Q.ANTUM TECHNOLOGY: LOW LEVELISED COST OF ELECTRICITY
Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 19.5%.

INNOVATIVE ALL-WEATHER TECHNOLOGY
Optimal yields, whatever the weather with excellent low-light and temperature behaviour.

ENDURING HIGH PERFORMANCE
Long-term yield security with Anti LID Technology, Anti PID Technology\(^1\), Hot-Spot Protect and Traceable Quality Tra.Q™.

EXTREME WEATHER RATING
High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).

MAXIMUM COST REDUCTIONS
Up to 10% lower logistics costs due to higher module capacity per box.

A RELIABLE INVESTMENT
Inclusive 12-year product warranty and 25-year linear performance warranty\(^2\).

\(^1\) APT test conditions according to IEC/TS 62804-1:2015, method B (-1500 V, 168 h)
\(^2\) See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:
Rooftop arrays on residential buildings

Engineered in Germany
## MECHANICAL SPECIFICATION

<table>
<thead>
<tr>
<th>Format</th>
<th>1670 mm × 1000 mm × 32 mm (including frame)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>18.5 kg</td>
</tr>
<tr>
<td>Front Cover</td>
<td>3.2 mm thermally pre-stressed glass with anti-reflection technology</td>
</tr>
<tr>
<td>Back Cover</td>
<td>Composite film</td>
</tr>
<tr>
<td>Frame</td>
<td>Black anodised aluminium</td>
</tr>
<tr>
<td>Cell</td>
<td>6 × 10 monocrystalline Q.ANTUM solar cells</td>
</tr>
<tr>
<td>Junction box</td>
<td>85-115 mm × 60-80 mm × 15-20 mm</td>
</tr>
<tr>
<td>Protection class</td>
<td>2x, bypass diodes</td>
</tr>
<tr>
<td>Cable</td>
<td>4 mm² Solar cable; (+) ≥1000 mm, (-) ≥1000 mm</td>
</tr>
<tr>
<td>Connector</td>
<td>Stäubli MC4, Hanwha Q CELLS HQC4, Renhe 05-6, Tong-in TL-Cable01S, JMTHY Jm601, Amphenol UTX, IP68</td>
</tr>
</tbody>
</table>

## ELECTRICAL CHARACTERISTICS

### POWER CLASS

<table>
<thead>
<tr>
<th></th>
<th>300</th>
<th>305</th>
<th>310</th>
<th>315</th>
<th>320</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power at MPP</td>
<td>W</td>
<td>300</td>
<td>305</td>
<td>310</td>
<td>315</td>
</tr>
<tr>
<td>Short Circuit Current</td>
<td>A</td>
<td>9.77</td>
<td>9.84</td>
<td>9.91</td>
<td>9.98</td>
</tr>
<tr>
<td>Open Circuit Voltage</td>
<td>V</td>
<td>39.76</td>
<td>40.05</td>
<td>40.33</td>
<td>40.62</td>
</tr>
<tr>
<td>Voltage at MPP</td>
<td>V</td>
<td>32.41</td>
<td>32.62</td>
<td>32.83</td>
<td>33.04</td>
</tr>
<tr>
<td>Efficiency</td>
<td>%</td>
<td>≥18.0</td>
<td>≥18.3</td>
<td>≥18.6</td>
<td>≥18.9</td>
</tr>
</tbody>
</table>

### MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC:

- Power Tolerance: +5 W / −0 W

### MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT:

- Power at MPP
- Short Circuit Current
- Open Circuit Voltage
- Current at MPP
- Voltage at MPP
- Efficiency

### TEMPERATURE COEFFICIENTS

- Temperature Coefficient of \( I_{SC} \): \( \alpha \) [% / K] +0.04
- Temperature Coefficient of \( V_{OC} \): \( \beta \) [% / K] −0.38
- Temperature Coefficient of \( P_{MPP} \): \( \gamma \) [% / K] −0.27
- Normal Module Operating Temperature: NMOT [°C] 43 ± 3

### PROPERTIES FOR SYSTEM DESIGN

- Maximum System Voltage: \( V_{DC} \) [V] 1000
- Safety Class: II
- Maximum Reverse Current: \( I_{R} \) [A] 20
- Permitted Module Temperature: −40°C - +85°C
- Continuous Duty

### QUALIFICATIONS AND CERTIFICATES

- VDE Quality Tested, IEC 61215:2016; IEC 61730:2016, Application Class II
- This data sheet complies with DIN EN 50380

### PACKAGING INFORMATION

- Number of Modules per Pallet: 32
- Number of Pallets per Trailer (241): 30
- Number of Pallets per 40’ HC-Container (261): 26
- Pallet Dimensions (L × W × H): 1745 × 1150 × 1170 mm
- Pallet Weight: 651 kg

**Note:** Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

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