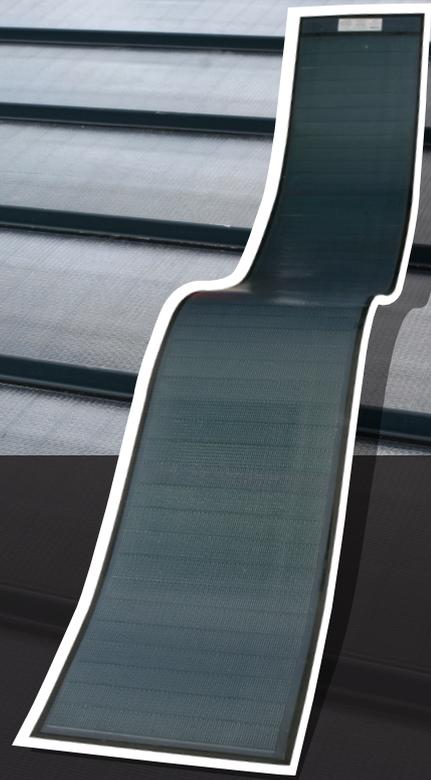


FLEXTRON

Flexible Photovoltaic Roofing Solution

CIGS flexible, peel + stick



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.

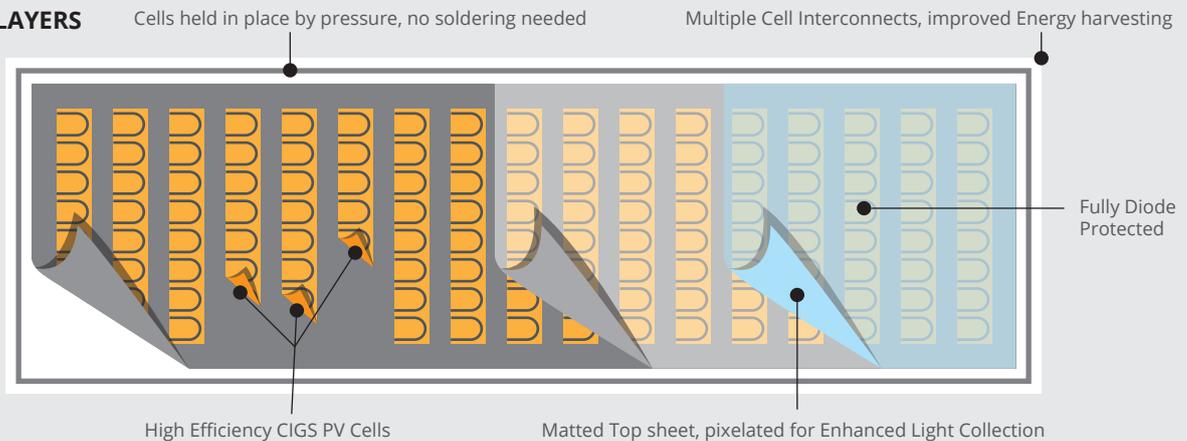
Flextron is a 'peel and stick' module with integrated solar cells. Modules are attached to the approved substrate to create a roofing system that can be installed in the same way as a conventional roof.

Flextron modules will be sold independently with a module 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



TECHNICAL CHARACTERISTICS

Copper Indium Gallium Diselenide thin film flexible solar module designed to be fitted to approved roofing panels. The modules are delivered with front mounted junction boxes with IP67 rated terminal housing assembly and quick connect terminals.

ELECTRICAL PERFORMANCE AT STC,

		F13F120B1	F15F240B1	F33F360B1
Front Contact		F13R120B1	F15R240B1	F33R360B1
Rear Contact				
Nominal Power	P _{MPP} [W]	120	240	360
Power Output Tolerance	[W]		+/- 3%	
Maximum Power Voltage	V _{MPP} [V]	31.18	62.36	93.83
Maximum Power Current	I _{MPP} [A]	3.85	3.85	3.84
Open Circuit Voltage	V _{oc} [V]	38.6	77.2	115.95
Short Circuit Current	[A]	4.43	4.43	4.41
Maximum Series Fuse Rating	[A]		10	
Maximum System Voltage	[V]		1000	
Cell Efficiency	%		15.5%	
Watts per Square Meter	w/m ²	128	132	139
Cells/Bypass Diodes per module		56/28	112/56	168/84

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

THERMAL CHARACTERISTICS

NOCT	[°C]	56.2
Temperature Coefficient of P _{MPP}	[%/°C]	-0.268
Temperature Coefficient of V _{oc}	[%/°C]	-0.209
Temperature Coefficient of I _{sc}	[%/°C]	-0.0007

PHYSICAL AND MECHANICAL SPECIFICATIONS

Length	mm	2609	5067	2609
Width	mm	358	358	990
Module Area	m ²	0.934	1.81	2.58
Thickness, Maximum at J-Box, Module	mm		19	
Thickness, laminate without adhesive	mm		2.5	
Thickness, laminate with adhesive	mm		5.5	
Weight (Module without adhesive)	kg	2.08	4.05	5.76
Weight (Module with adhesive)	kg	3.56	6.91	9.84
Weight/Area (Module without adhesive)	kg/m ²		2.23	
Weight/Area (Module with adhesive)	kg/m ²		3.81	
Junction Box type			IP67	
Cell Type		Copper Indium Gallium Diselenide (CIGS)		
Certification		IEC 61730-1, IEC 61730-2, IEC61646, (TUV Rheinland)		
MCS		MCS 017 (TUV Sud / BABT)		
Quality System		ISO 9001 (SGS)		
Warranty		5 year Product, 10/25 year Performance		

- Market leading high efficiency Copper Indium Gallium Diselenide (CIGS) solar photovoltaic (PV) cells that are applied to roofs and walls during the manufacturing of the building materials.
- Photovoltaic Integrated Roof Components – PV cells are directly encapsulated onto premium pre-painted steel/aluminum based or single ply membrane (TPO) roofs in highly controlled factory environment to create a combined PV roof system.
- Flexible Peel and Stick modules – PV cells are encapsulated onto a plastic backing sheet with specialist adhesive for supply to either metal component manufacturers (for application in factory) or installers (for application in the field).
- High performance solar module system for the building envelope, which can be applied to new roofs, during the building process, or retrospectively as an add-on.



BIPVco, PV Accelerator Building, Shotton Works, Deeside CH5 2NH Phone: (+44) 0333 554 8924, Email: sales@bipvco.com
www.bipvco.com