PREMIUM

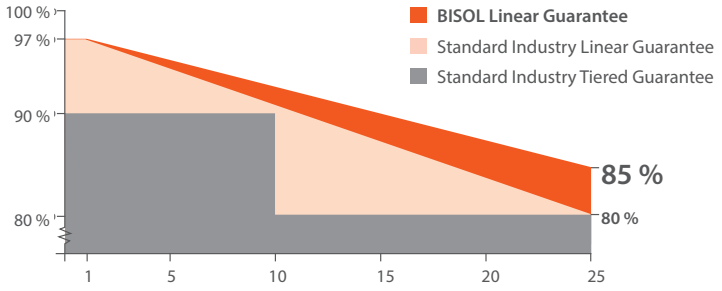
BISOL Bifacial

Bifacial Half-Cut PV Modules with Transparent Backsheet /
BDO 440-460 Wp (+ Bifacial Gain)

100% EU DESIGNED AND MANUFACTURED

- Designed and manufactured in EU
- Higher power
- Lower losses
- Module presorting for higher profitability
- Excellent low light performance
- Natural light transmission
- Available with or without frame
- Transparent back foil
- Bifacial module

Guarantees:



25 Linear Guarantee
85 % power output
in 25th year

up to 20 Product Guarantee
Standard: 15 years
Extra: 20 years

In compliance with:

HW3 · certisolis CRE4 · European Recycling Platform · ÖVE · CE · AIT Austrian Institute of Technology · IEC 61730 61215 · IEC 62804-1 · IEC 62716 Ammonia resistance · Istituto Giordano · TÜV SÜD · ISO 9001 SGS · ISO 45001 SGS · ISO 14001 SGS · MCS CERTIFIED · REACH · RoHS · epd · TÜV NORD · TÜVRheinland Precisely Right. · EPD® THE INTERNATIONAL EPD® SYSTEM EPD-IES-0016567 · EPD ITALY

Certificates available upon special request. Additional charges may apply.

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

Module Type	BDO	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			±3 %	
Maximum System Voltage			1,500 V	
Maximum Reverse Current			30 A	
Protection Class			Class II	
Bifaciality			72 % ± 5 %	

Electrical specifications at STC (1,000 W/m², AM 1.5, 25 °C), NOCT (800 W/m², AM 1.5, 42 °C, Wind 1 m/s), BSTC (1000 W/m² front side, 135 W/m² back side, AM 1.5, 25 °C). | 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 %. | Additional power classes available upon request.

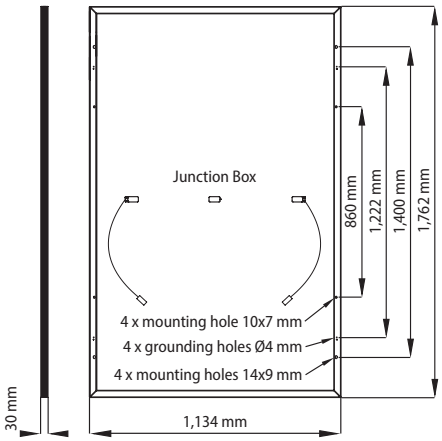
Electrical Specifications @ NOCT (800 W/m², AM 1.5, 42 °C, Wind 1 m/s):

Module Type	BDO	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
Module Efficiency	η_M [%]	22.0	22.5	23.0
Cell Efficiency	η_C [%]	24.0	24.5	25.1
Power Output Tolerance			±3 %	
Maximum System Voltage			1,500 V	
Maximum Reverse Current			30 A	

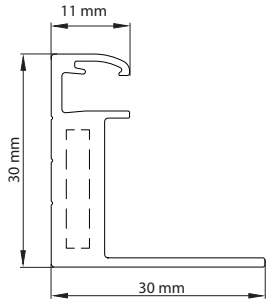
Electrical Specifications @ BSTC (1,000 W/m² front, 135 W/m² back, AM 1.5, 25 °C):

Module Type	BDO	440	450	460
Nominal Power	P_{MPP} [W]	499.4	510.8	522.1
Short Circuit Current	I_{SC} [A]	17.9	18.2	18.6
Open Circuit Voltage	V_{OC} [V]	34.9	35.3	35.9
MPP Current	I_{MPP} [A]	17.0	17.3	17.5
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			±3 %	
Maximum System Voltage			1,500 V	
Maximum Reverse Current			30 A	
Protection Class			Class II	
Bifaciality			72 % ± 5 %	

Dimensions



Frame Cross Section



Thermal Specifications:

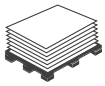
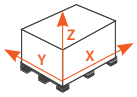
Current Temperature Coefficient	α	+ 0.05 %/°C
Voltage Temperature Coefficient	β	- 0.25 %/°C
Power Temperature Coefficient	γ	- 0.29 %/°C
NOCT		42 °C (±3 °C)
Temperature Range		- 40 °C to + 85 °C

Mechanical Specifications:

Length x Width x Thickness	1,762 x 1,134 x 30 mm
Weight	21 kg
Solar Cells	96 Half-Cut Bifacial c-Si / 182.25 x 105 mm
Junction Box / Connectors / IP	3 bypass diodes / MC4 compatible / IP 68
Cable Length	Default: 1,200 mm On demand (for portrait orientation): 300 mm
Frame	Anodaized Al with mounting and drainage holes / rigid anchored corners.
Glass	3.2 mm AR coating tempered glass / high-transparency / low-iron content
Certified Test Load (Snow / Wind)	6,000 Pa / 2,400 Pa
Impact Resistance	Hailstone / Φ 35 mm / 83 km/h (51 mph)

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

Packaging Information:

				
Modules per Pallet	Packing Dimension: Length/Width/Height	Stackable	Packing Weight	Tot. Nr. of Pallets/Load
35	178 x 116 x 128 cm	3 pallets	759 kg	28