

Datasheet



PREMIUM BIFACIAL HETEROJUNCTION (HST) SOLAR MODULE 120 HALF-CUT CELLS PRODUCT FAMILY (370-390 W)

ABOUT ECOSOLIFER

Vertically integrated Swiss Company involved in Photovoltaic (PV) power generation, founded in 2007. Have the know-how of the entire PV technology value chain with the ultimate goal of producing electricity via the lowest achievable cost structure (LCOE) and carbon foot print, based on heterojunction technology. R&D, planning and elaboration of application activities are covered entirely by EcoSolifer scientists and engineers. As PV developer of high performance solar technology EcoSolifer owns patents which underlines the future oriented company strategy. EcoSolifer's vision is an overall low carbon energy sector where PV is highly and efficiently utilized due to company's contribution. Our motto is: 'something new under the sun' that we create throughout our day by day activity.

KEY FEATURES

Exceptional performance:

Up to 30% more energy yield, most advanced cell technology results in highest efficiency
High power density, low degradation
Lowest temperature coefficient $-0,25\%/^{\circ}\text{C}$ - more electricity generation on hot climate
Designed to be PID, LID, LeTID free

Exceptional quality:

Production of HST cells and modules according to EU standards and requirements
Lead free cell technology

Exceptional durability:

Guaranteed high durability even in harsh environment conditions

Exceptional lifetime power yield:

Superior warranty: 30 years performance
0,20% linear power degradation/year

Exceptional appearance:

Elegant state of the art design

WARRANTY

Initial performance warranty 99.2%

Product warranty 25 years

Linear performance warranty 30 years



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120 HALF-CUT CELLS PRODUCT FAMILY (370-390 W)

General Data

Dimension	1,722 x 1,041 x 35 (mm)
Weight	24,4 (kg)
Front glass	Solar glass, 2.1 mm, with anti-reflective surface
Back glass	Solar glass 2.1 mm
Frame	Anodized aluminium (black)
Cell type	120 half-cut, mono n-Si, HST
Junction box	PV cable 4 mm ² , 1.2 , lenght, in accordance with EN 50618
Connectors	MC4-Evo2, in accordance with IEC 62852, IP68 rated only when connected

Electrical Data¹

Power tolerance - 0 W/+ 5 W (Wp)		STC	NMOT ³	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Power output - P _{max} (Wp) ²		370	284	375	286	380	291	385	295	390	296
Minimum Current at MPP	I _{mpp} (A)	9,9	8	9,9	8	10	8,1	10,1	8,2	10,2	8,2
Minimum Short Circuit Current	I _{sc} (A)	10,4	8,4	10,4	8,4	10,5	8,5	10,6	8,6	10,7	8,6
Minimum Voltage at MPP	V _{mpp} (V)	37,7	35,5	37,9	35,7	38,1	35,9	38,2	36	38,3	36,1
Minimum Open Circuit Voltage	V _{oc} (V)	44,5	41,9	44,6	42	44,7	42,1	44,7	42,1	44,7	42,1
Minimum Efficiency	η (%)	20,6		20,9		21,2		21,5		21,8	

Bifacial Specifications

Bifacial Factor (%) ⁹³											
Power with rear irradiation [W/m ²] ^{4,5}	Pmax [W]	Isc [A]	Pmax [W]	Isc [A]	Pmax [W]	Isc [A]	Pmax [W]	Isc [A]	Pmax [W]	Isc [A]	
Bifi50	386	10,9	391	10,9	396	11	401	11,1	406	11,2	
Bifi100	403	11,3	408	11,3	413	11,4	418	11,5	423	11,6	
BSTC ⁵	414	11,6	419	11,6	424	11,7	429	11,8	434	11,9	
Bifi200	436	12,2	441	12,2	446	12,3	451	12,4	456	12,5	
Bifi250	452	12,7	457	12,7	462	12,8	467	12,9	472	13	

Temperature Coefficients

Temperature Coefficient of I _{sc}	α	[%/°C]	+0.033
Temperature Coefficient of V _{oc}	β	[%/°C]	-0.234
Temperature Coefficient of P _{MPP}	γ	[%/°C]	-0.259
Nominal Module Operating Temperature	NMOT	[°C]	43±3

The temperature coefficients stated are linear values

Properties for system design

Maximum System Voltage	[V]	1,500
Maximum Series Fuse Rating	[A]	18
Max. Test Load +/-, (incl. Safety Factor of 1.5)	[Pa]	5,400/2,400
Operation Temperature	°C	-40 to +85

Warranty

Product Warranty [y]	25
Power Warranty [y]	30
Power after 1 year	≥99% of nominal power
Annual Degradation [%/y]	0,2
Power after 30 years	≥93.2% of nominal power

Warranty conditions apply

¹ Measurement according to IEC 60904-3, measurement tolerance: ±3%, monofacial measurement with rear side covered

² STC: Irradiance 1000 W/m², 25 °C, AM1.5 Spectrum

³ NMOT: Nominal Module Operating Temperature, with irradiance 800 W/m², AM1.5 Spectrum, 20 °C, wind speed 1 m/s

⁴ According to IEC TS 60904-1-2, with rear irradiances of 50, 100, 200 and 250 W/m²

⁵ According to TÜV 2 PfG 2645/11.17, with a rear irradiance of 135 W/m²

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