

## Designed specially for rooftops

### Integrates with roofing surface

- No mounting hardware
- No roof penetrations
- No wind load
- Low profile

### Flexible module

- Fits many roof types
- Durable, non-breakable

### Light weight

- 3.3 kg/m<sup>2</sup> (0.68 lb/ft<sup>2</sup>) with adhesive

## More energy per roof

### High efficiency CIGS

- 10.4% to 12.7% aperture efficiency
- 50% more efficient than flexible a-Si

### High performance

- Performs in all light conditions
- Shade tolerant

### Covers entire roof area

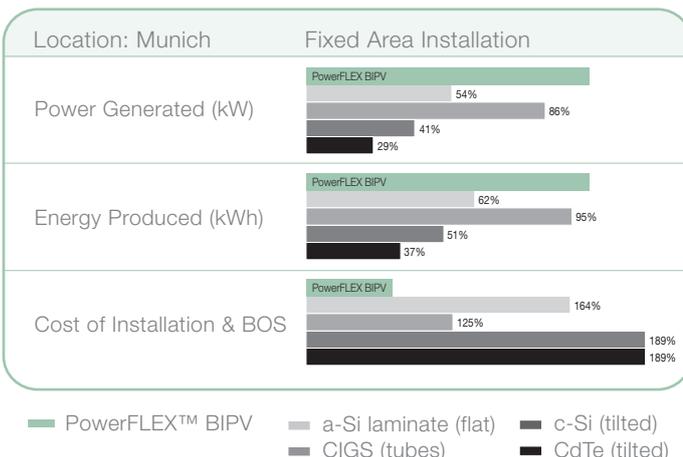
- Lays flat. No tilt required
- Minimum module spacing required

## Lower installed system costs

### Large format module

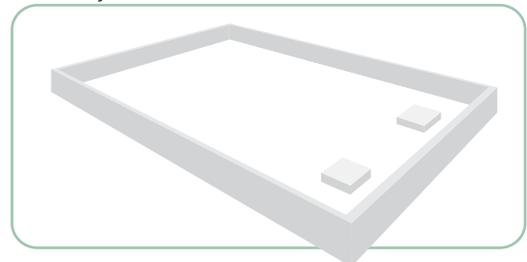
- 82-100 Watts
- 2.0m x 0.49m dimensions
- 30% to 40% savings in BOS & installation costs

## How PowerFLEX™ BIPV compares

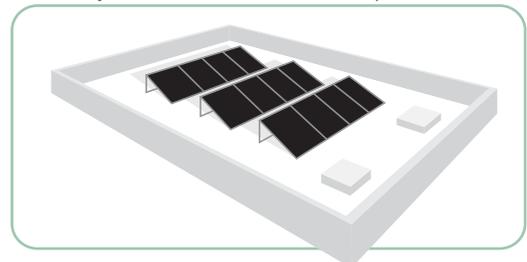


## More power per roof with lower BOS & installation costs

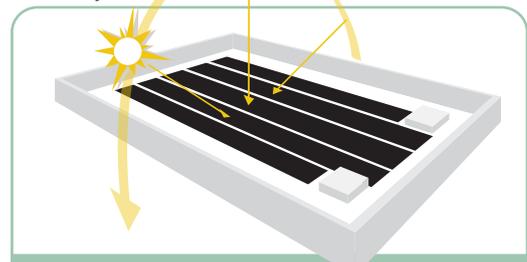
This is your roof



This is your roof with tilted solar panels



This is your roof with PowerFlex™ BIPV



More surface area covered plus higher performance equals more power and energy to you

### Electrical Specifications

Capacity rating	P max	100 W	90 W	82 W
Tolerance of Pmax	%	+10 / -7%	+10 / -7%	+10 / -7%
Module aperture area efficiency	%	12.7%	11.4%	10.4%
Rated voltage	Vmpp	17.8 V	16.5 V	15.5 V
Rated current	Impp	5.6 A	5.4 A	5.3 A
Open circuit voltage	Voc	23.3 V	22.0 V	20.9 V
Short circuit current	Isc	6.4 A	6.3 A	6.2 A

**Note 1:** Standard Test Conditions (STC): Cell Temperature at 25°C; Solar irradiance intensity of 1000 W/m<sup>2</sup>; AM1.5 solar reference spectrum (ASTM E892)  
**Note 2:** Average efficiency is calculated using the 0.79 m<sup>2</sup> aperture area of the module **Note 3:** Electrical parameters are +/-10% unless stated otherwise

### Temperature Coefficients

Maximum power	P max	-0.43%/°C
Maximum voltage	Vmax	-0.38%/°C
Open circuit voltage	Voc	-0.33%/°C
Short circuit current	Isc	-0.03%/°C

**Note:** Relative to Standard Test Conditions (STC): Solar irradiance intensity of 1000 W/m<sup>2</sup>; AM1.5 solar reference spectrum (ASTM E892)

### Low-Light Performance

Intensity	Relative Efficiency
1000 W/m <sup>2</sup>	100%
500 W/m <sup>2</sup>	99%
200 W/m <sup>2</sup>	91%

**Note:** Relative to Standard Test Conditions (STC): Cell Temperature at 25°C; AM1.5 solar reference spectrum (ASTM E892)

### Mechanical Specifications

Dimensions	2017 x 494 x <3 mm (79.3 x 19.4 x <0.12 in)
Weight	2.6 kg without adhesive (2.6 kg/m <sup>2</sup> ) ± 5% 3.3 kg with adhesive (3.3 kg/m <sup>2</sup> ) ± 5%
Junction Box - Top Mounted	TE Connectivity SOLARLOK™ Micro Junction Box
Cables	4 mm <sup>2</sup> dual rated with SOLARLOK™ connectors
Junction Box - Bottom Mounted	MC-JM/FM (MC4 Connectors)
Front Sheet	Non-stick ETFE
Solar Cells	36 CIGS cells (210 x 100 mm)
Adhesive	ADCO Heliobond™ PVA 600BT butyl mastic
Hot Spot Protection	Bypass diodes at each cell; 1 at junction box
Materials	Lead free and exempt from RoHS requirements
Maximum Series Fuse Rating	10 Amp
Color Options	Black (B) or White (W) backsheet behind cells

### Operating Conditions

Temperature Range	-40°C to + 85°C
Maximum System Voltage	1000VDC IEC, 600VDC UL

### Certifications and Warranty\*

EN 61646, EN 61730, UL 1703
Materials and workmanship - 5 years
Power output - 25 years (90% @ 10 yrs; 80% @ 25 yrs) Limited Warranty

\*Contact GSE for complete warranty terms

Global Solar® is a leading manufacturer of Copper Indium Gallium diSelenide (CIGS) thin-film solar on a flexible substrate. With a plant in Tucson (Arizona, USA), Global Solar® operates with a total of 40MW of production capacity. An average cell efficiency above 12.5% makes the company the world leader in CIGS efficiency on flexible substrate in large scale production. Sold worldwide in multiple applications, including flexible laminates, solar shingles, glass modules and portable chargers.

Call Global Solar® to find out if PowerFLEX™ BIPV is right for you.



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