



650W

MAXIMUM MODULE EFFICIENCY

23.3%

POSITIVE POWER TOLERANCE

0 TO +5 W



IDEAL FOR:



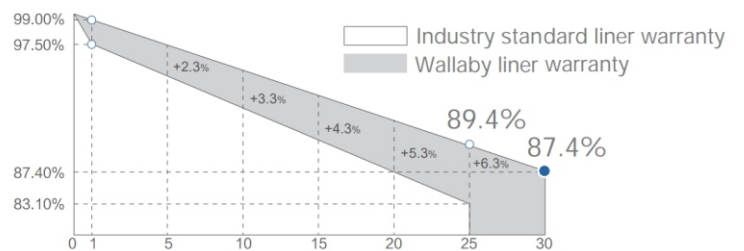
Commerical & Industrial Projects

POWER YOUR LIFE

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

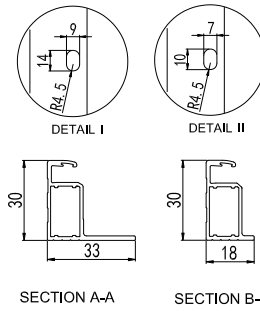
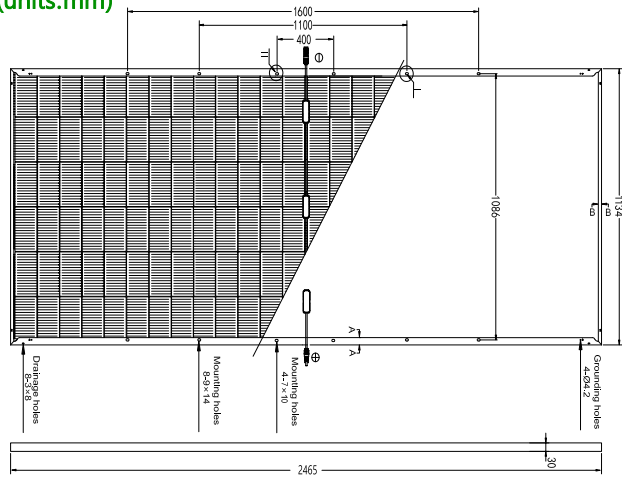
QUALIFICATIONS & CERTIFICATES

IEC 61730,
IEC 61215,
CE,

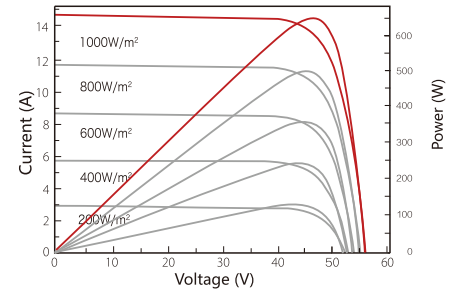


1.00% the 1st year power degradation
0.04% annual power degradation

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-645 CF78 e/2 | WA-650 CF78 e/2 |
|--|-----------------|-----------------|
| Power output-Pmax (W) | 645 | 650 |
| Power output tolerances-ΔPmax (W) with tolerance ±3% (W) | 0/+5W | 0/+5W |
| Module efficiency-ηm (%) | 23.1 | 23.3 |
| Voltage at Pmax - Vmpp (V) | 46.67 | 46.80 |
| Current at Pmax-Impp (A) | 13.82 | 13.89 |
| Open-circuit voltage-Voc (V) with tolerance ±5% (V) | 56.19 | 56.30 |
| Short-circuit current-Isc (A) with tolerance ±5% (A) | 14.53 | 14.60 |

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

Bifacial Output-Rearside Power Gain (BSI)

| | | |
|------------------------------|--------|--------|
| Short Circuit Current (Isc) | 17.90 | 17.99 |
| 5% Double sided gain (Pmax) | 677 | 683 |
| 5% Double sided gain (%) | 24.23% | 24.42% |
| 15% Double sided gain (Pmax) | 742 | 748 |
| 15% Double sided gain (%) | 26.54% | 26.74% |
| 25% Double sided gain (Pmax) | 806 | 813 |
| 25% Double sided gain (%) | 28.84% | 29.07% |

Bifacial Electrical Parameters at Standard Test Conditions(BNPI)*

| Module type | WA-645 CF78 e/2 | WA-650 CF78 e/2 |
|--|-----------------|-----------------|
| Power output-Pmax (W) | 714.66 | 720.20 |
| Voltage at Pmax - Vmpp (V) | 46.84 | 46.97 |
| Current at Pmax-Impp (A) | 15.26 | 15.33 |
| Open-circuit voltage-Voc (V) with tolerance ±5% (V) | 56.75 | 56.90 |
| Short-circuit current-Isc (A) with tolerance ±5% (A) | 16.04 | 16.12 |
| Bifaciality coefficient is φVoc/Tolerance ±5% | 99% | 99% |
| Bifaciality coefficient is φIsc/Tolerance ±10% | 80% | 80% |
| Bifaciality coefficient is φPmax/Tolerance ±10% | 80% | 80% |

*1000W·m⁻² on the front side and 135 W·m⁻² 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) | 2500 mm / 1110 mm / 1245 mm |
| Box weight | 1286kg |

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) | 2465 mm / 1134 mm / 30 mm |
| Weight | 34.5 kg |

Construction Materials

| | | | |
|----------------------------|--|----------------------------------|--|
| Cell (material / quantity) | n-type monocrystalline silicon/ 6 x 26 | 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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