



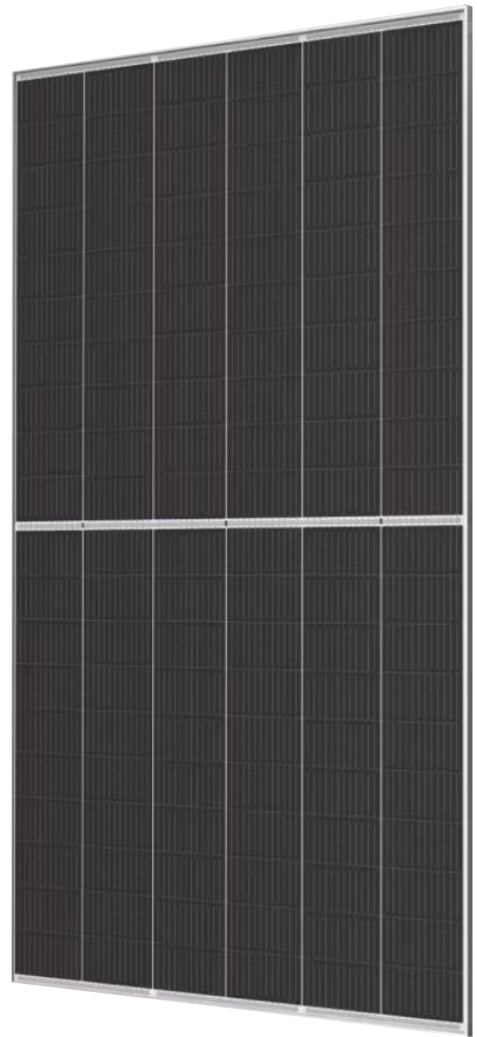
650W

MAXIMUM MODULE EFFICIENCY

23.3%

POSITIVE POWER TOLERANCE

0 TO +5 W



IDEAL FOR:



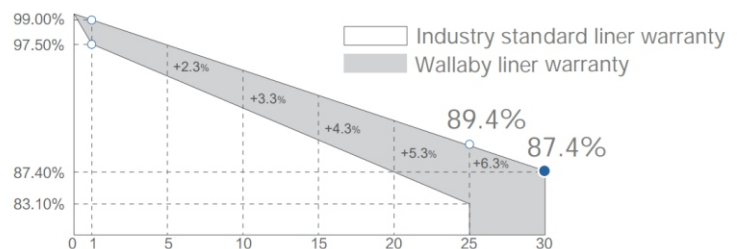
Commerical & Industrial Projects

POWER YOUR LIFE

Outstanding Bifaciality | Strong Lightweight Construction | Built for the Australian Environment

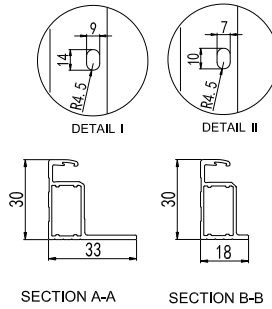
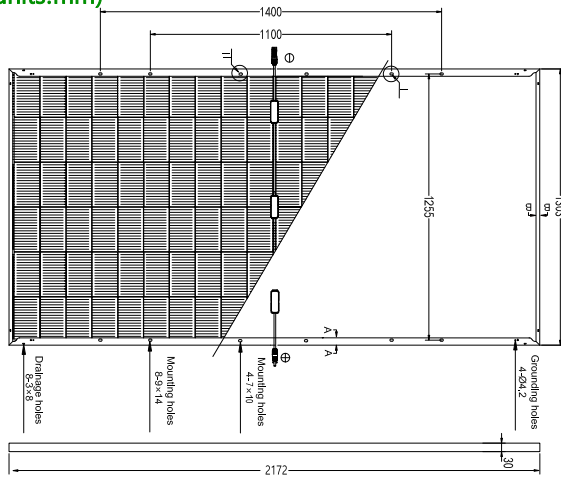
QUALIFICATIONS & CERTIFICATES

IEC 61730,
IEC 61215,
CE,

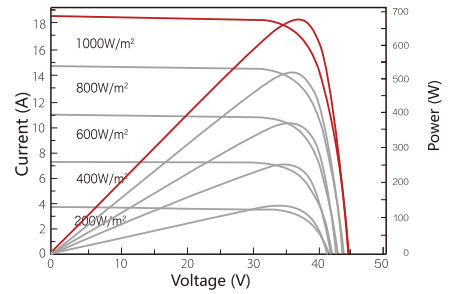


1.00% the 1st year power degradation
0.04% annual power degradation

BACK VIEW (units:mm)



I-V/P-V CURVES



Warning Read the Installation and User Manual in its entirety before handling, installing and operating Wallaby Solar modules

Electrical Parameters at Standard Test Conditions(STC*)

Module type	WA-650 CF60 f/2	WA-655 CF60 f/2	WA-660 CF60 f/2
Power output-Pmax (W)	650	655	660
Power output tolerances-ΔPmax (W) with tolerance ±3% (W)	0/+5W	0/+5W	0/+5W
Module efficiency-ηm (%)	23.0	23.1	23.3
Voltage at Pmax - Vmpp (V)	37.14	37.34	37.54
Current at Pmax-Imp (A)	17.50	17.54	17.58
Open-circuit voltage-Voc (V) with tolerance ±5% (V)	44.62	44.82	45.02
Short-circuit current-Isc (A) with tolerance ±5% (A)	18.48	18.53	18.58

*STC: 1000 W-mirradiance, 25°C cell temperature, AM 1.5.-2

Bifacial Output-Rearside Power Gain (BSI)

Short Circuit Current (Isc)	22.77	22.83	22.89
5% Double sided gain (Pmax)	683	688	693
5% Double sided gain (%)	24.12%	24.30%	24.49%
15% Double sided gain (Pmax)	748	753	759
15% Double sided gain (%)	26.41%	26.62%	26.82%
25% Double sided gain (Pmax)	813	819	825
25% Double sided gain (%)	28.71%	28.93%	29.15%

Bifacial Electrical Parameters at Standard Test Conditions(BNPI*)

Module type	WA-650 CF60 f/2	WA-655 CF60 f/2	WA-660 CF60 f/2
Power output-Pmax (W)	720.20	725.74	731.28
Voltage at Pmax - Vmpp (V)	37.28	37.48	37.68
Current at Pmax-Imp (A)	19.32	19.36	19.41
Open-circuit voltage-Voc (V) with tolerance ±5% (V)	44.78	44.98	45.18
Short-circuit current-Isc (A) with tolerance ±5% (A)	20.40	20.46	20.51
Bifaciality coefficient is φVoc/Tolerance ±5%	99%	99%	99%
Bifaciality coefficient is φIsc/Tolerance ±10%	80%	80%	80%
Bifaciality coefficient is φPmax/Tolerance ±10%	80%	80%	80%

*1000W-m² on the front side and 135 W-m² on the back side, 25°C cell temperature, AM 1.5.

Thermal Characteristics

Nominal operating cell temperature -NOCT(°C)	42±2
Temperature coefficient of Pmax -γ(°/°C)	-0.29
Temperature coefficient of Voc -β(°/°C)	-0.24
Temperature coefficient of Isc -α(°/°C)	0.042

Packaging Specifications

Number of modules per pallet	36
Number of pallets per 40' container	18
Packaging box dimensions (L / W / H)	1330 mm / 1110 mm / 2295 mm
Box weight	1295 kg

Operating Conditions

Max. system voltage	1500 V _{oc}
Max. series fuse rating*	30 A
Operating temperature range	-40°C ~ +70°C
Max. static load, front (e.g., snow)	+5400 Pa
Max. static load, back (e.g., wind)	-2400 Pa
Max. hailstone impact (diameter /velocity)	25 mm / 23 m·s ⁻¹

*Do not connect fuse in combiner box with two or more strings in parallel connection.

General Characteristics

Dimensions (L / W / H)	2172 mm / 1303 mm / 30 mm
Weight	34.5 kg

Construction Materials

Cell (material / quantity)	n-type monocrystalline silicon/ 6 x 20	Junction box (type)	3 bypass diodes
Glass (thickness)	2.0 mm / 2.0 mm	Junction box (protection degree)	≥IP68 Rated
Frame (material)	anodized aluminum alloy	Connector Type	PV-KST4-EVO2/xy_UR, PV-KBT4-EVO2/xy_UR
Protection Class	Class II	Output Cables	4.0 mm ² , 250mm (+) / 350mm (-) or Customized Length
IEC Fire Type	Class A		

- Due to continuous innovation, research and product improvement, the specifications in this product information sheet are subject to change without prior notice. The specifications may deviate slightly and are not guaranteed.
- The data do not refer to a single module and they are not part of the offer, they only serve for comparison to different module types.
- PV module 98 th percentile operating temperature:70 C



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