ASTORIOS

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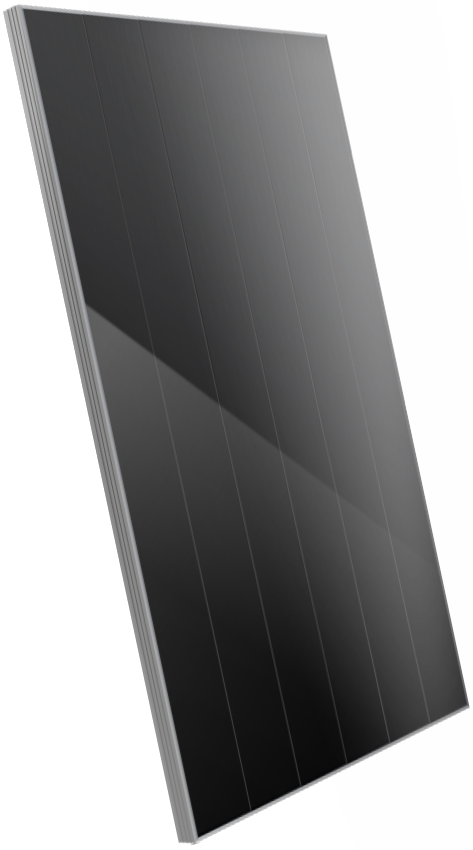


PHOTOVOLTAIC MODULE

ASTR **MB6-69SDC** Series **635-675Wp**

SHINGLED CELLS

675 W
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

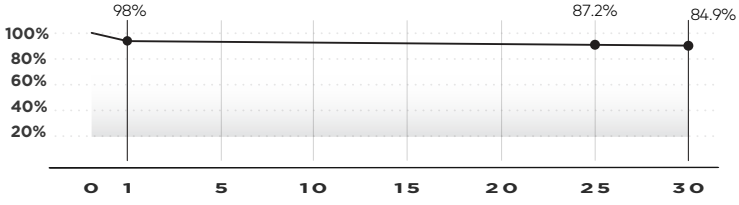
SAND, AMMONIA AND SALT MIST RESISTANCE

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

15 YEARS
Product Warranty

info@astorios.com
www.astorios.com

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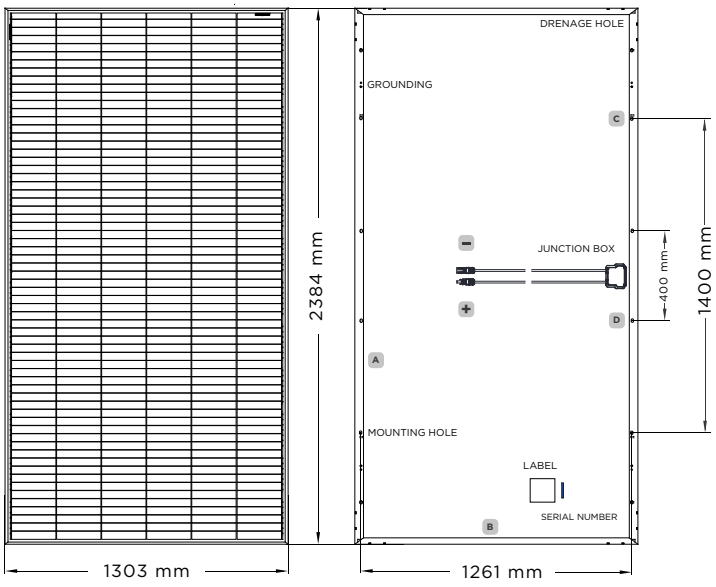
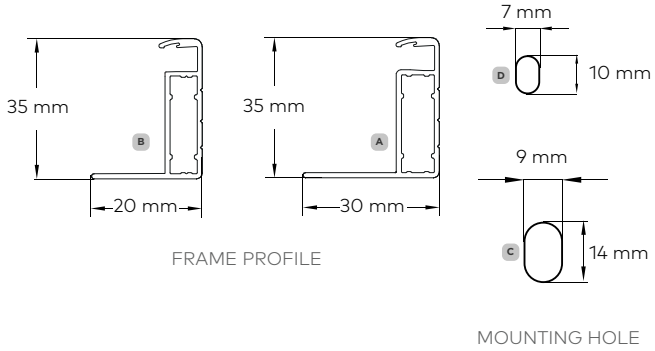




FRAME PROFILE

MOUNTING HOLE

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 (NMOT)	42.3±2 °C

MATERIAL CHARACTERISTICS

Dimensions	2384 × 1303 × 35 mm
Weight	39 kg
Glass	2 mm AR coated tempered glass/low iron
Cells	Mono-crystalline
Cell layout	414 (69*6)
Frame	Anodized aluminum alloy
Junction box	IP 68 rated, 3 bypass diods
Output cable	4 mm2,+500 /-1000 mm (Vertical), +250 /-150 mm (Horizontal)
Connector	Staubli MC4 / MC4-Evo 2 / MC4 Compatible

MODULE TYPE MB6-69SDC	635 Wp		640 Wp		645 Wp		650 Wp		655 Wp		660 Wp		665 Wp		670 Wp		675 Wp	
ELECTRICAL CHARACTERISTICS	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum power (Pmax / Wp)	**635**	478	**640**	482	**645**	486	**650**	489	**655**	493	**660**	497	**665**	501	**670**	504	**675**	508
Open circuit voltage (Voc / V)	**46.4**	44.2	**46.5**	44.2	**46.6**	44.3	**46.7**	44.4	**46.8**	44.5	**46.9**	44.7	**47.0**	44.8	**47.1**	44.9	**47.2**	45.0
Short circuit current (Isc / A)	**17.54**	14.13	**17.64**	14.21	**17.74**	14.29	**17.84**	14.37	**17.97**	14.47	**18.06**	14.55	**18.16**	14.63	**18.26**	14.71	**18.36**	14.79
Maximum power voltage (Vmp / V)	**38.5**	36.7	**38.6**	36.8	**38.7**	36.9	**38.8**	37.0	**38.8**	37.0	**38.9**	37.1	**39.0**	37.2	**39.1**	37.3	**39.2**	37.3
Maximum power current (Imp / A)	**16.49**	13.02	**16.58**	13.10	**16.68**	13.17	**16.77**	13.25	**16.89**	13.32	**16.98**	13.39	**17.07**	13.46	**17.16**	13.54	**17.26**	13.61
Module efficiency at STC (ηm / %)	**20.4**		**20.6**		**20.8**		**20.9**		**21.1**		**21.2**		**21.4**		**21.6**		**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

Comparison of Rear Power Gains (650Wp)

Power Gain-PG	5%	10%	15%	20%	25%	30%
Maximum Power (Pmax/Wp)	693	726	759	792	825	858
Open Circuit Voltage (Voc/V)	46.9	46.9	46.9	47	47	47
Short Circuit Current (Isc/A)	18.97	19.87	20.77	21.68	22.58	23.48
Maximum Power Voltage (Vmp/V)	38.9	38.9	38.9	39	39	39
Maximum Power Current (Imp/A)	17.83	18.68	19.53	20.38	21.23	22.07

MAXIMUM RATINGS

Max. System Voltage	11000/1500V DC (IEC)
Max. Series Fuse Rating	30A
Uplift load (wind)	2400 Pa*
Downforce load (snow)	5400 Pa*
Hail Resistance	Max. diameter 25 mm, impact speed 23 m/s

PACKAGING INFORMATION

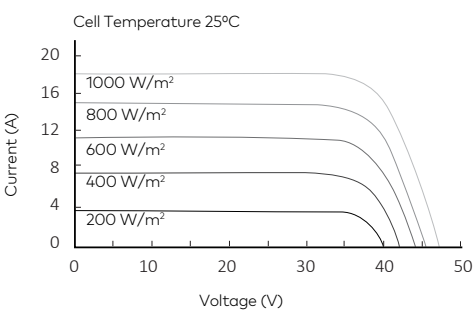
One pallet quantity	31 pcs
40 ft HC/HQ container	558 pcs
Truck	744 pcs

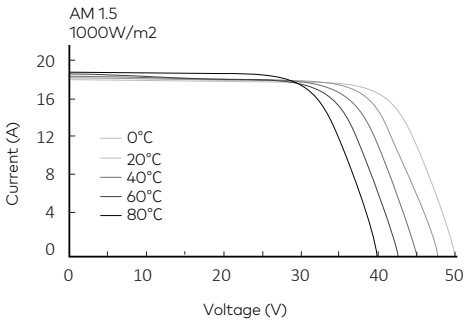
*For more information please refer to instruction manual

CERTIFICATES

IEC61215/61730, IEC62804 (PID), IEC61701 (Salt)
IEC62716 (Ammonia), IEC60068-2-68 (Sand)
IC TS 62941 -2016
PV industry quality management system

I-V Curves





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