

Dach-Energie is the complete rooftop solar solution. A revolutionary integration combining cutting-edge technologies to create sustainable power generating roofs. The system is based upon the BRUCHA WP PIR+ Panel featuring an optimal construction width of 1,100mm and precise joint connection which eliminates thermal bridging, which in turn creates a dense and uniform structure. The availability of numerous core thicknesses (up to 250mm) means that even the most exacting building physics requirements can be met.

This cost-effective solution combines the benefits of a quick and easy installation with the smooth and consistent appearance of a flat roof.

The pioneering Flextron PV solar modules are factory bonded to a range of best-in-class TPO and EPDM membranes. Flextron PV contains no glass and harnesses the sun's energy through the innovative use of flexible and robust CIGS technology. This enables the modules to be curved whilst remaining shatterproof, at the same time as operating at a high efficiency for a longer period in the day than 'traditional' solar panels. In conjunction with the Telfon-like and self-cleaning protective top sheet, Flextron PV requires no ongoing maintenance.

Dach-Energie is the next generation of integrated solar roofing



KEY FEATURES

3mm ultra thin PV, weighing just 3kg /m²

Best in class PV performance, 17% efficiency with 25 year warranty

Shatterproof & maintenance free solar panels require no ongoing treatment

No requirement for thermal bridges

Range of core thicknesses

Streamlined installation



*images representative of visual finish



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.

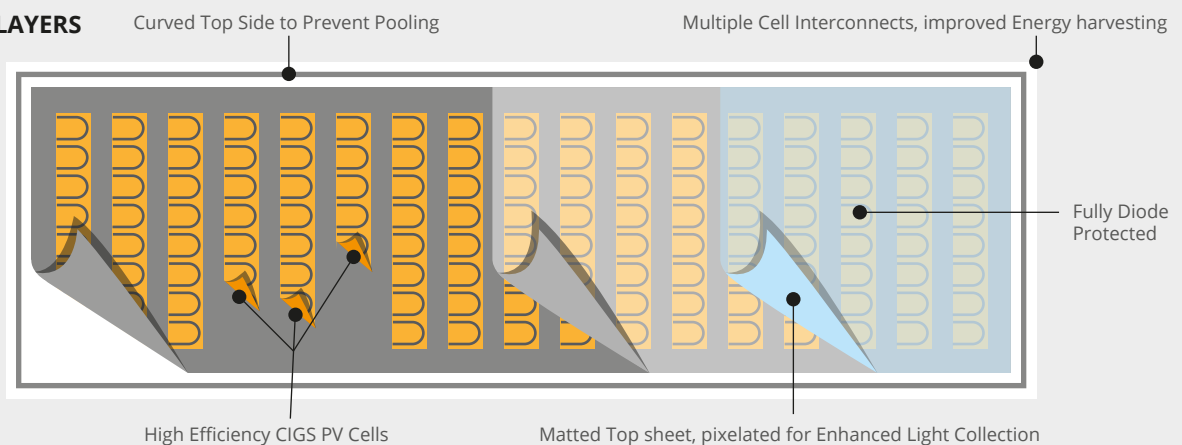
Powerply is a single ply membrane roofing product with integrated solar cells. Factory applied PV cells are integrated directly onto the approved single ply membrane to create a roofing system that can be installed in the same way as a conventional roof.

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

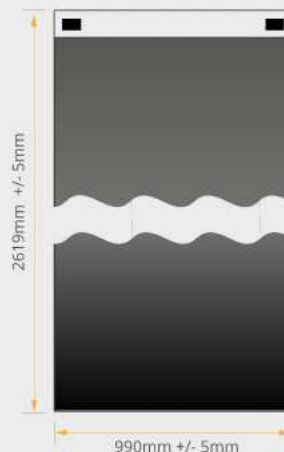
			340W	350W	360W	370W
Nominal Power	P_{MPP}	[W]	340	350	360	370
Aperture Efficiency	η	[%]	14.8%	15.3%	15.7%	16.1%
Power Output Tolerance		[W]	+10/-0	+10/-0	+10/-0	+10/-0
Maximum Power Voltage	V_{MPP}	[V]	30.5	31.0	31.6	32.2
Maximum Power Current	I_{MPP}	[A]	11.23	11.33	11.43	11.52
Open Circuit Voltage	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 manufacturer approved 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 must be carried out by a manufacturer approved installer. Refer to the relevant manufacturer's technical manual and installation specifications for approved substrates and installation methods. All specifications may be subject to change without notice.

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BRUCHA panel PIR+ non-halogen / iQTec wall – WP as flat roof solution

with waterproofing membrane

Waterproofing of roofs

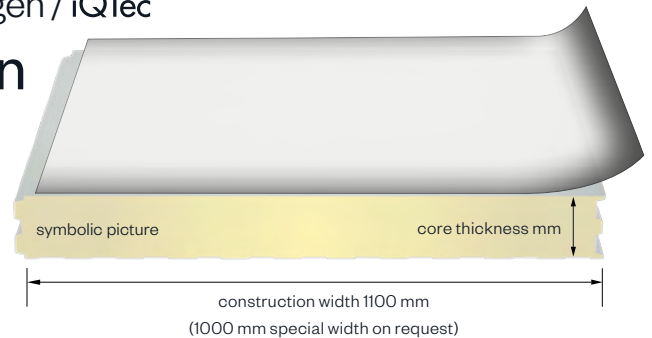
The repurposing of our wall panel WP as roof panel features its core values of optimized construction width of 1100 mm and perfect joint connection without thermal bridges, creating a homogeneous and dense surface.

Due to numerous core thicknesses (up to 250 mm), literally any building physics requirement can be met.

This cost-effective solution combines the benefits of a quick and easy installation with the smooth appearance of a flat roof.

For application of BRUCHA panel WP as flat roof a self-adhered or adhered soft-nonmetallic membrane for waterproofing must be used.

The installation of the waterproofing membrane has to be carried out on site by a specialized company.



Note:

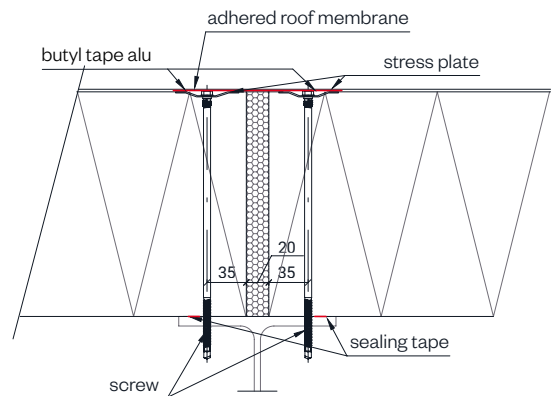
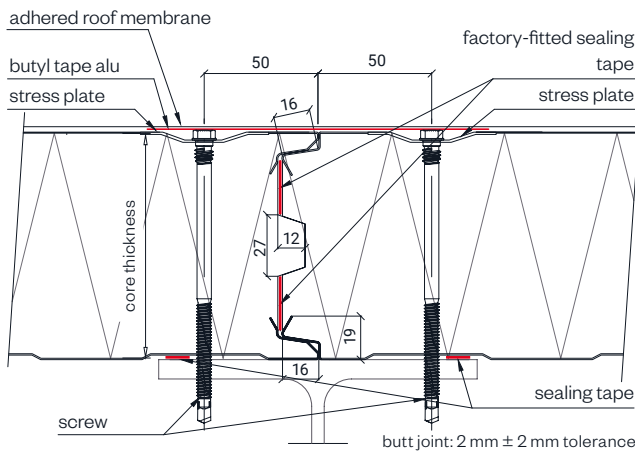
The selection of a suitable roof membrane is the responsibility of the customer. Verification of suitability of a roof membrane must be determined in consultation with the respective manufacturer.

For determination of the minimum roof slope, please refer to the requirements of the roof membrane manufacturer. We can offer roof membranes from resale, as we work with renowned suppliers (e.g. Sika/Sarnafil). Upon request, we can provide technical support (e.g. preliminary structural calculations, shop drawings, etc.)

DETAIL/joint geometry

longitudinal joint

cross joint



PANEL TYPE	WP 40	WP 50	WP 60	WP 80	WP 100	WP 120	WP 140	WP 150*	WP 160	WP 170	WP 180*	WP 200	WP 220*	WP 250*
core thickness mm	40	50	60	80	100	120	140	150	160	170	180	200	220	250
PIR+ non-halogen U-value W/m ² K - EN 14509 including joint section	0.552	0.435	0.355	0.263	0.210	0.175	0.150	0.140	0.131	0.124	0.117	0.105	0.095	0.084
iQTec on request U-value W/m ² K - EN 14509 including joint section	0.479	0.377	0.307	0.227	0.181	0.151	0.129	0.120	0.113	0.106	0.100	0.090	0.082	0.072
weight kg/m ²	10.45	10.85	11.25	12.05	12.85	13.65	14.45	14.85	15.25	15.65	16.05	16.85	17.65	18.75

*on request, from 500 m² (180 from 300 m²), max. production length 16 m

MANUFACTURING TOLERANCES
according EN 14509

MANUFACTURING LENGTHS
max. 18.4 m (extra-long transport from 13.6 m)

en_09/2022 - All information is considered to be subject to errors in composition or printing errors.



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