



Photovoltaic module

AP-Series

EN

German quality standards

All WIOSUN photovoltaic modules are subject to our strict quality standards. To ensure this, we continually monitor all manufacturers and suppliers worldwide that deliver products to WIOSUN.

Positive-only tolerance

You can count on our quality, because WIOSUN delivers only modules with positive tolerance up to 3%.

Suitable for all snow load zones

Due to the reinforced 50 mm (1.9") cavity frame as well as 3.2 mm (0.13") thick glass, our modules are extremely stable in all weather conditions.

10 year warranty on our products

With the 10-year product warranty on the A, B, C, E and SB series, as well as a 25-year performance guarantee, WIOSUN photovoltaic modules are among the most reliably calculable components for efficient PV systems.

Shaping the future together

Already now, WIOSUN is thinking about the future of the next generation. As a full member of the PV-Cycle association, we guarantee the full-scale end-of-life recycling of each WIOSUN photovoltaic module installed.



AP-SERIES

Technical Data

General							
Cells	48, polycrystalline cells, 6 x 8		Cellsize	125 x 125 mm			
Frame	Anodized aluminium		Front glass	3.2 mm (0.13") Solarglass			
Connection	Junction box with 3 bypass-diodes		Wire	4 mm ² Solar cable, 1300 mm / 51.18" length			
Connector	MC4		Power tolerance	Positive-only tolerance 0 to +3 %			
Electrical Data (STC*)							
Module type			A170P	A175P	A180P	A185P	A190P
Nominal power	P _{MPP}	Wp	170	175	180	185	190
Max. power voltage	U _{MPP}	V	23.30	23.60	23.80	24.00	24.20
Max. power current	I _{MPP}	A	7.30	7.42	7.56	7.71	7.85
Open-circuit voltage	U _{OC}	V	27.98	28.32	28.56	28.80	29.04
Short-circuit current	I _{SC}	A	8.05	8.21	8.32	8.49	8.65
Cell efficiency %			14.55	15.00	15.41	15.83	16.26
Module efficiency η %			12.97	13.35	13.73	14.11	14.50
Electrical Data (NOCT**)							
Nominal power	P _{MPP}	Wp	147.56	151.90	155.70	159.29	163.59
Max. power voltage	U _{MPP}	V	23.10	23.40	23.59	23.79	23.99
Max. power current	I _{MPP}	A	6.39	6.49	6.60	6.70	6.82
Open-circuit voltage	U _{OC}	V	27.59	27.92	28.13	28.28	28.52
Short-circuit current	I _{SC}	A	6.64	6.77	6.86	6.99	7.12
At a low irradiation intensity of 200 W/m² (AM 1.5, cell temperature 25 °C) 96 % of the STC module efficiency will be archived.							
*STC = Standard test conditions (1000 W/m ² , AM 1.5, cell temperature 25 °C)							
**NOCT = Normal operating cell temperature (800 W/m ² , AM 1.5, windspeed 1m/s, ambient temperature 20 °C)							
Temperature coefficients			Technical drawing				
Temperature coefficients I _{SC}	+0.04 % / °C						
Temperature coefficients U _{OC}	-0.35 % / °C						
Temperature coefficients P _{MPP}	-0.5 % / °C						
Temperature coefficients I _{MPP}	+0.04 % / °C						
Temperature coefficients U _{MPP}	-0.38 % / °C						
NOCT	48 °C ± 2 °C						
Mechanic Data							
Dimensions (± 1mm/0.03 inch)	1316(51.8") x 996(39.21") x 50(1.97") mm						
Weight	15 kg / 33.07 lbs						
Limits							
Maximum system voltage	1000 V						
Maximum reverse current	24A						
Operating temperature	-40 °C to 90 °C						
Maximum load	5400 N/m ² = 550 kg/m ² (75 lbs/ft ²)						
Safety class	II						
Certifications and warranty			Manufacturer/Distribution		Logistics/Academy		
TÜV, UL	IEC 61215, IEC 61730 i.p.		WIOSUN GmbH & Co. KG		WIOSUN GmbH & Co. KG		
Product warranty	10 years		Untertürkheimer Str. 23		Gewerbepark 5 - 13		
Performance guarantee	90/80% - 10/25 years		DE-66117 Saarbrücken		DE-87640 Biessenhofen		
Packing configuration			Telefon +49 681 95451-0		info@wiosun.com		
Cardboard	23 Piece up or 20 Piece		Telefax +49 681 95451-499		www.wiosun.com		
Pallet	1 Cardboard		Your WIOSUN dealer:				
Container	32 Pallet / 688 modules						
Further							
All figures are according to DIN EN 50380. Tolerance at rated power 0 to +3%. All other specifications ± 3%.							

