

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/m² (0.68 lb/ft²) with adhesive

More energy per roof

High efficiency CIGS

- 11.4% 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

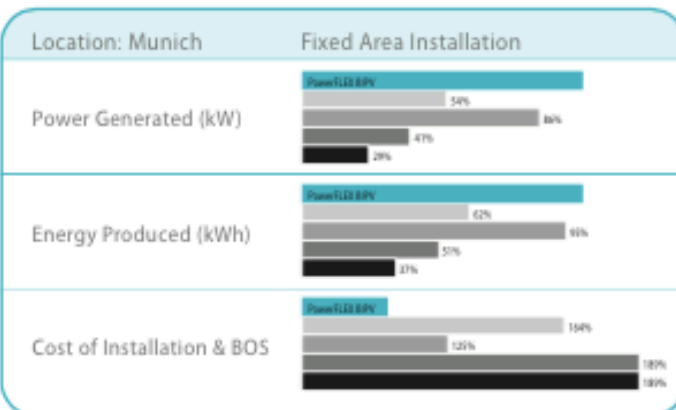
- Lays flat. No tilt required
- Minimum module spacing required

Lower installed system costs

Large format module in six power outputs

- 90-300 Watts
- 0.49m width x lengths of 2.0, 3.9 or 5.7m
- 30% to 40% savings in BOS & installation costs

How PowerFLEX™ BIPV compares

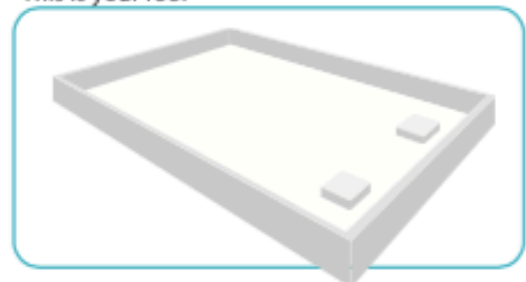


■ PowerFLEX™ BIPV
 ■ a-Si laminate (flat)
 ■ c-Si (tilted)
■ CIGS (tubes)
 ■ CdTe (tilted)

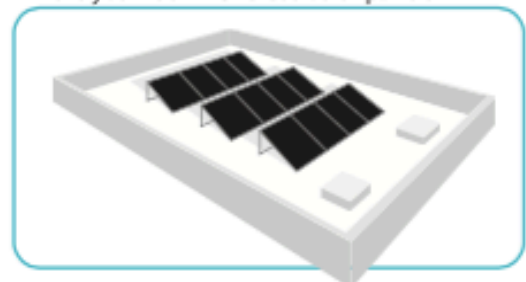


More power per roof with lower BOS & installation costs

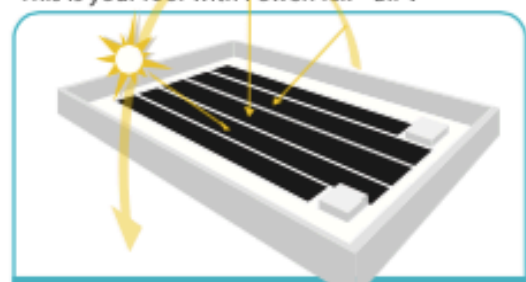
This is your roof



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}	300 W	275 W	200 W	185 W	100 W	90 W
Tolerance of P _{max}	%	+10 / -7%	+10 / -7%	+10 / -7%	+10 / -7%	+10 / -7%	+10 / -7%
Module aperture area efficiency	%	12.6%	11.5%	12.6%	11.7%	12.7%	11.4%
Rated voltage	V _{mpp}	54.3 V	51.5 V	36.2 V	34.7 V	17.8 V	16.5 V
Rated current	I _{mpp}	5.5 A	5.3 A	5.5 A	5.3 A	5.6 A	5.4 A
Open circuit voltage	V _{oc}	69.7 V	67.6 V	46.4 V	45.6 V	23.3 V	22.0 V
Short circuit current	I _{sc}	6.4 A	6.3 A	6.4 A	6.3 A	6.4 A	6.3 A

Note 1: Standard Test Conditions (STC): Cell Temperature at 25°C; Solar irradiance intensity of 1000 W/m²; AM1.5 solar reference spectrum (ASTM E892)

Note 2: Average efficiency is calculated using the aperture area of the module: 0.79m² for 90/100W, 1.59m² for 185/200W, and 2.38m² for 275/300W

Note 3: Electrical parameters are +/-10% unless stated otherwise

Temperature Coefficients

Maximum power	P _{max}	-0.43%/°C
Voltage at Maximum Power	V _{max}	-0.38%/°C
Open circuit voltage	V _{oc}	-0.33%/°C
Short circuit current	I _{sc}	-0.03%/°C

Note: Relative to Standard Test Conditions (STC): Solar irradiance intensity of 1000 W/m²; AM1.5 solar reference spectrum (ASTM E892)

Low-Light Performance

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

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

Mechanical Specifications

Dimensions	275/300 W	185/200 W	90/100 W
	5745 x 494 x <3 mm (226 x 19.4 x <0.12 in)	3881 x 494 x <3 mm (153 x 19.4 x <0.12 in)	2017 x 494 x <3 mm (79.3 x 19.4 x <0.12 in)
Weight - without adhesive	7.2 kg (2.5 kg/m ²) ± 5%	4.9 kg (2.6 kg/m ²) ± 5%	2.6 kg (2.6 kg/m ²) ± 5%
Weight - with adhesive	9.3 kg (3.3 kg/m ²) ± 5%	6.3 kg (3.3 kg/m ²) ± 5%	3.3 kg (3.3 kg/m ²) ± 5%
Junction Box - Top Mounted	TE Connectivity SOLARLOK™ Micro Junction Box with 4 mm ² dual rated cables and SOLARLOK™ connectors		
Junction Box - Bottom-mounted	Made with integrated MC4 connectors		
Top Surface Material	Non-stick ETFE		
Solar Cells	108, 72 or 36 CIGS cells (210 mm 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		

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