ASTORIOS

per aspera ad astra

PHOTOVOLTAIC MODULE

ASTR **120HC/M12** Series **585-605 Wp**

HALF CUT CELLS

605 W
MAXIMUM POWER OUTPUT

21.4 %
MAXIMUM MODULE EFFICIENCY

MORE YIELD

PV modules are positive tolerance current level sorted bringing to increase in energy yield and avoiding solar panel degradation due to mismatch.

HOT SPOTS RISK REDUCTION

Sophisticated electrical design, cells sorting, cutting and soldering technology leads to low hot spot risk and temperature control

HIGH QUALITY GLASS

Additional yield and easy maintenance are provided by high transparent and self-cleaning glass

MULTI BUSBAR TECHNOLOGY

Better light absorption and current collection for better power output

MINIMIZING THE SHADING IMPACT

Better partial-shade tolerance due to separated half panel string wiring

PID RESISTANT

Selected encapsulants, precision in manufacturing quality control makes modules highly PID resistant and snail trails free

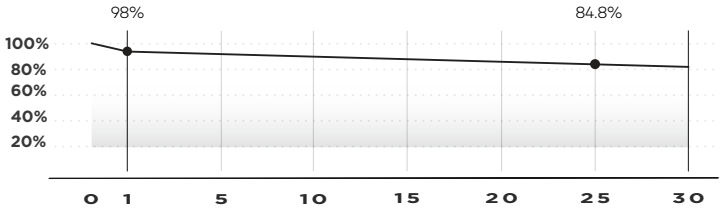
SAND, AMMONIA AND SALT MIST RESISTANCE

Sand blowing, ammonia and salt mist resistance tests have been passed by international standards to ensure operation in harsh conditions

SUPERIOR SAFETY AND RELIABILITY

Tested to avoid microcracks and welding cracks, can withstand high pressure loads, passed multi-step quality control

PERFORMANCE



30 YEARS
Performance Guarantee

15 YEARS
Product Warranty

info@astorios.com
www.astorios.com

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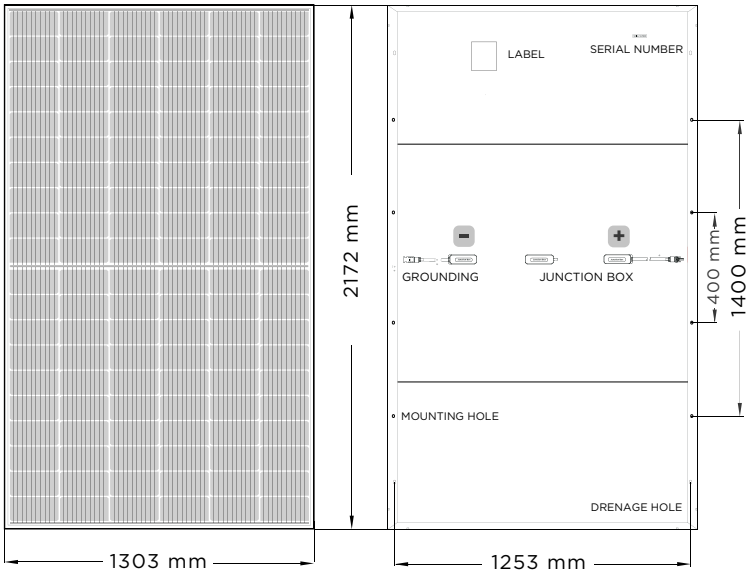
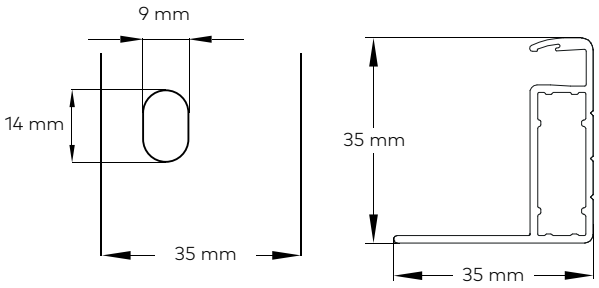




MOUNTING HOLE FRAME PROFILE

MATERIAL CHARACTERISTICS

Dimensions	2172 x 1303 x 35 mm
Weight	30.9 kg
Number of cells	120 pcs (6*20)
Cells Type	10BB (210 mm)
Glass	3.2 mm AR coated tempered glass, low iron
Frame	Silver anodized aluminum alloy
Junction box	IP68, 3 diodes
Connector type	Staubli MC4 / MC4-Evo 2 / MC4 Compatible
Cable	4 mm², 300 mm

PACKAGING INFORMATION

40 ft HC/HQ container	550 pcs

TEMPERATURE PARAMETERS

Temperature Coefficient of Pmax	-0.34 % / °C
Temperature Coefficient of Voc	-0.25 % / °C
Temperature Coefficient of Ic	+0.04 % / °C
Operating Temperature	-40°C to +85 °C
Normal Operating Cell Temperature (NOCT)	43±2°C

MAXIMUM RATINGS

Max. System Voltage	1500V DC -(H)
Max. Series Fuse Rating	30A
Uplift load (wind)	2400 Pa*
Downforce load (snow)	5400 Pa*

*For more information please refer to Instruction Manual

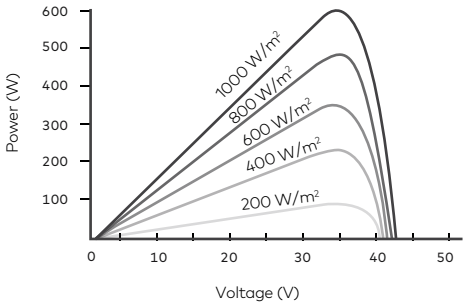
MODULE TYPE 120HC/M12	585 Wp		590 Wp		595 Wp		600 Wp		605 Wp	
ELECTRICAL CHARACTERISTICS	**STC**	NMOT	**STC**	NMOT	**STC**	NMOT	**STC**	NMOT	**STC**	NMOT
Maximum power (Pmax / Wp)	**585**	443	**590**	447	**595**	451	**600**	454	**605**	458
Open circuit voltage (Voc / V)	**40.9**	38.5	**41.1**	38.7	**41.3**	38.9	**41.5**	39.1	**41.7**	39.3
Short circuit current (Isc / A)	**18.37**	14.81	**18.42**	14.85	**18.47**	14.88	**18.52**	14.92	**18.57**	14.96
Maximum power voltage (Vmp / V)	**33.8**	31.5	**34.0**	31.7	**34.2**	31.9	**34.4**	32.0	**34.6**	32.2
Maximum power current (Imp / A)	**17.31**	14.05	**17.35**	14.09	**17.40**	14.13	**17.44**	14.18	**17.49**	14.22
Module efficiency at STC (ηm / %)	**20.7**		**20.9**		**21.0**		**21.2**		**21.4**	
Power tolerance (Pmax)	**(0,+5) Wp**									

STC: Irradiance of 1000 W/m² with spectrum AM 1.5 and a module temperature of 25°C
NMOT: Irradiance 800 W/m², ambient temperature 20°C and wind speed 1 m/s

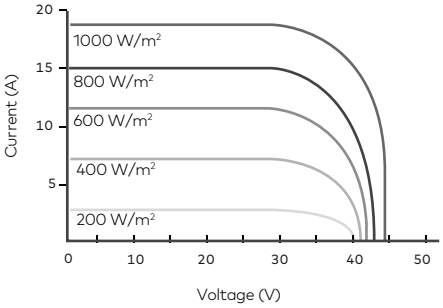
CERTIFICATES

IEC 62716 (Ammonia)
IEC 60068-2-68 (Sand)
IEC 61701 (Salt)
IEC 61215 / 61730

P-V Curve at Different Irradiation (595W)
Cell Temperature 25ºC



I-V Curve at Different Temperature (595W)
Cell Temperature 25ºC



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