



**99% relative efficiency at weak-light** Because a 3% increase in yield is better than nothing.



**Protection against Ammonia, Salt Mist, Hail and the elements** Because long term performance matters.



## Designed for fire safety

Because plant fires mean more than financial losses alone.



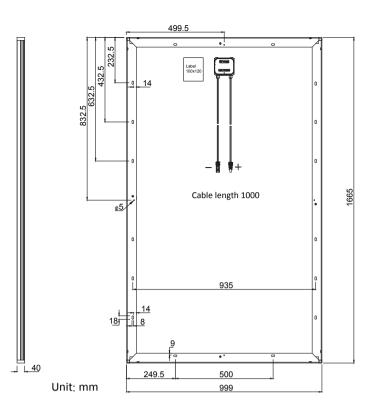
**25 year linear performance guarantee** 15 year product warranty.



**2 years of free insurance included** Because you never know what tomorrow might bring.



Made in Taiwan Home of high precision semiconductor manufacturing.





## Mechanical data

CellMonocrystallineQuantity and wiring of cells60 in seriesDimensions1,665 x 999 x 4Weight19.6 kg (43.2 llGlass thickness3.2 mm (0.13 iFrameBlack anodisedJunction boxIP67Connector typeMC4 (PV-KBT4,Module fire performanceType 1

Monocrystalline 156.75 x 156.75 mm silicon cells 60 in series 1,665 x 999 x 40 mm (65.55 x 39.33 x 1.57 in) 19.6 kg (43.2 lbs) 3.2 mm (0.13 in) Black anodised aluminium IP67 MC4 (PV-KBT4/PV-KST4) IP68; QC4.10 IP67 Type 1

–40°C to +85°C

## **Operating conditions**

Operating temperature

 $\begin{array}{c} -40\,^{\circ}\text{F to }+185\,^{\circ}\text{F} \\ \text{Maximum system voltage IEC/UL} & 1,000\,^{\vee}\text{V}1,000\,^{\vee} \\ \text{Maximum series fuse} & 25A \\ \text{Maximum load} & 5,400\,^{Pa} \\ \text{Nominal operating cell temperature NOCT} & 45\pm3\,^{\circ}\text{C} \\ \text{Temperature coefficient of P}_{MAX} & -0.43\%^{\circ}\text{C} \\ \text{Temperature coefficient of I}_{SC} & 0.06\%^{\circ}\text{C} \\ \end{array}$ 

## Certifications

IEC 61215, IEC 61730-1/-2, UL 1703 Ed. 3, MCS, CE

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Electrical data (STC)		WSP-310M6	WSP-315M6	
Nominal performance	P <sub>MAX</sub>	310	315	Wp
Voltage at maximum performance	V <sub>MP</sub>	32.9	33.2	V
Current at maximum performance	I <sub>MP</sub>	9.42	9.48	А
Open circuit voltage	V <sub>oc</sub>	40.3	40.4	V
Short circuit current	$I_{sc}$	10.1	10.2	А
Module efficiency		18.6	18.9	%
Power tolerance		-0/+5		W

Reduction in the module efficiency rating from 1,000 W/m<sup>2</sup> to 200 W/m<sup>2</sup>: < 4%. The electrical data applies under standard test conditions (STC): solar radiation 1,000 W/m<sup>2</sup> with light spectrum AM 1.5, with cell temperature 25 °C. Measurement tolerance of  $P_{MAX}$  at STC: ±3%. Accuracy of other electrical data: ±10%.

Electrical data (NOCT)		WSP-310M6	WSP-315M6	
Nominal performance	P <sub>MAX</sub>	230	234	Wp
Voltage at maximum performance	V <sub>MP</sub>	30.2	30.5	V
Current at maximum performance	I <sub>MP</sub>	7.62	7.67	А
Open circuit voltage	V <sub>oc</sub>	38.1	38.2	V
Short circuit current	I <sub>sc</sub>	8.11	8.19	А

The electrical data applies under normal operating cell temperature (NOCT): solar radiation 800W/m<sup>2</sup>, AM 1.5, air temperature 20°C, wind speed 1 m/s.



This frame design, produced entirely from aluminium, guarantees the maximum stability and protection against material fatigue. The rounded corner elements provide greater torsional stiffness and waterproofing in the critical corner areas where the material is at its weakest. In contrast to corner connections that use mitred cuts or threaded connections, WINAICO corner pieces guarantee the best possible transfer of tension across each section of the frame.



WINAICO is a trademark of Win Win Precision Technology Co., Ltd. WINAICO Australia Pty Ltd 3/393 George Street, Sydney NSW 2000, Australia Tel + 61 2 8091 2771 · australia@winaico.com · www.winaico.com