

# ASTORIOS

per aspera ad astra



## HIGH EFFICIENCY PHOTOVOLTAIC MODULE BIFACIAL, DOUBLE GLASS

ASTR 108HCND/10 Series 430-440 Wp

TOPCON N-TYPE HALF CUT CELLS

**440 Wp**

MAXIMUM POWER OUTPUT

**22.5%**

MAXIMUM MODULE EFFICIENCY



### NEGLIGIBLE LID IMPACT

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



### 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



### 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

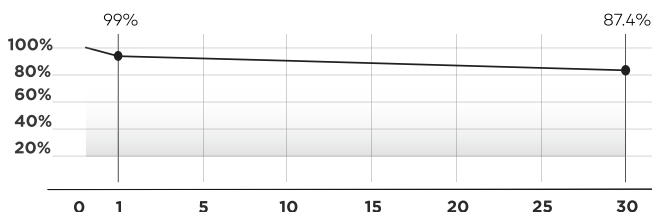
Sand blowing, ammonia and salt mist resistance tests have been passed by international standards to ensure operation in harsh conditions



### SUPERIOR SAFETY AND RELIABILITY

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

## PERFORMANCE

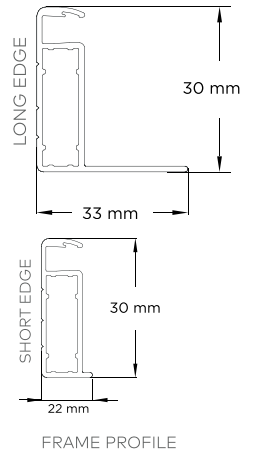
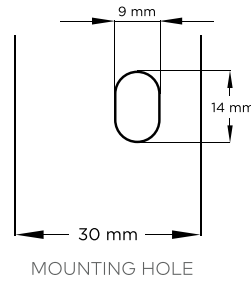
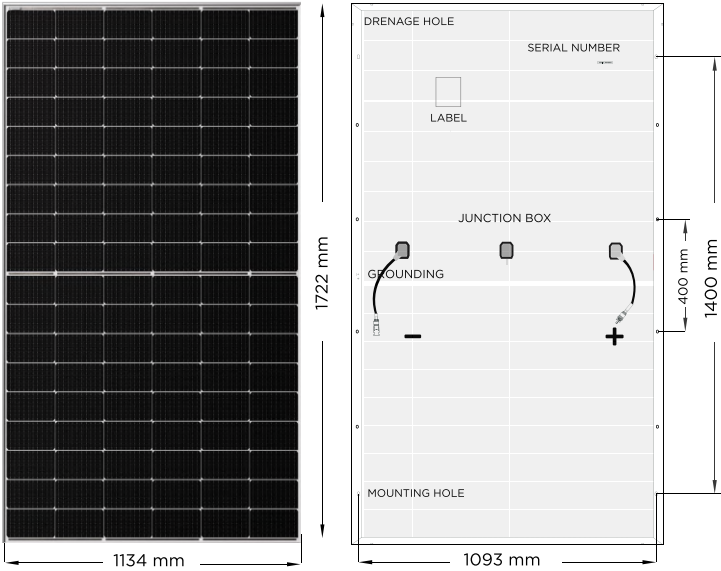


**30 YEARS**

Performance Guarantee

**20 YEARS**

Product Warranty



## MATERIAL CHARACTERISTICS

Dimensions	1722 x 1134 x 30 mm
Weight	25.8kg
Number of cells	108 pcs (6x18)
Glass front/rear	2mm, High transparency, AR coated
Cell layout	Mono-crystalline, Bifacial 16BB (182 mm)
Frame	Silver color (Black optional), anodized aluminum alloy
Junction box	IP68 Rated, 3 bypass diodes
Connector type	Staubli MC4-Evo 2 / MC4 (Original)
Cable	4 mm <sup>2</sup> , 300 mm

## TEMPERATURE PARAMETERS

Temperature Coefficient of Pmax	-0.30 % / °C
Temperature Coefficient of Voc	-0.25 % / °C
Temperature Coefficient of Isc	+0.046 % / °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	25A
Uplift load (wind)	2400 Pa*
Downforce (snow)	5400 Pa*

## PACKAGING INFORMATION

One pallet quantity	36 pcs
40 ft HC/HQ container	828 pcs

\*For more information please refer to Instruction Manual

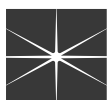
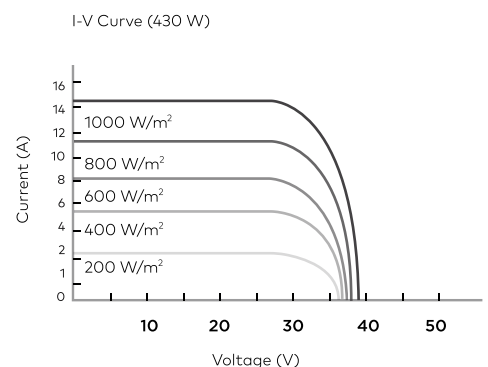
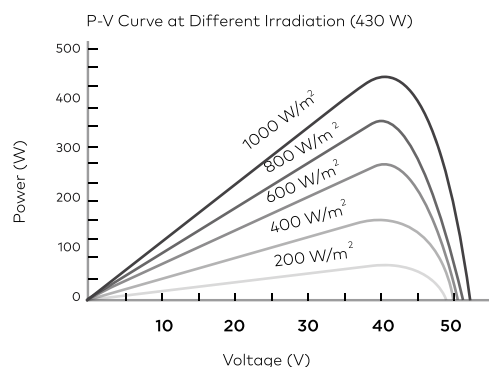
MODULE TYPE 108HCND/10	430 Wp		435 Wp		440 Wp	
	STC	NMOT	STC	NMOT	STC	NMOT
<b>ELECTRICAL CHARACTERISTICS</b>						
Maximum power (Pmax/Wp)	430	324	435	328	440	332
Open circuit voltage (Voc / V)	38.49	36.56	38.68	36.74	38.87	36.92
Short circuit current (Isc / A)	14.23	11.49	14.31	11.56	14.39	11.63
Maximum power voltage (Vmp / V)	31.88	29.66	32.06	29.81	32.24	29.96
Maximum power current (Imp / A)	13.49	10.93	13.57	11.01	13.65	11.09
Module efficiency at STC (ηm / %)	22.00		22.30		22.50	
Power tolerance (Pmax)			0-+3%			

NMOT: Irradiance 800 W/m<sup>2</sup>, ambient temperature 20°C and wind speed 1 m/s

STC: Irradiance of 1000 W/m<sup>2</sup> 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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