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 20.4%.

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\(^TM\).

EXTREME WEATHER RATING

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

A RELIABLE INVESTMENT

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

STATE OF THE ART MODULE TECHNOLOGY

Q.ANTUM DUO combines cutting edge cell separation and innovative wiring with Q.ANTUM Technology.

\(^1\) 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
- Rooftop arrays on commercial/industrial buildings

Engineered in Germany
**MECHANICAL SPECIFICATION**

**Format**
1740 mm x 1030 mm x 32 mm (including frame)

**Weight**
19.9 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 20 monocrystalline Q.ANTUM solar half cells

**Junction box**
53-101 mm x 32-60 mm x 15-18 mm

**Protection class IP67, with bypass diodes**

**Cable**
4 mm² Solar cable; (+) ≥ 1150 mm, (−) ≥ 1150 mm

**Connector**
Stäubli MC4, Hanwha Q CELLS HQC4; IP68

**ELECTRICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>POWER CLASS</th>
<th>340</th>
<th>345</th>
<th>350</th>
<th>355</th>
<th>360</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power at MPP(^\text{\textsuperscript{1}}) (P_{\text{MPP}}) ([\text{W}])</td>
<td>340</td>
<td>345</td>
<td>350</td>
<td>355</td>
<td>360</td>
</tr>
<tr>
<td>Short Circuit Current(^\text{\textsuperscript{1}}) (I_{\text{SC}}) ([\text{A}])</td>
<td>10.63</td>
<td>10.68</td>
<td>10.74</td>
<td>10.79</td>
<td>10.84</td>
</tr>
<tr>
<td>Open Circuit Voltage(^\text{\textsuperscript{1}}) (V_{\text{OC}}) ([\text{V}])</td>
<td>40.20</td>
<td>40.45</td>
<td>40.70</td>
<td>40.95</td>
<td>41.19</td>
</tr>
<tr>
<td>Current at MPP (I_{\text{MPP}}) ([\text{A}])</td>
<td>10.12</td>
<td>10.17</td>
<td>10.22</td>
<td>10.28</td>
<td>10.33</td>
</tr>
<tr>
<td>Voltage at MPP (V_{\text{MPP}}) ([\text{V}])</td>
<td>33.61</td>
<td>33.92</td>
<td>34.24</td>
<td>34.55</td>
<td>34.85</td>
</tr>
<tr>
<td>Efficiency(^\text{\textsuperscript{2}}) (\eta) ([%])</td>
<td>≥ 19.0</td>
<td>≥ 19.3</td>
<td>≥ 19.5</td>
<td>≥ 19.8</td>
<td>≥ 20.1</td>
</tr>
</tbody>
</table>

**MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC (POWER TOLERANCE +5 W / −0 W)**

**MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT\(^\text{\textsuperscript{2}}\)**

| Power at MPP \(P_{\text{MPP}}\) \([\text{W}]\) | 254.6 | 258.4 | 262.1 | 265.9 | 269.6 |
| Short Circuit Current \(I_{\text{SC}}\) \([\text{A}]\) | 8.56 | 8.61 | 8.65 | 8.69 | 8.74 |
| Open Circuit Voltage \(V_{\text{OC}}\) \([\text{V}]\) | 37.91 | 38.14 | 38.38 | 38.61 | 38.85 |
| Current at MPP \(I_{\text{MPP}}\) \([\text{A}]\) | 7.96 | 8.00 | 8.05 | 8.09 | 8.13 |
| Voltage at MPP \(V_{\text{MPP}}\) \([\text{V}]\) | 31.98 | 32.28 | 32.57 | 32.87 | 33.16 |

\(^{\text{1}}\) Measurement tolerances \(P_{\text{MPP}}\) ± 3 %; \(I_{\text{SC}}\), \(V_{\text{OC}}\) ± 5 % at STC: 1000 W/m², 25 ± 2 °C, AM 1.5 according to IEC 60904-3.

\(^{\text{2}}\) Q CELLS PERFORMANCE WARRANTY

**PERFORMANCE AT LOW IRRADIANCE**

At least 98 % of nominal power during first year. Thereafter max. 0.54 % degradation per year. At least 93.1 % of nominal power up to 10 years. At least 85 % of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organisation of your respective country.

**TEMPERATURE COEFFICIENTS**

- Temperature Coefficient of \(I_{\text{SC}}\) \(a\) \([\% / \text{K}]\) +0.04
- Temperature Coefficient of \(V_{\text{OC}}\) \(\beta\) \([\% / \text{K}]\) -0.27
- Temperature Coefficient of \(P_{\text{MPP}}\) \(\gamma\) \([\% / \text{K}]\) -0.35

**Nominal Module Operating Temperature**

NMOT \([\text{°C}]\) 43 ± 3

**PROPERTIES FOR SYSTEM DESIGN**

- Maximum System Voltage \(V_{\text{bus}}\) \([\text{V}]\) 1000
- PV module classification Class II
- Maximum Reverse Current \(I_{\text{R}}\) \([\text{A}]\) 20
- Fire Rating based on ANSI / UL 61730 C / TYPE 2
- Permitted Module Temperature on Continuous Duty -40 °C - 85 °C
- Max. Design Load, Push / Pull \([\text{Pa}]\) 3600 / 2667
- Max. Test Load, Push / Pull \([\text{Pa}]\) 5400 / 4000

**QUALIFICATIONS AND CERTIFICATES**

**PACKAGING INFORMATION**

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. Q CELLS supplies solar modules in two different stacking methods, depending on the location of manufacture (modules are packed horizontally or vertically). You can find more detailed information in the document "Packaging and Transport Information", available from Q CELLS.

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Engineered in Germany