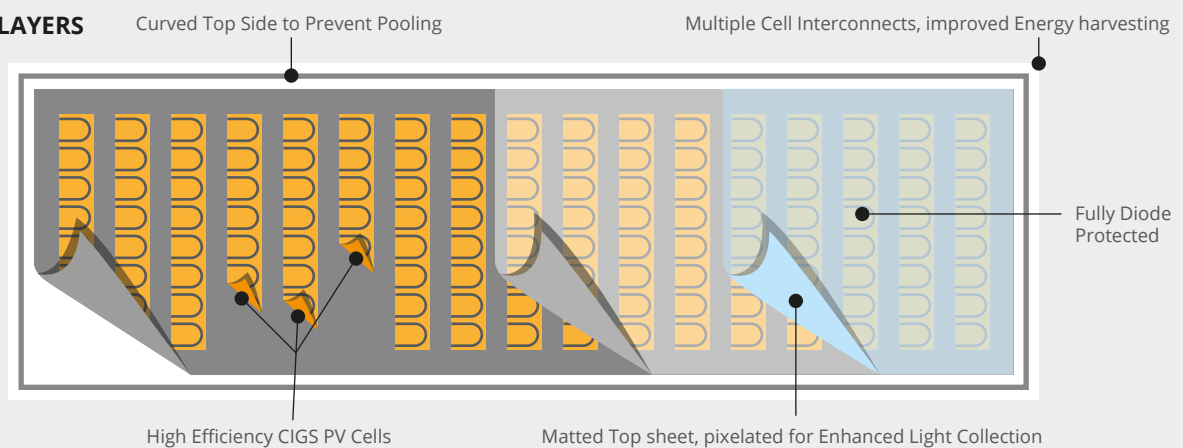
Powerply is a single ply membrane roofing product with integrated solar cells. Factory applied PV cells are integrated directly onto the approved single ply membrane to create a roofing system that can be installed in the same way as a conventional roof.

This is a specification product with associated roof system warranty.

KEY FEATURES

- Cell Efficiency, up to 17%
- Best in class thin film technology
- No ballast, penetrations or racking required
- Low installed weight of less than 3kg/m²
- Improved aesthetics
- Multiple Bypass Diode design to improve performance in shading/low light
- 25 year performance warranty, 5 year product warranty

MODULE LAYERS



The Building Integrated Photovoltaics Company



TECHNICAL CHARACTERISTICS

DESCRIPTION

Copper Indium Gallium Diselenide thin film cells on ultra thin 20 micron stainless steel substrate fused directly to a 2.0mm thick TPO membrane.

The TPO membrane is available in a standard or fleece-backed version.

The module is delivered with IP68 rated terminal housing assembly and quick connect terminals.

ELECTRICAL PERFORMANCE AT STC¹

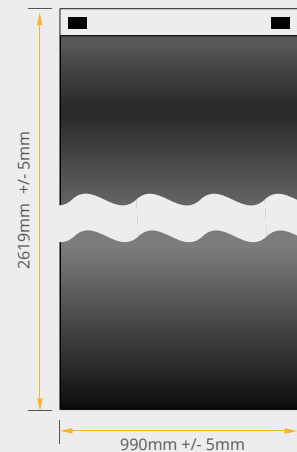
		340W	350W	360W	370W
Nominal Power	P_{MPP} [W]	340	350	360	370
Aperture Efficiency	η [%]	14.8%	15.3%	15.7%	16.1%
Power Output Tolerance	[W]	+10/-0	+10/-0	+10/-0	+10/-0
Maximum Power Voltage	V_{MPP} [V]	30.5	31.0	31.6	32.2
Maximum Power Current	I_{MPP} [A]	11.23	11.33	11.43	11.52
Open Circuit Voltage	V_{OC} [V]	38.3	38.8	39.3	39.8
Short Circuit Current	[A]	12.97	12.99	13.02	13.04
Maximum Series Fuse Rating	[A]	25			
Maximum System Voltage (IEC/UL)	[V]	1000/600			

¹Standard Test Conditions (STC): 1000 W/m², 25°C cell temperature, AM 1.5 spectrum

PHYSICAL AND MECHANICAL SPECIFICATIONS

Length	2619 mm
Width	990 mm
Thickness, Maximum at J-Box, Module	17 mm, 2.5mm
Weight (Module without adhesive)	5.1 kg
Weight (Module with adhesive)	6.2 kg
Weight/Area (Module without adhesive)	2.0 kg/m ²
Weight/Area (Module with adhesive)	2.4 kg/m ²
Junction Box Type	IP68
Cell Type	Copper Indium Gallium Diselenide (CIGS)
Warranty**	5 year workmanship; 10/25 year power output

** Please see full warranty for details



THERMAL CHARACTERISTICS

NOCT	[°C]	48
Temperature Coefficient of P_{MPP}	[%/°C]	-0.40
Temperature Coefficient of V_{OC}	[%/°C]	-0.36
Temperature Coefficient of I_{SC}	[%/°C]	0.003

APPLICATION CRITERIA

Standard Membrane panel mechanically attached system (using Rubberfuse fixings)

Fleece-Backed Membrane panel adhered system (using FB-Solvent Free Adhesive on compatible substrate)

Application on flat roofs with a 3% minimum slope

Application Temperature 10°C - 40°C

Maximum roof temperature 85°C

The roofing works will be carried out by a Rubberfuse Authorised Applicator.

Refer to the Rubberfuse technical manual and installation specifications for approved substrates and installation methods.

All specifications may be subject to change without notice.



Allen House, Harmby Road,
Leyburn, North Yorkshire DL8 5QA
Tel: 01969 625000
Fax: 01969 623000

In association with BIPVco

BIPVco, PV Accelerator Building, Shotton Works, Deeside CH5 2NH
Phone: 01244 892022, Email: sales@bipvco.com

www.bipvco.com

