

ASTORIOS

per aspera ad astra

BLACK FRAME PHOTOVOLTAIC MODULE

ASTR MB7-44SCS Series 400-430 Wp

SHINGLED PERC CELLS

430 Wp
MAXIMUM POWER OUTPUT

21.7 %
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



SHINGLING TECHNOLOGY

Adhesive bonded, innovative high-density shingled cells layout technology



MINIMIZING THE SHADING IMPACT

Better partial-shade tolerance and high effective power generation hours due to full parallel arrangement



PID RESISTANT

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



SAND, AMMONIA AND SALT MIST RESISTANCE

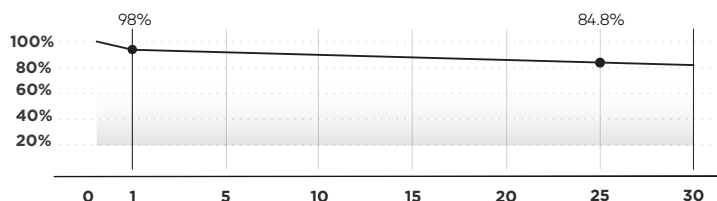
Sand blowing, ammonia and salt mist resistance tests have been passed by international standards to ensure operation in harsh conditions



SUPERIOR APPEARANCE

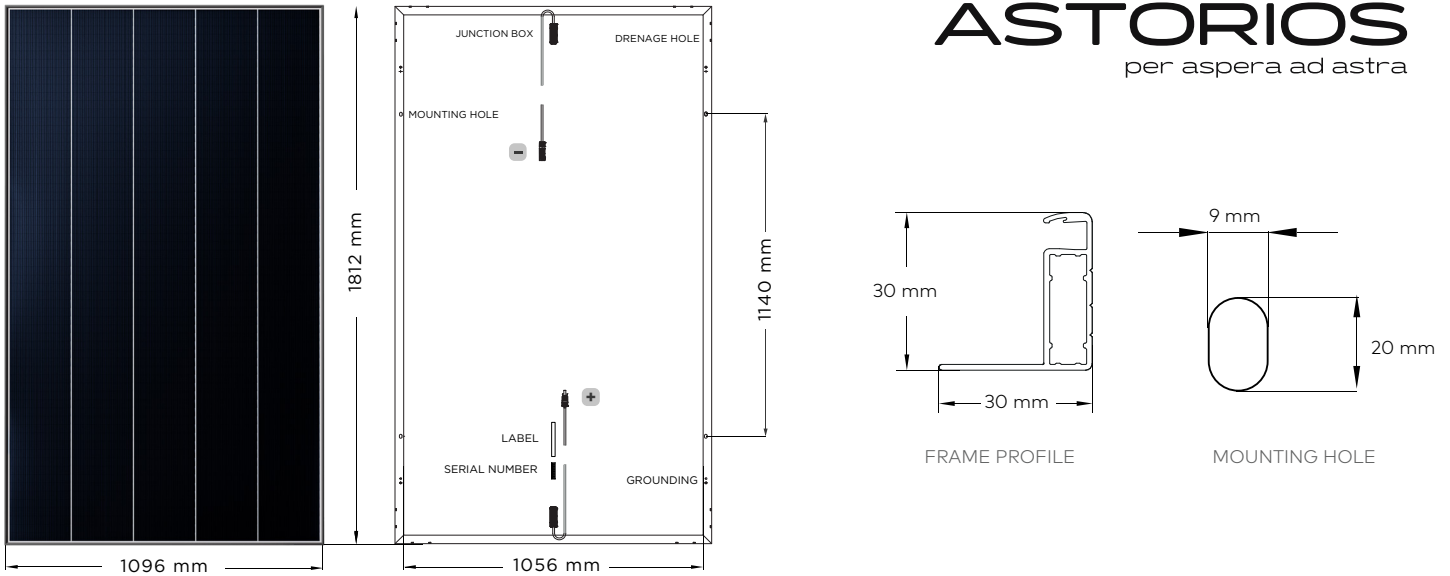
Uniform and solid layout, high tech look

PERFORMANCE



30 YEARS
Performance Guarantee

25 YEARS
Product Warranty



MATERIAL CHARACTERISTICS

Dimensions	1812x1096x30 mm (1.986 m ²)
Weight	20.8 kg
Glass	3.2 mm AR coated tempered glass, low iron
Cells	Mono-crystalline, PERC Shingled
Cell layout	305 pcs (61x5)
Frame	Black color, Anodized aluminum alloy
Junction box	IP 68 rated, 2 bypass diodes
Output cable	4 mm ² , +300 mm/-1000 mm (Vertical), +220 mm/-180 mm (Horizontal)
Connector	Staubli MC4-Evo 2 / MC4 (Original)

PACKAGING INFORMATION

One pallet quantity	36 pcs
40 ft HC/HQ container	924 pcs

TEMPERATURE PARAMETERS

Temperature Coefficient of Pmax	-0.34 % /°C
Temperature Coefficient of Voc	-0.27 % /°C
Temperature Coefficient of Isc	+0.04 % /°C
Operating Temperature	-40°C to +85°C
Nominal Module Operating Temperature	42.3±2°C

MAXIMUM RATINGS

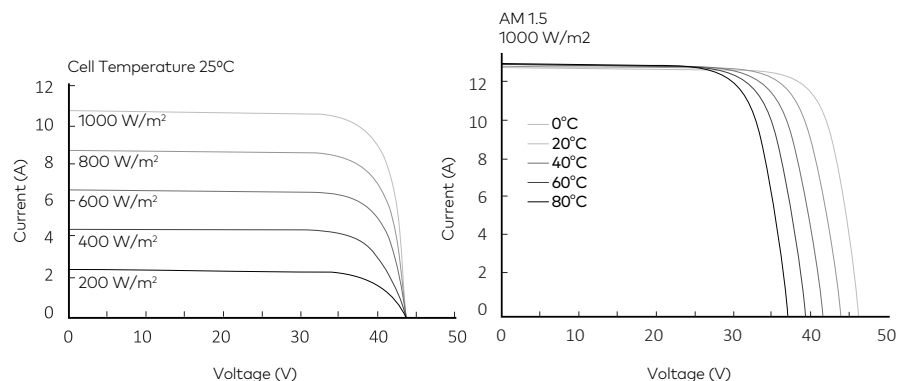
Max. System Voltage	1500V DC (IEC)
Max. Series Fuse Rating	25A
Uplift load (wind)	2400 Pa*
Downforce load (snow)	5400 Pa*
Hail Resistance	Max. diameter 25mm, impact speed 23m/s

*For more information please refer to Instruction Manual

MODULE TYPE	MB7-44SCS	400 Wp	405 Wp	410 Wp	415 Wp	420 Wp	425 Wp	430 Wp						
ELECTRICAL CHARACTERISTICS	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum power (Pmax / Wp)	400	301	405	305	410	309	415	312	420	316	425	320	430	324
Open circuit voltage (Voc / V)	41.2	39.3	41.3	39.4	41.4	39.5	41.5	39.6	41.6	39.7	41.7	39.8	41.8	39.8
Short circuit current (Isc / A)	12.41	10.00	12.53	10.09	12.65	10.19	12.80	10.31	12.92	10.41	13.03	10.50	13.05	10.51
Maximum power voltage (Vmp / V)	34.2	32.6	34.3	32.7	34.4	32.8	34.4	32.8	34.5	32.9	34.6	33.0	34.7	33.1
Maximum power current (Imp / A)	11.71	9.24	11.82	9.33	11.93	9.41	12.08	9.53	12.19	9.62	12.30	9.70	12.40	9.79
Module efficiency at STC (ηm / %)	20.1		20.4		20.6		20.9		21.1		21.4		21.7	
Power tolerance (Pmax)	(0,+5) Wp													

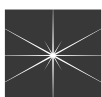
STC: Irradiance of 1000 W/m² with spectrum AM 1.5 and a module temperature of 25°C
 NMOT: Irradiance 800 W/m², ambient temperature 20°C and wind speed 1 m/s

I-V Curves



CERTIFICATES

IEC61215/61730, IEC62804(PID), IEC61701(Salt)/IEC62716 (Ammonia),
 IEC60068-2-68(Sand)
 ISO 9001:2015 / quality management system
 ISO 14001:2015/environmental management system
 ISO 45001:2018/ occupation health safety management system
 ISO 50001:2011/energy management system
 IEC TS 62941-2016/PV industry quality management system



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