

THE AS M "PREMIUM" SERIES FROM ANTARIS SOLAR



The monocrystalline high-performance modules in the AS M "Premium" series are suitable for roof-mounted and roof-integrated installation for all types of roofs. In a 2010 comparison test, the AS M series module was awarded the best result of 1.1 for achieving the highest energy yield per individual module*. The test, carried out by the TEC Institute under real conditions, compared modules from a series of reputable manufacturers. Impressively, the rated output tolerance to rated output of our Premium range is +3%.

On the AS M "PREMIUM" series, we grant a 30-year performance guarantee and a 12-year product guarantee.



Also available
IN BLACK



* Test results from the TEC Institute

ANTARIS SOLAR GmbH & Co. KG
Head office
63735 Aschaffenburg, Germany

Phone: +49 (0) 6095 950-441
Fax: +49 (0) 6095 950-544
Email: info@antaris-solar.com
Internet: www.antaris-solar.com

LIVING BY THE SUN!

AS M "PREMIUM" SERIES

ELECTRICAL PROPERTIES (STC*)

ANTARIS SOLAR AS M series	M 190	M 195	M 200
Rated output (P _{max}) [Wp]	190	195	200
Voltage with P _{max} (V _{mpp}) [V]	36.5	36.9	37.4
Current with P _{max} (I _{mpp}) [A]	5.2	5.3	5.4
Open circuit voltage (V _{oc}) [V]	45.2	45.4	45.9
Short circuit current (I _{sc}) [A]	5.5	5.6	5.7
Output tolerance to rated output	-0% / +3%		
Max. reverse current (I _r) [A]	10		
Max. system voltage [V]	IEC 1000		
Degree of module effectiveness [%]	14.9	15.3	15.7
Application category	(as per IEC 61730) A		
Fire category	(as per IEC 61730) C(UL)		
Protection rating	(as per IEC 61730) II		

STC* (Standard test conditions): Irradiation 1000 W/m², module temperature 25°C, air mass 1.5

ELECTRIC OUTPUT WITH NOCT

ANTARIS SOLAR AS M series	M 190	M 195	M 200
Rated output (P _{max}) [Wp]	140	143.6	146.9
Voltage with P _{max} (V _{mpp}) [V]	33.6	33.7	34.3
Current with P _{max} (I _{mpp}) [A]	4.17	4.25	4.28
Open circuit voltage (V _{oc}) [V]	41.5	41.7	42
Short circuit current (I _{sc}) [A]	4.46	4.55	4.57

NOCT: Irradiation 800 W/m², air 20°C, module temperature 45 +/- 2°C, air mass 1.5

TEMPERATURE PROPERTIES

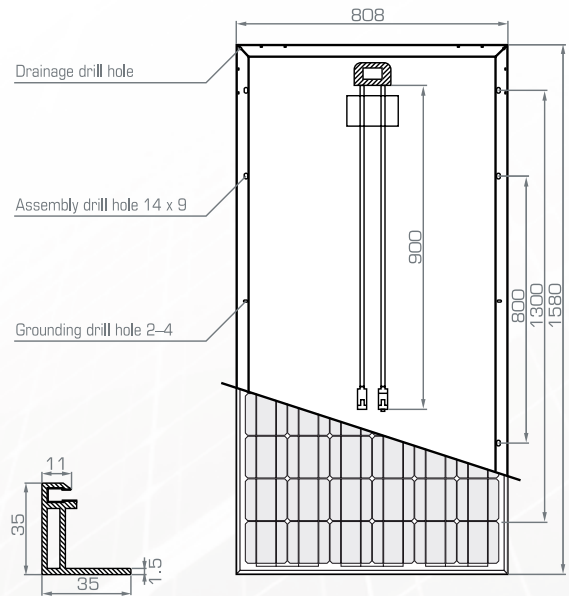
NOCT**	45 +/- 2°C
Temperature coefficient P _{max}	-0.42 %/K
Temperature coefficient V _{oc}	-0.30 %/K
Temperature coefficient I _{sc}	0.06 %/K
Operating temperature	from -40 to +85°C

NOCT**: Nominal cell operating temperature sun 800 W/m², air 20°C, wind speed 1m/s

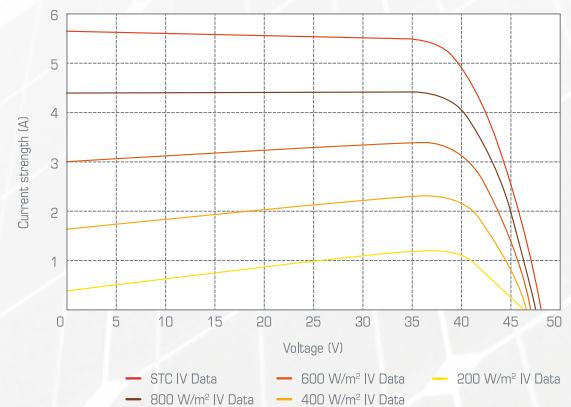
MECHANICAL PROPERTIES

Solar cells	72 (6x12) monocrystalline silicon solar cells, 125 x 125 mm
Front surface	3.2 mm thick, low-iron solar glass
Rear side cover	Film compound (EVA/TPT)
Frame	Anodised aluminium
Diodes	3 bypass diodes
Junction box	Protection degree IP65
Plug-in connector	MC4 compatible
Cables	Length: 900 mm / profile: 4 mm ²
Dimensions	1580 x 808 x 35 mm 62.2 x 31.8 x 1.38 inches
Weight	15.6 kg / 33.1 lbs
Snow load	2400 Pa (as per test at PI-Institut-Berlin: >5400 Pa)
Wind load	60 m/s (200 kg/m ²)
Hail test	227 g steel balls from 1 m height
Product guarantee	12 years
Performance guarantee	10 years at 90 %, 30 years at 80 % of the min. rated output

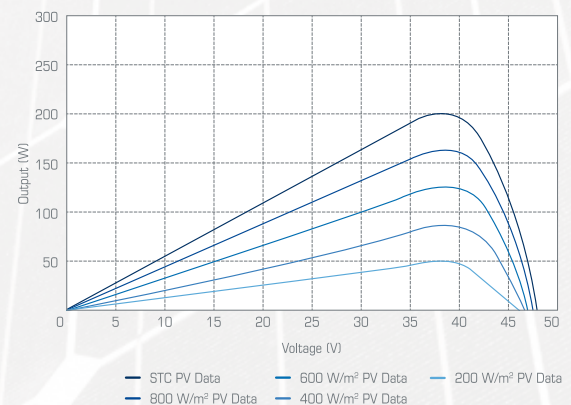
SCHEMA AS M SERIES



CURRENT-VOLTAGE CHARACTERISTIC CURVE



OUTPUT-VOLTAGE CHARACTERISTIC CURVE



The typical change in the degree of module effectiveness with an irradiation of 200 W/m² instead of 1000 W/m² (both at 25°C and spectrum AM 1.5) < 3%