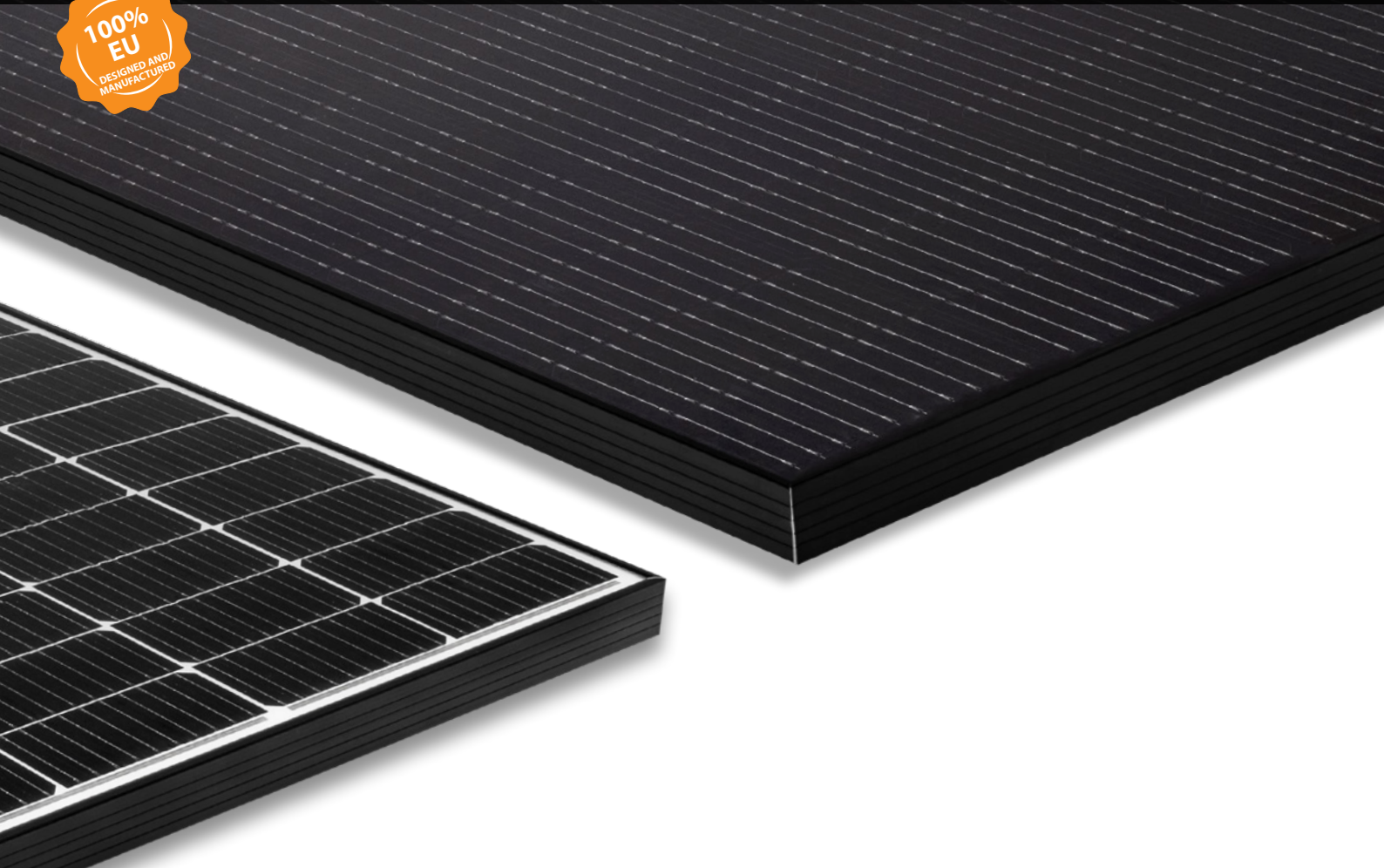


PREMIUM

# BISOL Duplex

Monocrystalline Half-Cut PV Modules (108 Cells) / BDO 400-420 Wp



Designed and manufactured in EU



Higher power



Lower losses



All relevant certificates



Limited shading



Module presorting for higher profitability



Module efficiency up to 21.5 %

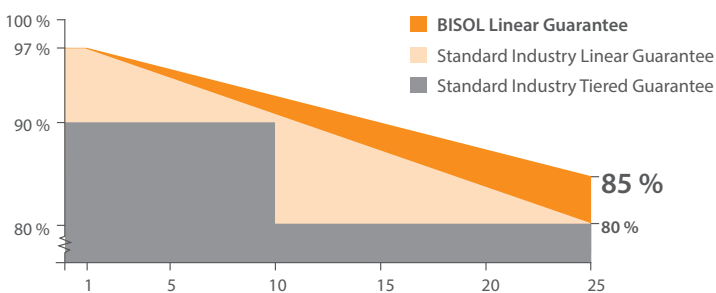


Strictly positive output power tolerances



Excellent low light performance

## Guarantees:



Linear Guarantee  
85 % power output in 25<sup>th</sup> year



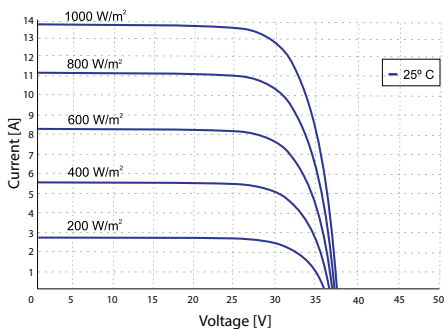
Product Guarantee  
Standard: 15 years  
Extra: 20 years

## In compliance with:

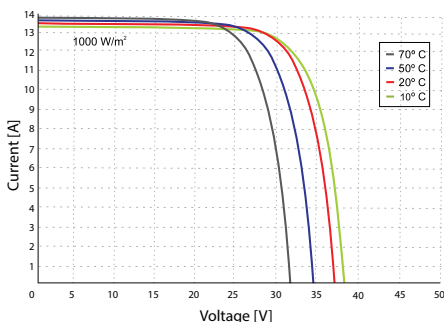


Certificates available upon special request. Additional charges may apply.

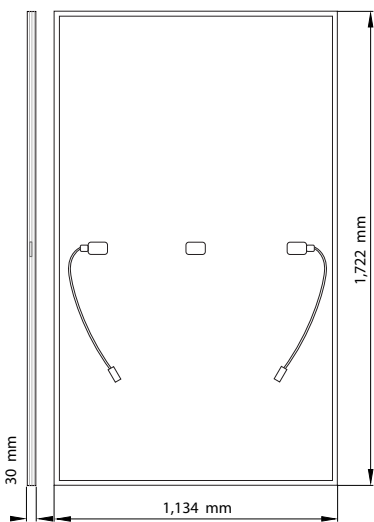
### I-V Curve at Various Irradiation Levels



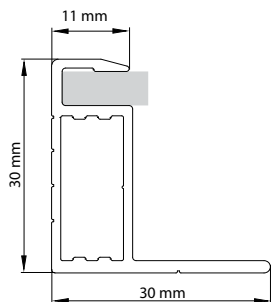
### I-V Curve at Various Cell Temperatures



### Dimensions



### Frame Cross Section



### Electrical Specifications @SCT (AM 1.5, 1,000 W/m<sup>2</sup>, 25 °C):

Module Type	BDO	400	410	420
Nominal Power	$P_{MPP}$ [W]	400	410	420
Short Circuit Current	$I_{SC}$ [A]	13.0	13.3	13.7
Open Circuit Voltage	$V_{OC}$ [V]	39.5	39.6	39.7
MPP Current	$I_{MPP}$ [A]	12.3	12.5	12.8
MPP Voltage	$V_{MPP}$ [V]	32.6	32.8	32.9
Module Efficiency	$\eta_M$ [%]	20.5	21.0	21.5
Power Output Tolerance			0/+5 W	
Maximum System Voltage			1,500 V	
Maximum Reverse Current			25 A	
Protection Class			Class II	

Additional power classes available upon request. Efficiency at irradiation 200 W/m<sup>2</sup>: 99.3 % of STC efficiency or higher. Tolerances for  $V_{OC}$  and  $I_{SC}$  and other electrical parameters are  $\pm 3\%$ .

### Electrical Specifications @ NOCT (AM 1.5, 800 W/m<sup>2</sup>, 43 °C, Wind 1 m/s):

Module Type	BDO	400	410	420
Nominal Power	$P_{MPP}$ [W]	303	310	318
Short Circuit Current	$I_{SC}$ [A]	10.49	10.74	11.06
Open Circuit Voltage	$V_{OC}$ [V]	37.7	37.7	37.8
MPP Current	$I_{MPP}$ [A]	9.93	10.09	10.33
MPP Voltage	$V_{MPP}$ [V]	30.6	30.8	30.8

### Thermal Specifications:

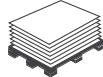
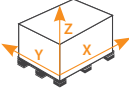



Current Temperature Coefficient	$\alpha$	+ 0.05 %/°C
Voltage Temperature Coefficient	$\beta$	- 0.26 %/°C
Power Temperature Coefficient	$\gamma$	- 0.34 %/°C
NOCT		43 $\pm$ 2 °C
Temperature Range		- 40 °C to + 85 °C

### Mechanical Specifications:

Length x Width x Thickness	1,722 x 1,134 x 30 mm
Weight	22 kg
Solar Cells	108 Half-Cut mono PERC c-Si / 182 x 91 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	Anodized Al with drainage holes / rigid anchored corners
Glass	3.2 mm AR coating tempered glass / high-transparency / low-iron content
Certified Test Load (Snow/Wind)	5,400 Pa / 2,400 Pa
Impact Resistance	Hailstone / $\Phi$ 25 mm / 83 km/h (51 mph)

Tolerances of values are  $\pm 5\%$ . 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
35	175 x 116 x 128 cm	3 pallets	794 kg	30

Additional terms & conditions apply. Please see *Standard Limited Guarantee* and *General Sales Terms & Conditions*.

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