Q.PEAK DUO L-G8.3 / BFF
410-425

BIFACIAL GLASS FOIL 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 Technology\(^1\), 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 (2400Pa).

A RELIABLE INVESTMENT
Double glass module design enables extended lifetime with 12-year product warranty and improved 25-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 54 lbs (24.5 kg)
Front Cover 0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover Transparent composite film
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 - 103.3 mm x 32 - 38.5 mm x 18.7 mm), IP67, with bypass diodes
Cable 4 mm² Solar cable; (+) ≥ 17.7 in (450 mm), (−) ≥ 200 mm
Connector Stäubli MC4-Evo2, Hanwha Q CELLS HQC4, Amphenol UTX, Renhe 05-8, JMTHY JM601A, Tongling Cable015-F, IP68 or Friends PV2e, IP67

ELECTRICAL CHARACTERISTICS

POWER CLASS

| Minimum Performance at Standard Test Conditions, STC* and BSTC* (Power Tolerance +5 W / −0 W) |
|---|---|---|---|---|
| Power at MPP | P_{MP} [W] | 410 | 415 | 420 | 425 |
| Short Circuit Current | I_{SC} [A] | 10.65 | 11.65 | 10.69 | 11.74 | 11.75 | 10.78 | 11.80 |
| Open Circuit Voltage | V_{OC} [V] | 48.34 | 48.52 | 48.76 | 48.84 | 49.01 | 49.09 | 49.26 |
| Current at MPP | I_{MP} [A] | 10.13 | 11.09 | 11.14 | 10.22 | 11.18 | 10.27 | 11.23 |
| Voltage at MPP | V_{MP} [V] | 40.46 | 40.45 | 40.77 | 40.76 | 41.08 | 41.07 | 41.39 |
| Efficiency | η [%] | 19.1 | 20.9 | 19.4 | 21.2 | 19.6 | 21.4 | 19.8 | 21.6 |

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

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT

| Minimum Performance at Low Irradiance, BSTC | BSTC |
|---|---|---|---|
| Power at MPP | P_{MP} [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 Voltage | 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 |

*200 W/m², NMOT, spectrum AM 1.5

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 3 years. At least 95 % of nominal power up to 10 years. At least 98 % of nominal power during 25 years.

At least 93.8 % of nominal power up to 3 years. At least 97.1 % of nominal power up to 10 years. At least 98.1 % 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 [%/°C] | +0.04 |
| Temperature Coefficient of V_{OC} | β [%/°C] | -0.27 |
| Temperature Coefficient of P_{MP} | γ [%/°C] | -0.35 |

| PV module classification | Class II |
| Fire Rating based on ANSI / UL 61730 | TYPE 1 |
| Permitted Module Temperature on Continuous Duty | -40 °F up to +185 °F (-40 °C up to +85 °C) |

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V_{VS} [V] 1500 (IEC) / 1500 (UL)
Maximum Series Fuse Rating [A DC] 20
Max. Design Load, Push / Pull [lbs/ft²] 76 (3600 Pa) / 33 (1800 Pa)
Max. Test Load, Push / Pull [lbs/ft²] 113 (5400 Pa) / 50 (2400 Pa)

QUALIFICATIONS AND CERTIFICATES


PACKAGING AND TRANSPORT INFORMATION

Horizontal packaging 83.9 in 2130 mm 42.5 in 1080 mm 47.1 in 1196 mm 1655 lbs 750.5 kg 24 pallets 22 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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