



N-Type ABC Dual-glass Module

AIKO-A-MAH54Db

Up to **23.3%**
440W-455W



Product
Warranty



Performance
Warranty



reddot winner 2023

Full Black Design

No grid lines on the front

Higher Power Output

Higher efficiency: 23.3%

Lower degradation: 1 Year \leq 1.0%, 2 -30 Year \leq 0.35%

Better Temperature Coefficient: $-0.29\%/^{\circ}\text{C}$

Optimized Balance of System (BOS)

Significant savings on mounting structure, cabling, and labour cost

Complete Set of Quality Management System

IEC 61730 (2016) IEC 61215 (2021)

ISO 9001:2015 Quality Management System

ISO 14001:2015 Environmental Management System

ISO 45001:2018 Occupational Safety and Management System



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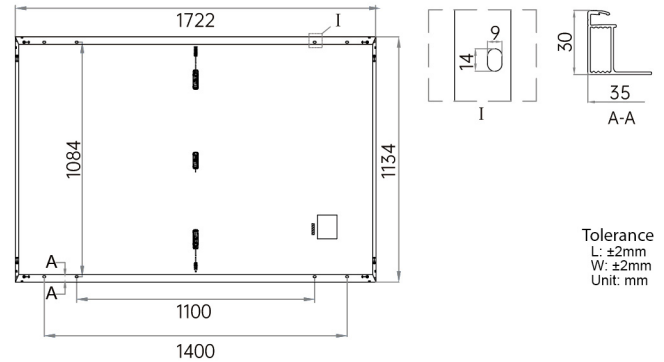
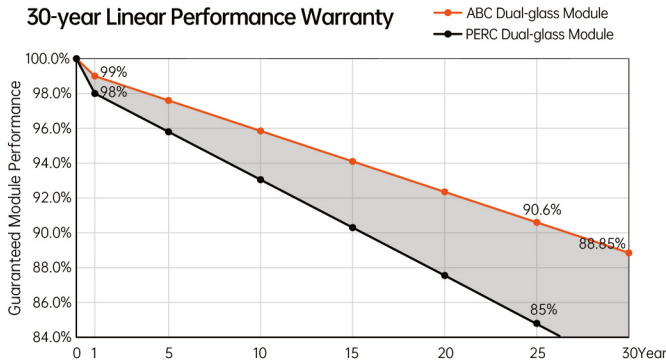
AIKO-A-MAH54Db

455W
Output

23.3%
Efficiency

≤1%
First-year Degradation

≤0.35%
Annual Degradation from Year 2-30



Electrical Characteristics (STC: AM1.5 1000W/m² 25°C NOCT: AM1.5 800W/m² 20°C 1m/s) Power Tolerance: 0~+3% Max Power Test Uncertainty: ±3%

Model	AIKO-A440-MAH54Db		AIKO-A445-MAH54Db		AIKO-A450-MAH54Db		AIKO-455-MAH54Db	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
P _{max} [W]	440	332	445	336	450	339	455	343
V _{oc} [V]	40.05	37.72	40.15	37.82	40.25	37.91	40.35	38.00
V _{mp} [V]	33.69	31.73	33.79	31.83	33.89	31.92	33.99	32.01
I _{sc} [A]	13.54	10.98	13.60	11.03	13.66	11.08	13.72	11.13
I _{mp} [A]	13.07	10.47	13.18	10.56	13.28	10.65	13.39	10.73
Module Efficiency	22.5%		22.8%		23.0%		23.3%	

Mechanical Specification

Cell Type	Mono-crystalline Silicon
Glass	Dual glass, 1.6+1.6mm/2.0+2.0mm coated semi tempered glass
Frame	Black anodized aluminum
Cable	4mm ² (IEC) 12AWG(UL) 350mm or Customized Length
No. of Cells	108(6*18)
Junction Box	IP68, three bypass diodes
Connector	MC4 compatible
Weight	21.0/24.0kg±3%
Dimension	1722*1134*30mm
Package Detail	36pcs per pallet/216 pcs per 20' GP/936pcs per 40' HQ

Temperature Ratings (STC)

Temperature Coefficient of I _{sc}	+ 0.05%/ °C
Temperature Coefficient of V _{oc}	- 0.24%/ °C
Temperature Coefficient of P _{max}	- 0.29%/ °C

Installation Guide

Operation Temperature	- 40°C~+85°C
Maximum Series Fuse Rating	25A
Protection Class	Class II
V _{oc} and I _{sc} Tolerance	±3%
Maximum System Voltage	DC1500V
Maximum Static Loading	Front 5400Pa Back 2400Pa
Hail Test	25 mm diameter hail at 23 m/s
Fire Rating	IEC Class C



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*Aiko Energy reserves right to update the specification
without notice
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