



Neostar 1S

ABC N-Type

Mono-Glass Model

Up to **23.0%**
430W-450W



Product
Warranty



Performance
Warranty



reddot winner 2023

Full Black Design

No front grid lines

Higher Power Output

Higher efficiency: 23.0%

Lower degradation: 1st year $\leq 1.0\%$, Linear Degradation $\leq 0.35\%$

Better temperature coefficient: $-0.26\%/^{\circ}\text{C}$

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

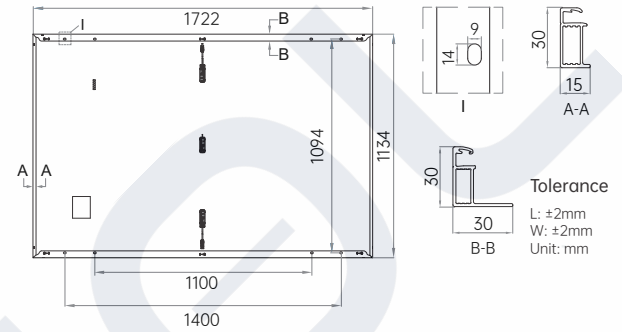
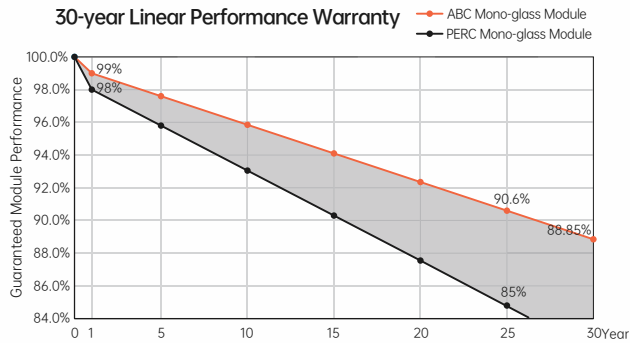
ISO 14001:2015 Environmental Management System

ISO 45001:2018 Occupational Safety and Management System

450W
Output

23.0%
Efficiency

 $\leq 1\%$
First-year Degradation

 $\leq 0.35\%$
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%

Model	AIKO-A430-MAH54Mb		AIKO-A435-MAH54Mb		AIKO-A440-MAH54Mb		AIKO-A445-MAH54Mb		AIKO-A450-MAH54Mb	
Test Conditions	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
P_{max} [W]	430	324	435	327	440	331	445	335	450	339
V_{oc} [V]	40.29	38.05	40.39	38.14	40.49	38.24	40.59	38.33	40.69	38.43
V_{mp} [V]	33.30	31.45	33.40	31.55	33.50	31.64	33.60	31.73	33.70	31.83
I_{sc} [A]	13.69	11.07	13.80	11.16	13.91	11.25	14.02	11.33	14.12	11.42
I_{mp} [A]	12.92	10.31	13.03	10.40	13.14	10.49	13.25	10.57	13.36	10.66
Module Efficiency	22.0%		22.3%		22.5%		22.8%		23.0%	

Mechanical Specification

Cell Type	N-Type ABC
Front Cover Mono glass	3.2 mm tempered glass
Frame	Black anodized aluminum
Cable	4mm ² (IEC) 12AWG(UL) 1200mm
No. of Cells	108(6*18)
Junction Box	IP68, 3 bypass diodes
Connector	MC4-Evo2
Weight	20.5kg
Dimension	1722*1134*30mm
Package Detail	36pcs per pallet / 216pcs per 20'GP / 936pcs per 40'HC

Temperature Ratings (STC)

Temperature Coefficient of I_{sc}	+ 0.05% / °C
Temperature Coefficient of V_{oc}	- 0.22% / °C
Temperature Coefficient of P_{max}	- 0.26% / °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

AEBHS_EN_V5.4

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