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 Technology¹, 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).

A RELIABLE INVESTMENT
Inclusive 25-year product warranty and 25-year linear performance warranty².

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

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 × 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, Amphenol UTx, Renhe 05-6, Tonging TL-Cable015, JMTH-Y, JM601, IP68 or Friends PV26; IP67

ELECTRICAL CHARACTERISTICS

POWER CLASS 330 335 340 345

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

<table>
<thead>
<tr>
<th>Power at MPP</th>
<th>P_{MPP} [W]</th>
<th>330</th>
<th>335</th>
<th>340</th>
<th>345</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Short Circuit Current</td>
<td>I_{SC} [A]</td>
<td>10.41</td>
<td>10.47</td>
<td>10.52</td>
<td>10.58</td>
</tr>
<tr>
<td>Open Circuit Voltage</td>
<td>V_{OC} [V]</td>
<td>40.15</td>
<td>40.41</td>
<td>40.66</td>
<td>40.92</td>
</tr>
<tr>
<td>Current at MPP</td>
<td>I_{MP} [A]</td>
<td>9.91</td>
<td>9.97</td>
<td>10.02</td>
<td>10.07</td>
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<tr>
<td>Voltage at MPP</td>
<td>V_{MP} [V]</td>
<td>33.29</td>
<td>33.62</td>
<td>33.94</td>
<td>34.25</td>
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<tr>
<td>Efficiency</td>
<td>η [%]</td>
<td>≥ 18.4</td>
<td>≥ 18.7</td>
<td>≥ 19.0</td>
<td>≥ 19.3</td>
</tr>
</tbody>
</table>

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT

<table>
<thead>
<tr>
<th>Power at MPP</th>
<th>P_{MPP} [W]</th>
<th>2470</th>
<th>260.7</th>
<th>254.5</th>
<th>258.2</th>
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</thead>
<tbody>
<tr>
<td>Minimum Short Circuit Current</td>
<td>I_{SC} [A]</td>
<td>8.39</td>
<td>8.43</td>
<td>8.48</td>
<td>8.52</td>
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<tr>
<td>Open Circuit Voltage</td>
<td>V_{OC} [V]</td>
<td>37.66</td>
<td>38.10</td>
<td>38.34</td>
<td>38.59</td>
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<tr>
<td>Current at MPP</td>
<td>I_{MP} [A]</td>
<td>7.80</td>
<td>7.84</td>
<td>7.89</td>
<td>7.93</td>
</tr>
<tr>
<td>Voltage at MPP</td>
<td>V_{MP} [V]</td>
<td>31.66</td>
<td>31.97</td>
<td>32.27</td>
<td>32.57</td>
</tr>
</tbody>
</table>

Q CELLS PERFORMANCE WARRANTY

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_{SC} α [%/K] +0.04

Temperature Coefficient of V_{OC} β [%/K] −0.27

Temperature Coefficient of P_{MPP} γ [%/K] −0.36

Normal Module Operating Temperature NMOT [°C] 43 ±3

QUALIFICATIONS AND CERTIFICATES

VDE Quality Tested, IEC 61215:2016; IEC 61730:2016, Application Class II;

This data sheet complies with DIN EN 50380.

ENGINEERED IN GERMANY

Hanwha Q CELLS GmbH
Sonnenallee 17-21, 06766 Bitterfeld-Wolfen, Germany | TEL +49 (0)3494 66 99-23444 | FAX +49 (0)3494 66 99-23000 | EMAIL sales@q-cells.com | WEB www.q-cells.com