

ASTORIOS

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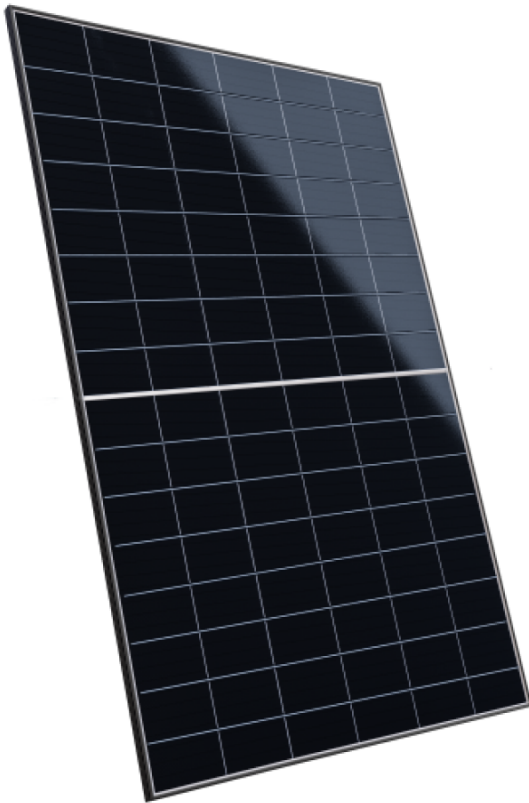
PHOTOVOLTAIC MODULE

BACK-CONTACT
N-ABC MONO BIFACIAL CELLS
SILVER FRAME, DOUBLE GLASS

ASTR **96HCNBD/10** Series **475-485 Wp**

485 Wp
MAXIMUM POWER OUTPUT

24.27%
MAXIMUM MODULE EFFICIENCY



BACK-CONTACT

Utilizes back contact technology to enhance light absorption, minimize internal current loss and deliver higher power output



HOT SPOTS RISK REDUCTION

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



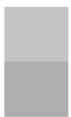
HIGH EFFICIENCY

N-type cells technology provides the highest efficiency modern multi busbar configuration at affordable cost



NEGLIGIBLE LID IMPACT

TOPCon cells exhibit an almost zero susceptibility to Light Induced Degradation, ensuring sustained high efficiency over time despite exposure to sunlight



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

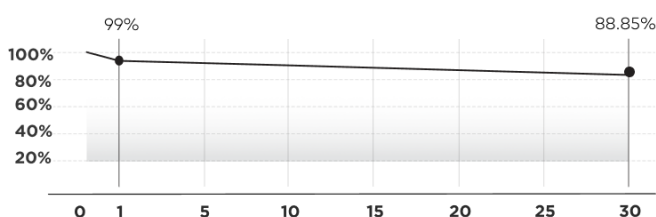
Sand blowing, ammonia and salt mist resistance tests have been passed by international standards to ensure operation in harsh conditions



SUPERIOR SAFETY AND RELIABILITY

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

PERFORMANCE

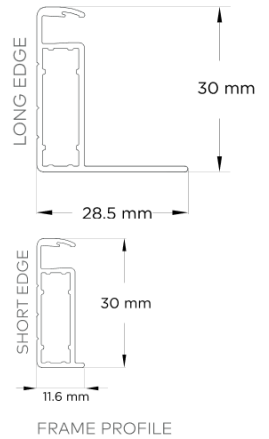
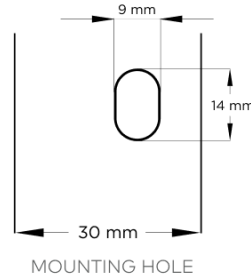
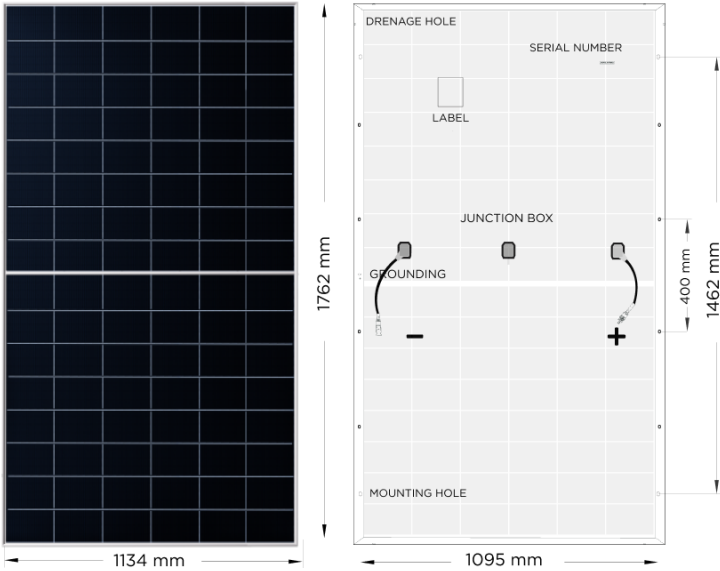


30 YEARS

Performance Guarantee

20 YEARS

Product Warranty



MATERIAL CHARACTERISTICS

Dimensions	1762 x 1134 x 30 mm
Weight	24.6kg
Number of cells	96 pcs (105x182)
Glass	2mm, High transparency, AR coated
Cell layout	Bifacial, N-ABC Mono
Frame	Silver frame, 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	-0.26 % / °C
Temperature Coefficient of Voc	-0.22 % / °C
Temperature Coefficient of Isc	+0.05 % / °C
Operating Temperature	- 40°C to + 85°C
Normal Operating Cell Temperature (NOCT)	44±2°C

MAXIMUM RATINGS

Max. System Voltage	1500V DC - (H)
Max. Series Fuse Rating	30A
Uplift load (wind)	2400 Pa*
Downforce (snow)	5400 Pa*
Hail Resistance	25mm ice-ball with velocity of 23m/s

*For more information please refer to Instruction Manual

PACKAGING INFORMATION

One pallet quantity	36 Pcs / 909kg / 1790x1130x1247mm
40 ft HC/HQ container	936 Pcs / 36 Pallets

MODULE TYPE 96HCNBD/10	475 Wp		480 Wp		485 Wp	
	STC	NMOT	STC	NMOT	STC	NMOT
Maximum power (Pmax/Wp)	475	365	480	369	485	373
Open circuit voltage (Voc / V)	40.75	38.67	40.85	38.75	40.97	38.92
Short circuit current (Isc / A)	14.74	11.89	14.80	11.94	14.85	11.98
Maximum power voltage (Vmp / V)	34.15	32.23	34.24	32.33	34.38	32.47
Maximum power current (Imp / A)	13.91	11.33	14.02	11.42	14.11	11.49
Module efficiency at STC (ηm / %)	23.77		24.02		24.27	
Power tolerance (Pmax)	0-+3%					

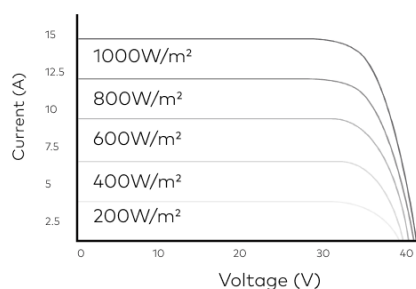
NMOT: Irradiance 800 W/m², ambient temperature 20°C, wind speed 1 m/s / **STC:** Irradiance of 1000 W/m², spectrum AM 1.5, a module temperature of 25°C

CERTIFICATES

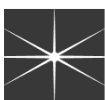
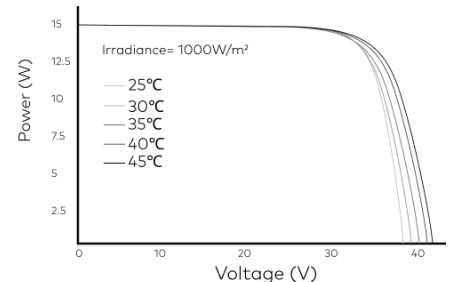
IEC62716 (Ammonia)
IEC60068-2-68 (Sand)
IEC61215 / 61730 / 61701



I-V Curve at Different Temperature (480 W)



P-V Curve



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