

# Empower your facade

# SKALA

## KEY FEATURES

### AESTHETICS

- Frameless thin-film solar module
- Without mechanical clamping on the front glass
- Rear mounting system compatible with all common façade substructures
- Particularly suitable for rear-ventilated curtain wall façades
- Matt, very homogeneous surface in terms of color

### VARIATION

- Can be installed in portrait and landscape format
- Different colors and lengths
- Can be combined with a variety of other façade materials

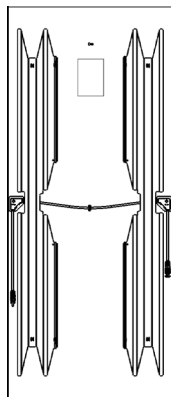
### RESISTANCE

- Glass-glass construction ensures high robustness against various weather influences
- Available in standard dimensions:



664 mm

1,587 mm



Rear side of module with backrail system for hook-in mounting

## CERTIFICATION

- Design qualification and type approval: IEC 61215:2016
- Safety qualification: IEC 61730:2016
- German general building approval (abZ): Z-70.1-224
- WEEE number: DE33274866



MADE IN GERMANY

**AVANCIS** 

## MECHANICAL SPECIFICATION

Valid for product variant 4.9 - Australia

| Characteristic                                      | Value  |
|---|--|
| Dimensions  | 1,587 mm × 664 mm  |
| Thickness   | 38 mm  |
| Weight  | 17 kg  |
| Cell type   | CIGS   |
| Frame   | without  |
| Front cover   | 3.0 mm single-pane safety glass                                  |
| Design load <sup>1)</sup> - Safety factor 1.5       | upward 3,300 Pa   downward 3,500 Pa                              |
| Junction box protection class                       | IP67   |
| Dimensions of junction box                          | 60 mm × 60 mm × 11.5 mm  |
| Cable lengths (⊖ plug   ⊕ socket)                   | 200 mm   320 mm  |
| Cable cross section                                 | 2.5 mm <sup>2</sup> ; minimal bending radius: 6 × outer diameter |
| Connector type                                      | H4 (Amphenol)  |
| Fire rating (roof)                                  | Class C <sup>2)</sup>  |
| Classification of fire behavior (building envelope) | B1 <sup>3)</sup><br>B - s2, d0 <sup>4)</sup>                     |

<sup>1)</sup> IEC 61730, for standard SKALA mounting

<sup>2)</sup> ANSI/UL 790:2004

<sup>3)</sup> DIN 4102-1:1998-05, depending on product characteristics

<sup>4)</sup> DIN EN 13501-1:2019-05, valid for all SKALA color codes excluding B001 (can be ordered optionally)





## ELECTRICAL SPECIFICATION

Data measured under standard test conditions (STC) for full size PV modules:

| SKALA xxx <sup>1)</sup> A0BB <sup>2)</sup> | SKALA 120 | SKALA 125 | SKALA 130 | SKALA 135 | SKALA 140 | SKALA 145 | SKALA 150 |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Nominal power $P_{nom}^{(III)}$            | 120 W     | 125 W     | 130 W     | 135 W     | 140 W     | 145 W     | 150 W     |
| Sorting                                    | -0/+5 W   |           |           |           |           |           |           |
| Module efficiency $\eta$                   | 11.4%     | 11.9%     | 12.3%     | 12.8%     | 13.3%     | 13.8%     | 14,2%     |
| Aperture efficiency $\eta$                 | 12.6%     | 13.2%     | 13.7%     | 14.2%     | 14.8%     | 15.3%     | 15,8%     |
| Open circuit voltage $V_{oc}^{(III)}$      | 89.2 V    | 89.2 V    | 89.3 V    | 89.3 V    | 89.4 V    | 89.4 V    | 89.5 V    |
| Short circuit current $I_{sc}^{(III)}$     | 2.00 A    | 2.07 A    | 2.14 A    | 2.21 A    | 2.28 A    | 2.35 A    | 2.41 A    |
| Voltage at mpp $V_{mpp}^{(III)}$           | 69.4 V    | 69.4 V    | 69.4 V    | 69.4 V    | 69.4 V    | 69.4 V    | 69.4 V    |
| Current at mpp $I_{mpp}^{(III)}$           | 1.73 A    | 1.80 A    | 1.87 A    | 1.95 A    | 2.02 A    | 2.09 A    | 2.16 A    |
| Max. over-current protection $I_R$         | 4.0 A     |           |           |           |           |           |           |
| Max. system voltage $V_{sys}$              | 1000 V    |           |           |           |           |           |           |

STC values are valid after stabilization with light according to IEC 61215.

STC: Irradiance 1,000 W/m<sup>2</sup>, module temperature 25 °C, spectral light distribution according to atmospheric mass (AM) 1.5.<sup>1)</sup> „xxx“ corresponds to power class in Wp (in steps of 5 W)<sup>2)</sup> Color code<sup>III)</sup> Tolerance of manufacturing: ±5%

Data measured at nominal module operating temperature (NMOT)\*\* and AM 1.5:

|                                | SKALA 120 | SKALA 125 | SKALA 130 | SKALA 135 | SKALA 140 | SKALA 145 | SKALA 150 |
|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| NMOT                           | 40 °C     |           |           |           |           |           |           |
| Nominal power $P_{nom}$        | 90 W      | 94 W      | 97 W      | 101 W     | 105 W     | 109 W     | 113 W     |
| Open circuit voltage $V_{oc}$  | 85 V      | 85 V      | 85 V      | 85 V      | 86 V      | 86 V      | 86 V      |
| Short circuit current $I_{sc}$ | 1.60 A    | 1.66 A    | 1.71 A    | 1.77 A    | 1.82 A    | 1.88 A    | 1.93 A    |
| Voltage at mpp $V_{mpp}$       | 66 V      | 66 V      | 66 V      | 66 V      | 66 V      | 66 V      | 66 V      |

\*\* NMOT: Module operating temperature at light intensity of 800 W/m<sup>2</sup> on the module area, air temperature 20 °C, wind speed 1m/s and operating at mpp.

| Temperature coefficient           | Value     |
|-----------------------------------|-----------|
| Temperature coefficient $P_{nom}$ | -0.35%/°C |
| Temperature coefficient $V_{oc}$  | -0.26%/°C |
| Temperature coefficient $I_{sc}$  | 0%/°C     |

Data measured at low light intensity:

The relative reduction of the module efficiency at a light intensity of 200 W/m<sup>2</sup> is 6%, compared to 1,000 W/m<sup>2</sup> at 25 °C module temperature and spectrum AM 1.5. At 500 W/m<sup>2</sup>, the relative increase of module efficiency is +1%.

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## PACKAGING INFORMATION

| For packaging of SKALA-modules of standard size* |                              |
|--|------------------------------|
| Size including pallet (L × W × H)                | 1,650 mm × 800 mm × 1,000 mm |
| Approx. gross weight (full box)                  | 435 kg                       |
| Modules per box                                  | 20                           |
| Maximum no. of stacked boxes                     | 1 on 1 (batch of 2)          |
| Max. truck loading                               | 48 (3 × 8 + 3 × 8)           |
| Max. 40 ft container load (24 t)                 | 28 (1 × 14 + 1 × 14)         |

\*variation of packaging size for SKALA Short and on individual request

| SKALA color code (a0bb) | Available power classes (xxx) |
|-------------------------|-------------------------------|
| B001                    | 145 W, 150 W                  |
| G001                    | 145 W, 150 W                  |
| G002                    | 135 W, 140 W                  |
| G004                    | 120 W, 125 W                  |
| 3001                    | 135 W, 140 W                  |
| 3002                    | 125 W                         |
| 4001                    | 125 W                         |
| 4002                    | 135 W                         |
| 7002                    | 135 W                         |
| 7003                    | 135 W                         |
| 7004*                   | 135 W                         |

\*Placement in performance class subject to reservation

## PERFORMANCE WARRANTY

Performance after 10 years: 90% of minimum nominal power  
Performance after 25 years: 80% of minimum nominal power  
**For detailed information see warranty terms and conditions.**

## PRODUCT WARRANTY

PV modules are free from defects in materials and workmanship under normal application, installation, use and service conditions for a period of 10 years. For detailed information see warranty terms and conditions.

