BISOL Duplex Series

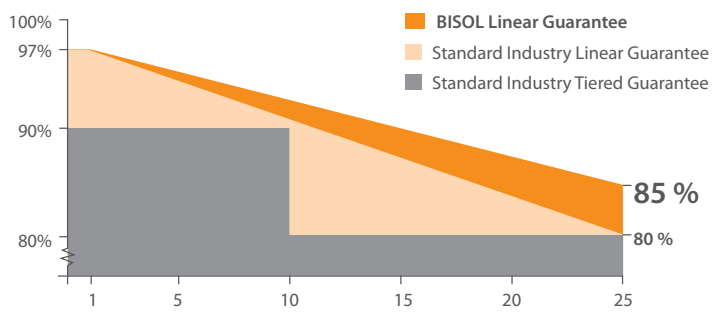
Monocrystalline Half-Cut PV Modules (144 cells) / BBO 435-455 Wp

BISOL
Solar company!

100% EU DESIGNED AND MANUFACTURED

- Designed & manufactured in EU
- Higher power
- Lower losses
- All relevant certificates
- Limited shading
- Module presorting for higher profitability
- Module efficiency up to 20.5 %
- Strictly positive output power tolerances
- Excellent low light performance

Guarantees:



25 Linear guarantee
85 % power output in 25th year

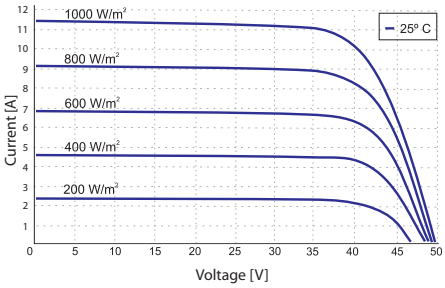
15 Product guarantee
15 years

In compliance with:

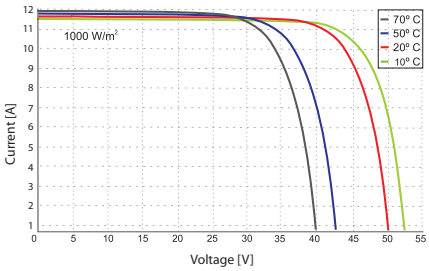
HW3 · CRE3 · European Recycling Platform · CE · IEC 61730 Ed.1 61215 Ed.2 · IEC 62804-1 · IEC 61701 Salt water mist resistance · IEC 62716 Ammonia resistance · ANSI UL 1703 · AS5033 compliant · ISO 9001 ISO 14001 OHSAS 18001 BUREAU VERITAS Certification · ISTITUTO GIORDANO Qualità al Plurale Fire resistant - Class 1 (UNI 9177) · MCS

Certificates available upon special request. Additional charges may apply.

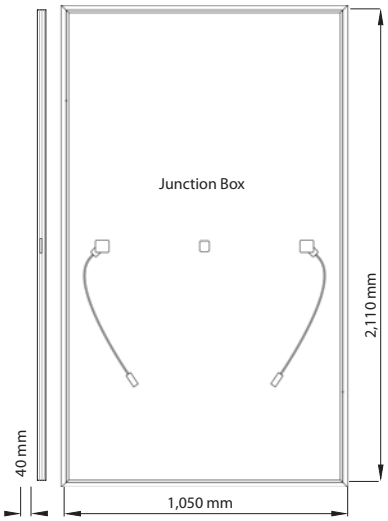
I-V Curve at Various Irradiation Levels



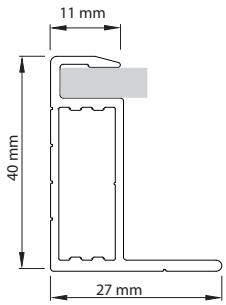
I-V Curve at Various Cell Temperatures



Dimensions



Frame cross section



Electrical Specifications @ STC (AM1.5, 1,000 W/m², 25 °C):

Module Type	BBO	435	440	445	450	455
Nominal Power	P_{MPP} [W]	435	440	445	450	455
Short Circuit Current	I_{SC} [A]	11.25	11.30	11.35	11.40	11.45
Open Circuit Voltage	V_{OC} [V]	49.4	49.7	50.0	50.2	50.4
MPP Current	I_{MPP} [A]	10.55	10.60	10.70	10.75	10.85
MPP Voltage	V_{MPP} [V]	41.2	41.5	41.6	41.9	41.9
Module Efficiency	η_M [%]	19.6	19.9	20.1	20.3	20.5
Power Output Tolerance		0/+5 W				
Maximum Reverse Current		20 A				
Maximum System Voltage		1,500 V (Application Class A)				

Additional power classes available upon request. | Power measurement tolerance: ±3 %.

Thermal Specifications:

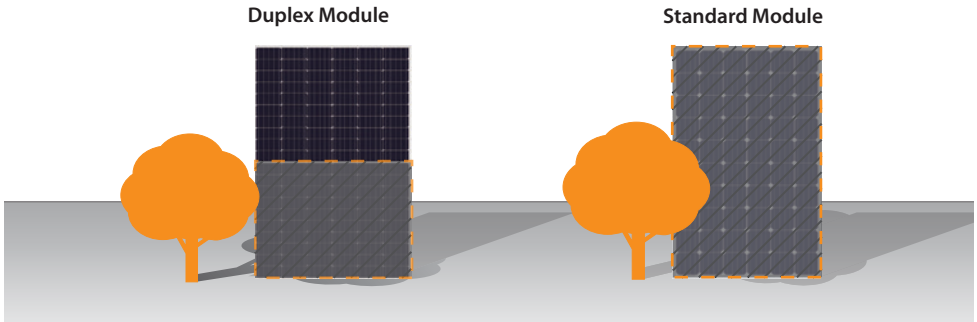
Current Temperature Coefficient	α	+ 0.06 %/K
Voltage Temperature Coefficient	β	- 0.27 %/K
Power Temperature Coefficient	γ	- 0.35 %/K
NOCT		44 ± 2 °C
Temperature range		- 40 °C to + 85 °C

Mechanical Specifications:

Length x Width x Thickness	2,110 x 1,050 x 40 mm
Weight	24 kg
Solar Cells	144 Half-Cut mono c-Si
Junction Box / Connectors	Three bypass diodes / MC4 compatible / IP 68
Cable Lenght	Default: 1200 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
Packaging	27 modules per pallet / stackable 3 pallets high
Certified Nominal Load (snow)	5,400 Pa
Impact resistance	Hailstone / Φ 25 mm / 83 km/h (51 mph)

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

Higher Yield Due to Better Shading Response:



BISOL
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Dealer information

www.bisol.com

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