

ASTORIOS

per aspera ad astra



HETEROJUNCTION BIFACIAL, DOUBLE GLASS PHOTOVOLTAIC MODULE

ASTR 110HCHD/12 Series **580-605 Wp**

605 Wp

MAXIMUM POWER OUTPUT

23.2%

MAXIMUM MODULE EFFICIENCY



NEGLECTIBLE LID IMPACT

HJT is subject to minimal LID due to the absence of boron-oxygen complexes and superior surface passivation, enhancing stability and efficiency under sunlight exposure



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

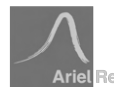
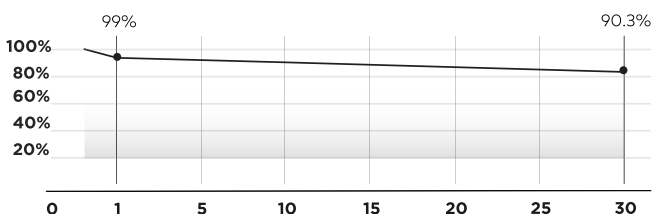
Sand blowing, ammonia and salt mist resistance tests have been passed by international standards to ensure operation in harsh conditions



SUPERIOR SAFETY AND RELIABILITY

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

PERFORMANCE



REINSURANCE COVERAGE

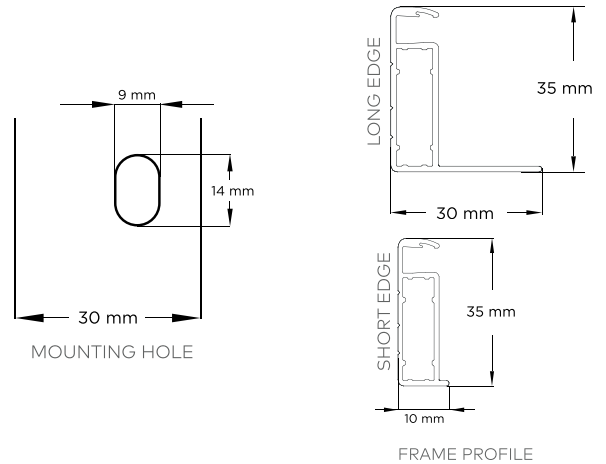
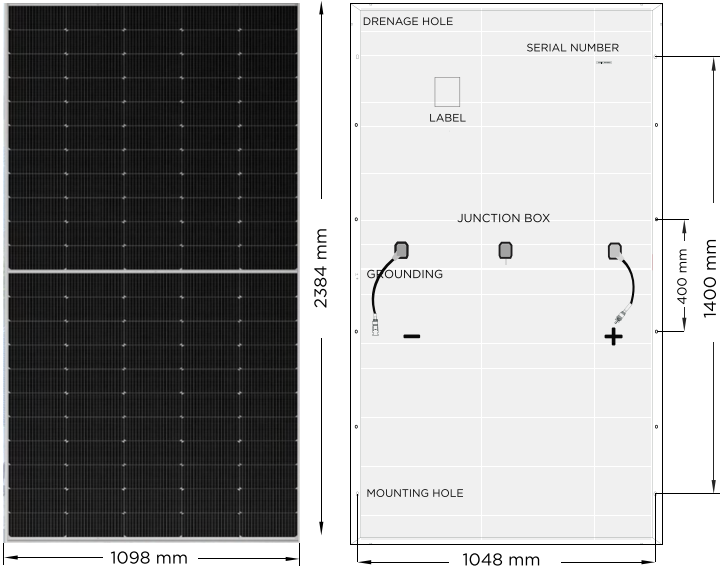
Reinsured for 30 years of performance guarantee by Ariel Re (Syndicate 1910 at Lloyd's)

30 YEARS

Performance Guarantee

20 YEARS

Product Warranty



MATERIAL CHARACTERISTICS

Dimensions	2384 x 1098 x 35 mm
Weight	32.1kg
Number of cells	110 pcs (5x22)
Glass front/rear	2mm, High transparency, AR coated
Cell layout	HJT Mono 18BB/20BB
Frame	Silver color, anodized aluminum alloy
Junction box	IP68 Rated, 3 bypass diodes
Connector type	Staubli MC4-Evo 2 / MC4 (Original)
Cable	4 mm ² , 300 mm

TEMPERATURE PARAMETERS

Temperature Coefficient of Pmax	-0.243 % / °C
Temperature Coefficient of Voc	-0.223 % / °C
Temperature Coefficient of Isc	+0.026 % / °C
Operating Temperature	- 40°C to + 85°C
Normal Operating Cell Temperature (NOCT)	43±2°C

PACKAGING INFORMATION

One pallet quantity	31 pcs
40 ft HC/HQ container	620 pcs

MAXIMUM RATINGS

Max. System Voltage	1500V DC - (H)
Max. Series Fuse Rating	35A
Uplift load (wind)	2400 Pa*
Downforce (snow)	5400 Pa*

*For more information please refer to Instruction Manual

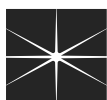
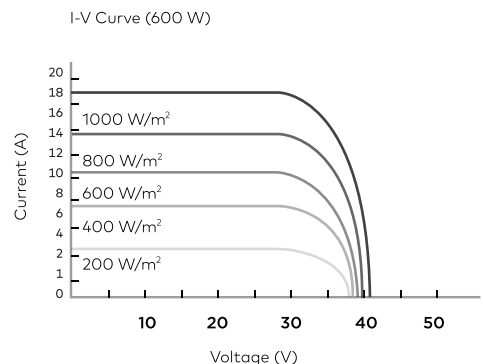
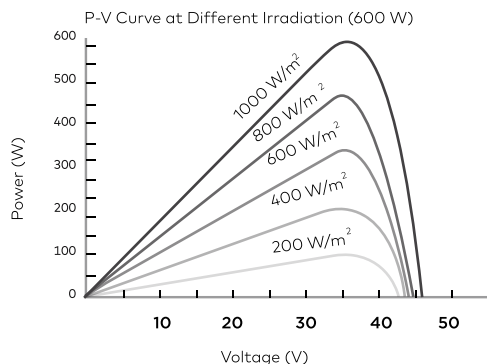
MODULE TYPE 110HCHD/12	580 Wp		585 Wp		590 Wp		595 Wp		600 Wp		605 Wp	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
ELECTRICAL CHARACTERISTICS												
Maximum power (Pmax/Wp)	580	444	585	448	590	452	595	456	600	460	605	464
Open circuit voltage (Voc / V)	41.54	39.00	41.75	39.20	41.94	39.40	41.13	39.60	42.32	39.80	42.51	40.00
Short circuit current (Isc / A)	17.43	14.39	17.49	14.45	17.55	14.50	17.61	14.57	17.67	14.62	17.73	14.66
Maximum power voltage (Vmp / V)	34.88	32.90	35.05	33.10	35.12	33.30	35.19	33.50	35.26	33.70	35.33	33.90
Maximum power current (Imp / A)	16.63	13.50	16.69	13.54	16.76	13.58	16.83	13.62	16.90	13.66	16.97	13.70
Module efficiency at STC (ηm / %)	22.20		22.40		22.60		22.80		23.00		23.20	
Power tolerance (Pmax)	0-+3%											

NMOT: Irradiance 800 W/m², ambient temperature 20°C and wind speed 1 m/s

STC: Irradiance of 1000 W/m² with spectrum AM 1.5 and a module temperature of 25°C

CERTIFICATES

IEC62716 (Ammonia)
IEC60068-2-68 (Sand)
IEC61215 / 61730 / 61701



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