

PREMIUM

BISOL® BIPV

Monocrystalline Roof Integrated PV Modules / BSO 440-460 Wp



Made in Europe



30 years of
EU Guarantee



Hail and
Fire resistant



Uncompromisingly
certified



11.000 Pa Snow load



PID and
LETID free



Highest Efficiency

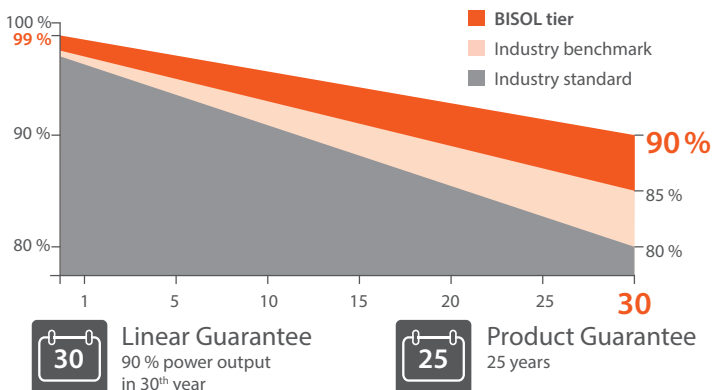


Module sorting
tehnology

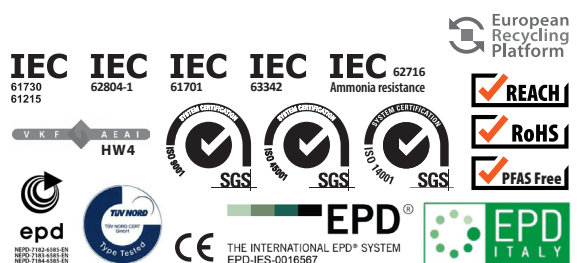


Low maintenance
costs

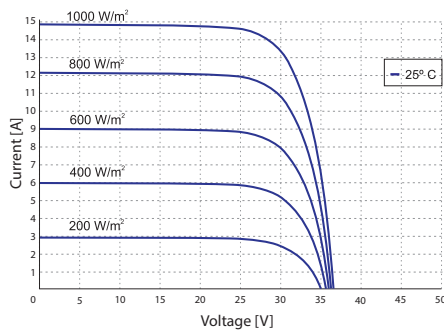
Guarantee:



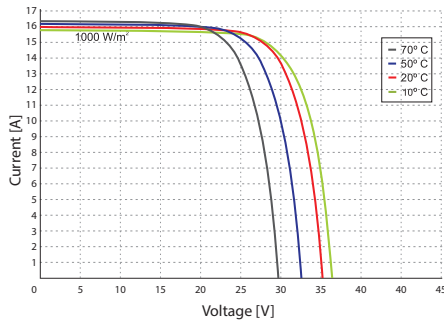
In compliance with:



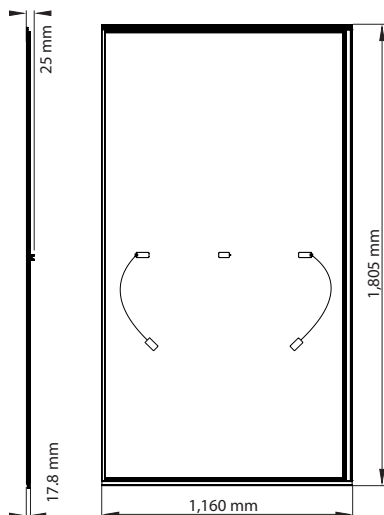
I-V Curve at Various Irradiation Levels



I-V Curve at Various Cell Temperatures



Dimensions



Electrical Specifications @ STC (AM 1.5, 1,000 W/m², 25 °C):

Module Type	BSO	440	450	460
Nominal Power	P_{MPP} [W]	440	450	460
Short Circuit Current	I_{SC} [A]	16.0	16.1	16.2
Open Circuit Voltage	V_{OC} [V]	34.9	35.3	35.9
MPP Current	I_{MPP} [A]	15.0	15.2	15.4
MPP Voltage	V_{MPP} [V]	29.3	29.6	29.9
Module Efficiency	η_M [%]	22.0	22.5	23.0
Cell Efficiency	η_C [%]	24.0	24.5	25.1
Power Output Tolerance		0/+5 W		
Maximum System Voltage		1,500 V		
Maximum Reverse Current		30 A		
Protection Class		Class II		

Additional power classes available upon request. Efficiency at irradiation 200 W/m²: 99.3 % of STC efficiency or higher. Tolerances for V_{OC} and I_{SC} and other electrical parameters are ± 3 %.

Electrical Specifications @ NOCT (800 W/m², 42 °C, AM 1.5, Wind 1 m/s):

Module Type	BSO	440	450	460
Nominal Power	P_{MPP} [W]	338	346	353
Short Circuit Current	I_{SC} [A]	12.9	13.0	13.1
Open Circuit Voltage	V_{OC} [V]	33.4	33.8	34.4
MPP Current	I_{MPP} [A]	12.1	12.3	12.4
MPP Voltage	V_{MPP} [V]	27.9	28.2	28.4

Thermal Specifications:

Current Temperature Coefficient	α	+ 0.05 %/°C
Voltage Temperature Coefficient	β	- 0.25 %/°C
Power Temperature Coefficient	γ	- 0.29 %/°C
NOCT		42 °C (± 3 °C)
Temperature Range		- 40 °C to + 85 °C

Mechanical Specifications:

Length x Width x Thickness	1,805 x 1,160 x 25 mm
Weight	21.5 kg
Solar Cells	96 Half-Cut c-Si / 182.25 x 105 mm
Junction Box / Connectors / IP	3 bypass diodes / MC4 compatible; On demand: MC4 EVO2 / IP 68
Cable Length	Default: 1,200 mm
Frame	Solrif® / thickness: 17.8 mm
Glass	3.2 mm AR coating tempered glass / high-transparency / low-iron content
Certified Test Load (Snow/Wind)	11,000 Pa / 2,400 Pa
Impact Resistance	Hailstone / Φ 40 mm / 99.1 km/h (61.6 mph)

Tolerances of values are ± 5 %. Unspecified product properties remain under full discretion of BISOL Production.

Packaging Information:

Modules per Pallet	Packaging Dimension: Length/Width/Height	Stackable	Packaging Weight	Tot. Nr. of Pallets/Load
24	196 x 116 x 136 cm	2 pallets	546 kg	26

*Loading of BIPV modules requires the use of truck with loading opening higher than 272 cm.