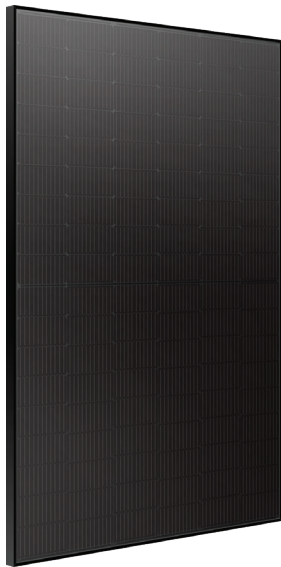


## SOLAHART SILHOUETTE N-TYPE RESIDENTIAL PANELS

SOLAHART410S5



The new Solahart Silhouette panel is our most advanced PV panel ever, featuring ultra-high performance, superior efficiency, and an impressive 30-year performance warranty. With its signature all-black design and innovative cell technology, it's the ideal solution for Australian homes.

This new model boosts panel efficiency to up to 21%, and with positive tolerance of up to 5W, guarantees that each Silhouette panel will have a rated maximum power on or above 410W at Standard Test Conditions.<sup>(1)</sup>

The state-of-the-art n-type, monocrystalline half-cell and multi-busbar design offers excellent performance under Australian conditions, on hot summer days and even in low-light environments.

An exceptionally low panel degradation of 1% in the first year and 0.4% thereafter, combined with a lower temperature coefficient, means higher power generation and higher savings over the life of the system compared to p-type PERC panels in the same power class.

The exceptional 25-Year Solahart Australian Product Warranty and a 30-Year Performance Guarantee provide ultimate confidence and peace of mind.\*

### How you benefit:



#### MODERN DESIGN

Premium n-type technology with a contemporary design and striking all-black finish



#### HIGH SOLAR YIELD

Excellent low-light and temperature behaviour results in more energy production per square metre of panels.



#### HIGH PERFORMANCE

High efficiency (21%) and lower degradation for excellent performance and reliability.



#### DESIGNED FOR AUSTRALIA

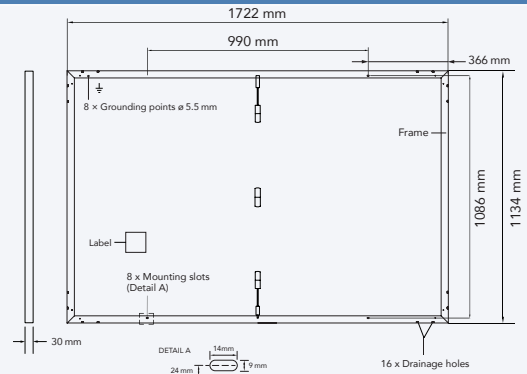
Designed for Australia to perform in all conditions, from low-light environment to high temperatures.



#### SOLAHART WARRANTY

25-Year Solahart Product Warranty for peace of mind, plus a 30-Year Performance Guarantee for long-term returns.\*

| Model                  | SOLAHART410S5   |  |
|------------------------|---|--|
| <b>Mechanical Data</b> |   |  |
| Dimensions (H x W x D) | 1722 x 1134 x 30 mm (including frame)                               |  |
| Weight                 | 21.3 Kg   |  |
| Front Cover            | 3.2 mm thermally pre-stressed glass with anti-reflection technology |  |
| Back Cover             | Composite film  |  |
| Frame                  | Black Anodised Aluminium  |  |
| Cell                   | 6 x 18 n-type monocrystalline solar half-cells                      |  |
| Junction Box           | Protection class IP68, with bypass diodes                           |  |
| Cable                  | 4 mm <sup>2</sup> solar cable; (+) 1200 mm, (-) 1200 mm             |  |
| Connector              | Stäubli MC4 connectors (PV-KST4 & PV-KSB4), IP68                    |  |

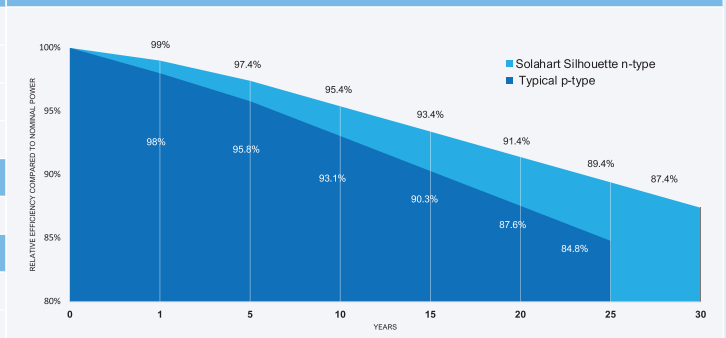


| Electrical Data   |          |
|---|----------|
| Minimum performance at standard test conditions, STC <sup>(1)</sup> (Power Tolerance +5 W / -0 W) |          |
| Power at MPP <sup>(2)</sup> - P <sub>MPP</sub>  | 410 Wp   |
| Short circuit current <sup>(2)</sup> - I <sub>sc</sub>  | 13.58 A  |
| Open circuit voltage <sup>(2)</sup> - V <sub>oc</sub>   | 37.78 V  |
| Current at MPP <sup>#</sup> - I <sub>MPP</sub>  | 12.91 A  |
| Voltage at MPP <sup>#</sup> - V <sub>MPP</sub>  | 31.75 V  |
| Efficiency <sup>(1)</sup> - η   | 21.0 %   |
| Minimum performance at normal operating conditions, NMOT <sup>(3)</sup>                           |          |
| Power at MPP - P <sub>MPP</sub>   | 308.3 Wp |
| Short circuit current <sup>#</sup> - I <sub>sc</sub>  | 10.96 A  |
| Open circuit voltage <sup>#</sup> - V <sub>oc</sub>   | 35.89 V  |
| Current at MPP <sup>#</sup> - I <sub>MPP</sub>  | 10.32 A  |
| Voltage at MPP <sup>#</sup> - V <sub>MPP</sub>  | 29.88 V  |

| Other information          |               |
|----------------------------|---------------|
| Part Number                | SOLAHART410S5 |
| Solahart Product Warranty* | 25 years      |
| Performance Guarantee*     | 30 years      |
| Country of Manufacture     | China         |

| Temperature Coefficients                        |               |
|---|---------------|
| Normal module operating temperature (NMOT)      | 41+/-2 °C     |
| Temperature coefficient of P <sub>MPP</sub> - γ | -0.30 % / °C  |
| Temperature coefficient of V <sub>oc</sub> - β  | -0.24 % / °C  |
| Temperature coefficient of I <sub>sc</sub> - α  | +0.043 % / °C |

### Performance Guarantee



| Qualifications and Certificates                         |  |
|---|--|
| IEC 61215: 2016; IEC 61730: 2016, Application class II. |  |

| Properties for System Design              |                   |
|---|-------------------|
| Permitted module temp on continuous duty  | -40°C up to +85°C |
| Maximum system voltage - V <sub>SYS</sub> | 1500 V            |
| Maximum reverse current - I <sub>R</sub>  | 25 A              |
| Maximum design load, Push / Pull          | 3600 / 1600 Pa    |
| Maximum test load, Push / Pull            | 5400 / 2400 Pa    |
| Safety class                              | II                |
| Fire rating based on ANSI / UL 61730      | C / TYPE 2        |

At least 99% of nominal power during the first year. Thereafter max 0.4% degradation per year.  
 At least 95.4% of nominal power up to 10 years.  
 At least 89.4% of nominal power up to 25 years.  
 At least 87.4% of nominal power up to 30 years.  
 All data within measurement tolerances.

Specifications and designs included in this data sheet are subject to change without notice.

<sup>(1)</sup>1000 W/m<sup>2</sup>, 25±2°C, AM 1.5 G. <sup>(2)</sup>Measurement tolerances PMPP ±3%; ISC, VOC ±5% at STC. <sup>(3)</sup>800 W/m<sup>2</sup>, NMOT, spectrum AM 1.5 G. # Typical values, actual values may differ.  
 \* 30-year Solahart Product Warranty covers certain defects with the Solahart Silhouette panels. Please refer to the 'Solahart PV Systems Owner's Guide' for full details, available on Solahart's website [www.solahart.com.au](http://www.solahart.com.au). 30-year Performance Guarantee is provided by the manufacturer of the Solahart Silhouette panels and guarantees the maximum reduction in power output performance of the panels over a 30-year period. Neither the Solahart Product Warranty nor the Performance Guarantee are intended to exclude, restrict or modify your rights under the Australian Consumer Law.  
 \*APT test conditions according to IEC/TS 62804-1:2015, method B (-1500 V, 168 h).