Q.PEAK DUO L-G8.3 / BGT
410-425
BIFACIAL DOUBLE GLASS MODULE
WITH EXCELLENT RELIABILITY
AND ADDITIONAL YIELD

BIFACIAL ENERGY YIELD GAIN OF UP TO 20%
Bifacial Q.ANTUM solar cells make efficient use of light shining on the module rear-side for radically improved LCOE.

LOW ELECTRICITY GENERATION COSTS
Q.ANTUM DUO combines cutting edge cell separation and innovative wiring with Q.ANTUM Technology for higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 20.1%.

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

ENDURING HIGH PERFORMANCE
Long-term yield security with Anti LID and Anti PID Technology¹, Hot-Spot Protect and Traceable Quality Tra.Q™.

FRAME FOR VERSATILE MOUNTING OPTIONS
High-tech aluminum alloy frame protects from damage, enables use of a wide range of mounting structures and is certified regarding IEC for high snow (5400Pa) and wind loads (3000Pa).

A RELIABLE INVESTMENT
Double glass module design enables extended lifetime with 12-year product warranty and improved 30-year performance warranty.²

¹ APT test conditions according to IEC/TS 62804-1:2015 method B (-1500 V, 168 h) including post treatment according to IEC 61215-1-1 Ed. 2.0 (CD)
² See data sheet on rear for further information

THE IDEAL SOLUTION FOR:
- Rooftop arrays on commercial/industrial buildings
- Ground-mounted solar power plants

Engineered in Germany
**MECHANICAL SPECIFICATION**

Format: 81.9 in x 40.5 in x 1.37 in (including frame) (2080 mm x 1030 mm x 35 mm)

Weight: 62.8 lbs (28.5 kg)

Front Cover: 0.07 in (2 mm) thermally pre-stressed glass with anti-reflection technology

Back Cover: 0.07 in (2 mm) semi-tempered glass

Frame: Anodized aluminum

Cell: 6 x 24 monocrystalline Q.ANTUM solar half cells

Junction Box: 3.42-3.94 in x 1.26-1.51 in x 0.73 in (87-103 mm x 32-38.5 mm x 18.7 mm), IP67, with bypass diodes

Cable: 4 mm² Solar cable; (+) ≥ 17.7 in (450 mm), (−) ≥ 7.87 in (200 mm)

Connector: Stäubli MC4-Evo2, Hanwha Q CELLS HQC4, Amphenol UTX, JMH601A, Tongling Cable01S-F, IP68 or Friends PV2e, IP67

**ELECTRICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>POWER CLASS</th>
<th>410</th>
<th>415</th>
<th>420</th>
<th>425</th>
</tr>
</thead>
<tbody>
<tr>
<td>MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC and BSTC² (POWER TOLERANCE +5 W / −0 W)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power at MPP¹</td>
<td>P_{PMP} [W]</td>
<td>410</td>
<td>448.5</td>
<td>415</td>
</tr>
<tr>
<td>Short Circuit Current¹</td>
<td>I_{SC} [A]</td>
<td>10.65</td>
<td>11.67</td>
<td>10.69</td>
</tr>
<tr>
<td>Open Circuit Voltage¹</td>
<td>V_{OC} [V]</td>
<td>48.34</td>
<td>48.52</td>
<td>48.59</td>
</tr>
<tr>
<td>Current at MPP</td>
<td>I_{MP} [A]</td>
<td>10.13</td>
<td>11.09</td>
<td>10.18</td>
</tr>
<tr>
<td>Voltage at MPP</td>
<td>V_{MP} [V]</td>
<td>40.46</td>
<td>40.45</td>
<td>40.77</td>
</tr>
<tr>
<td>Efficiency¹</td>
<td>η [%]</td>
<td>≥ 19.1</td>
<td>≥ 20.9</td>
<td>≥ 19.4</td>
</tr>
</tbody>
</table>

Bifaciality of P_{MP} and I_{SC}: 70% ± 5% • Bifaciality given for rear side irradiation on top of STC (front side) • According to IEC 60904-1-2

¹Measurement tolerances P_{MP} ± 3%, I_{SC} ± 5% at STC: 1000 W/m², *at BSTC: 1000 W/m² + Φ × 135 W/m², Φ = 70% ± 5%, 25 ± 2°C, AM 1.5 according to IEC 60904-3

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT

| Power at MPP² | P_{PMP} [W] | 307.1 | 310.8 | 314.5 | 318.3 |
| Short Circuit Current | I_{SC} [A] | 8.58 | 8.61 | 8.65 | 8.69 |
| Open Circuit Voltage² | V_{OC} [V] | 45.58 | 45.82 | 46.05 | 46.29 |
| Current at MPP | I_{MP} [A] | 7.98 | 8.01 | 8.05 | 8.08 |
| Voltage at MPP | V_{MP} [V] | 38.49 | 38.79 | 39.09 | 39.38 |

²800 W/m², NMOT, spectrum AM 1.5

**Q CELLS PERFORMANCE WARRANTY**

Performance at Low Irradiance

At least 98% of nominal power during first year. Thereafter max. 0.5% degradation per year. At least 93.5% of nominal power up to 10 years. At least 83.5% of nominal power up to 30 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_{MP} | γ [%/K] | −0.35 |

Nominal Module Operating Temperature NMOT [*°F] 108 ±5.4 (42 ±3°C)

**PROPERTIES FOR SYSTEM DESIGN**

| Maximum System Voltage V_{DC} [V] | 1500 (IEC)/1500 (UL) |
| Maximum Series Fuse Rating | 20 TYPE 29 (UL)¹ |
| Max. Design Load, Push/Pull² | 75 (3600 Pa)/42 (2000 Pa) |
| Max. Test Load, Push/Pull² | 113 (5400 Pa)/63 (3000 Pa) |
| Class II Fire Rating based on ANSI/UL 61730 |

¹See Installation Manual

²New Type is similar to Type 3 but with metallic frame

**QUALIFICATIONS AND CERTIFICATES**


**PACKAGING AND TRANSPORT INFORMATION**

Horizontal packaging 83.8 in / 2130 mm 42.5 in / 1080 mm 47.1 in / 1196 mm 192 lbs / 867.4 kg 22 pallets 22 pallets 29 modules

**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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