

# 48QL6-DB

470 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.



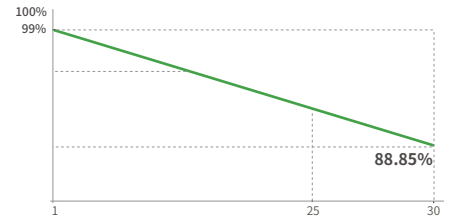
## Industry Leading Warranty

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



## 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

- 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



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## Mechanical Characteristics

Cell Type	N- type Mono-crystalline
No. of cells	192 (48×4)
Dimensions	1762×1134×30 mm
Weight	24.4kg
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 <sup>2</sup> (+): 600 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]	470
Maximum Power Voltage - Vmp [V]	30.97
Maximum Power Current - Imp [A]	15.18
Open-circuit Voltage - Voc [V]	36.19
Short-circuit Current - Isc [A]	15.80
Module Efficiency STC [%]	23.52
Power Tolerance	0 ~ + 3 %
Temperature Coefficient of Pmax	-0.26 %/°C
Temperature Coefficient of Voc	-0.24 %/°C
Temperature Coefficient of Isc	0.046 %/°C

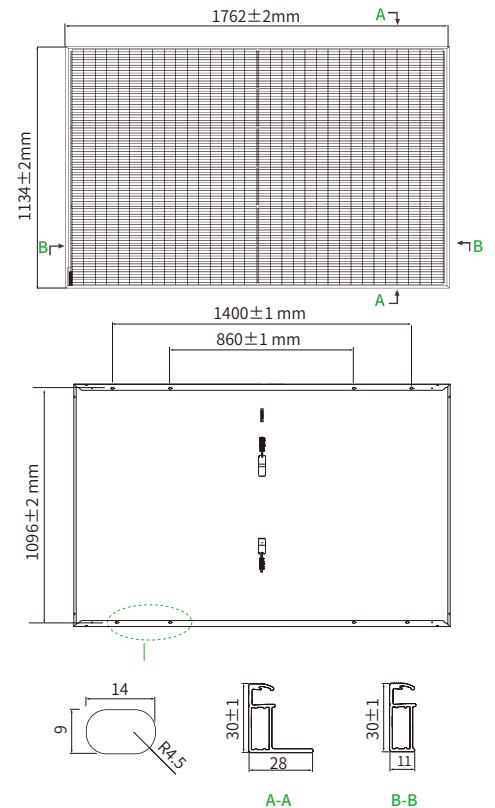
STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM=1.5

## Application Conditions

Level T <sub>98</sub> ≤ 70 °C	- 40 °C to + 70 °C*
Maximum System Voltage	1500 VDC (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

