

48QL6-DB

460-485 Watt

ALL BLACK MONO-FACIAL MODULE
WITH DUAL GLASS



Higher Power on Front Side

Leading power class based on the enhanced N-type TOPCon platform, achieved through cutting-edge technology and an optimized layout that captures more sunlight.



Optimized Heat resistance

Optimized temperature coefficient achieved via advanced graphical patterning, busbar and multi-cell technology.



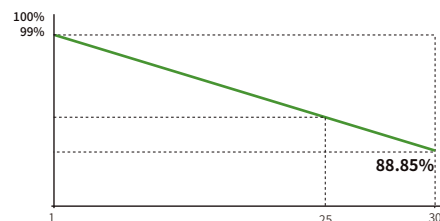
Proven Low Light Performance

Enhanced cell structure ensures superior module performance under low-light conditions.



Mechanical Load Enhanced

Certified to withstand:
6000 Pa front side max static test load
4000 Pa rear side max static test load



25 Year
Product Warranty

30 Year
Linear Power
Warranty

1%
First-year
Degradation

0.35%
Annual Degradation
Over 30 Years



Industry Leading Warranty

Advanced metallization and iterated module encapsulation deliver superior resistance to PID, LID / LeTID, and UV degradation.

- IEC61215:2021 / IEC61730:2023
- IEC61701 / IEC62716 / IEC60068 / IEC62804
- ISO9001:2015: Quality Management System
- ISO14001:2015: Environment Management System
- ISO45001:2018: Occupational health and safety management systems



JKM460-485N-48QL6-DB-F4-EU

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Mechanical Characteristics

Cell Type	N- type Mono-crystalline
No. of cells	192 (48×4)
Dimensions	1762×1134×30 mm
Weight	24.4 kg
Front Glass	2.0 mm, Anti-reflection Coating
Back Glass	2.0 mm, Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Protection Class	Class II
IEC Fire Type	Class C
Connector Type	JK03M/JK03M2/Others*
Output Cables (Including Connector)	≥ 4.0 mm ² (+): 500 mm , (-): 400 mm or Customized Length

* MC4-EVO2 available upon request and subject to availability

Packaging Configuration

Pallet Dimensions	1792×1140×1249 mm
Packing Detail (Two pallets = One stack)	37 pcs/pallets, 74 pcs/stack, 962 pcs/ 40'HQ Container

Specifications (STC)

Maximum Power - Pmax [Wp]*	460	465	470	475	480	485
Maximum Power Voltage - Vmp [V]	30.63	30.80	30.97	31.13	31.32	31.50
Maximum Power Current - Imp [A]	15.02	15.10	15.18	15.26	15.33	15.40
Open-circuit Voltage - Voc [V]	35.69	35.94	36.19	36.44	36.69	36.94
Short-circuit Current - Isc [A]	15.70	15.75	15.80	15.85	15.89	15.94
Module Efficiency STC [%]	23.02	23.27	23.52	23.77	24.02	24.27
Power Sorting	0 ~ + 3 %					
Temperature Coefficient of Pmax	-0.26 %/°C					
Temperature Coefficient of Voc	-0.24 %/°C					
Temperature Coefficient of Isc	0.046 %/°C					

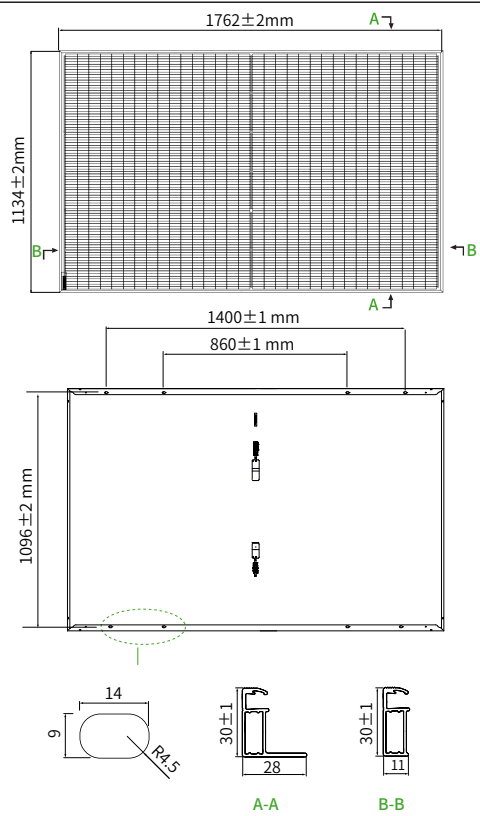
STC: Irradiance 1000W/m², Cell Temperature 25°C, AM=1.5. *Power measurement tolerance: ±3%

Application Conditions

Level T ₉₈ ≤ 70 °C	- 40 °C to + 70 °C*
Maximum System Voltage	1500 V DC (IEC)
Maximum Series Fuse Rating	30 A

*Short-term up to 85°C; higher operation requires IEC TS 63126 testing

Engineering Drawings



*Note: For specific dimensions and tolerance ranges, please refer to the corresponding detailed module drawings.

Electrical Performance

