

WINAICO WSP-P6 Blackline Series, Poly



About WINAICO

As a result of our passion for performance, we offer not only high performance photovoltaic modules, but also comprehensive support to the successful execution of photovoltaic projects.

As a Taiwanese module manufacturer with German and other subsidiary companies around the world, WINAICO is positioned amongst top brand manufacturers with a high-quality product from an automated production line. The parent company, Win Win Precision Technology Co., Ltd. has its origins in the semiconductor sector, which is subject to the same quality management demands as those applied in the solar industry. With leading-edge system technology and process expertise originating from the semiconductor industry, WINAICO is setting qualitative benchmarks on the PV market.

Thousands of installed systems are proving this every day.

Advantages of the WINAICO high performance modules

- + Use of top quality brand components exclusively
- + Linear performance guarantee over 25 years
- + 12-year product warranty
- + Plus tolerances of 0/+5 Wp
- + Anti-PID technology
- + Hot-Spot protection
- + Anti-reflective glass



AMMONIA RESISTANCE



ANTI-PID



DIRECT FROM THE MANUFACTURER



EL-CHECKED



HIGH YIELD



LOW DEGRADATION



HOT-SPOT PROTECTION

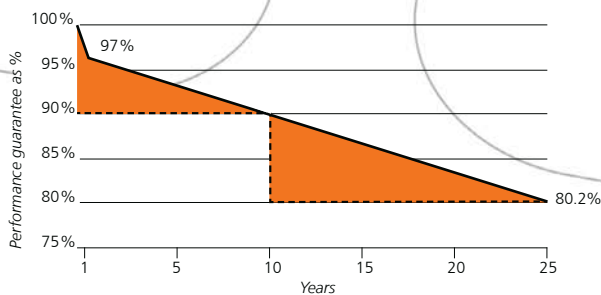


CONTROLLED GOODS FLOW



EXCELLENT WEAR-LIGHT PERFORMANCE

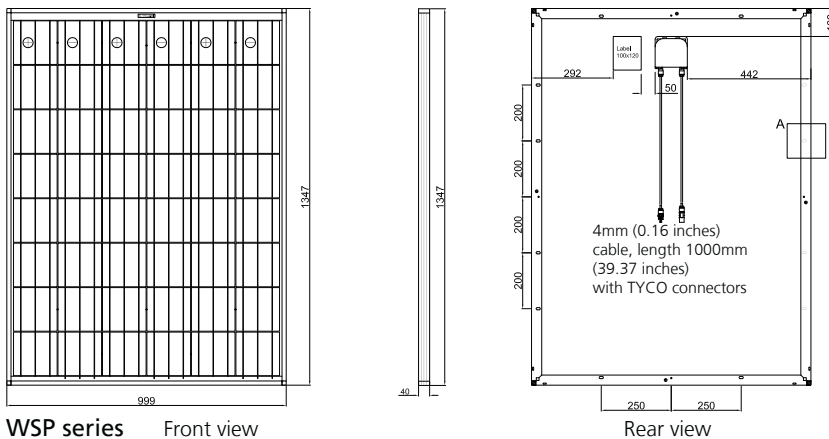
25-year linear performance guarantee



- Linear guarantee for WINAICO module performance
- - - Guarantee standard on the market
- Guarantee advantage for WINAICO customers

When you buy a WINAICO module, in the first year we guarantee a performance of at least 97% of rated performance.

For the following 24 years, WINAICO guarantees a maximum drop in performance of 0.7% of nominal performance per year. Through this promise, WINAICO guarantees the quality and performance of its own products and provides you with investment protection.



WSP series Front view
(Blackline)

Rear view

Mechanical data

Cell	Polycrystalline 156 x 156 silicon cells
Quantity and wiring of cells	6 x 8 in series
Dimensions	1.347 x 999 x 40 mm (53.03 x 39.33 x 1.57 inches)
Weight	16.6 kg
Glass thickness	3.2 mm (0.13 inches)
Connection type	Tyco connection socket and connector (IP 65)

Limit values

Operating temperature	-40 bis +90°C
Storage temperature	-40 bis +90°C
Maximum system voltage	1,000 VDC
Maximum load	5,400 N/m ²
Maximum reverse current	Voltages higher than V _{OC} of the module should not be applied
Maximum series fuse rating	15 A

Electrical data (STC)	WSP-190P6	WSP-195P6	WSP-200P6	WSP-205P6	
Module type	poly	poly	poly	poly	
Nominal performance	P _{max} 190	195	200	205	Wp
No-load voltage	V _{OC} 30.14	30.38	30.62	30.86	V
Short circuit current	I _{SC} 8.28	8.33	8.38	8.43	A
Voltage at max. performance	V _{MPP} 25.22	25.51	25.80	26.09	V
Current at max. performance	I _{MPP} 7.54	7.65	7.77	7.89	A
Module efficiency	14.12	14.51	14.90	15.30	%
Temperature coefficient performance	P _{MPP} -0.43	-0.43	-0.43	-0.43	%/°C
Temperature coefficient short circuit current	I _{SC} 0.06	0.06	0.06	0.06	%/°C
Temperature coefficient no-load voltage	V _{OC} -0.33	-0.33	-0.33	-0.33	%/°C

Reduction in the module efficiency rating from 1,000 W/m² to 200 W/m²: < 4%. The electrical data applies under standard test conditions (STC): Solar radiation 1,000 W/m² with light spectrum AM 1,5 with a cell temperature of 25 °C. Measurement tolerance of P_{MPP} under STC -3/+3%. Accuracy of other electrical data -10/+10%. Subject to specification changes.

Electrical data (NOCT)	WSP-190P6	WSP-195P6	WSP-200P6	WSP-205P6	
Nominal performance	P _{max} 138.71	142.53	145.81	149.16	Wp
No-load voltage	V _{OC} 27.43	27.65	27.89	28.14	V
Short circuit current	I _{SC} 6.79	6.83	6.88	6.93	A
Voltage at max. performance	V _{MPP} 22.70	22.96	23.19	23.42	V
Current at max. performance	I _{MPP} 6.10	6.20	6.30	6.39	A
Module efficiency	10.31	10.59	10.84	11.08	%

The electrical data applies under standard operating conditions of the cells: 800 W/m²; 20 °C; AM 1,5; wind speed 1m/s. NOCT: 44.7°C (normal operating cell temperature). Subject to specification changes.



WINAICO is a trademark of Win Win Precision Technology Co., Ltd.

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