



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

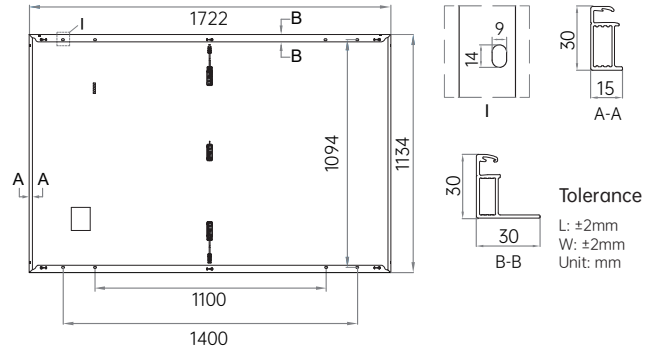
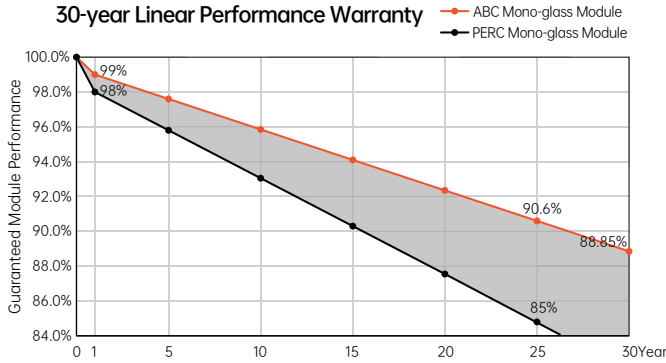
ISO 45001:2018 Occupational Safety and Management System

450W
Output

23.0%
Efficiency

≤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%

Model	AIKO-A430-MAH54Mb		AIKO-A435-MAH54Mb		AIKO-A440-MAH54Mb		AIKO-A445-MAH54Mb		AIKO-A450-MAH54Mb	
	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



Battery Storage

PGEM

- Quick installation
- Remote monitoring
- Flexible remote upgrade
- Auto-addressing for master/slaves set up
- Parallel up to 32 modules
- Wide range inverter compatibility
- 1C rate continuous charge/discharge
- Multi protection to avoid over discharge
- Smart BMS management for longer lifespan
- Active balancing charging, low self consumption



Specifications

Model	PGEM
Cell Type	LFP
Rated Power	5.12kWh
Rated Capacity	100Ah
Rated Voltage	51.2V
Charge Voltage	56.5V
Max. Charge/Discharge Current	100A
Discharge Peak Current	105A / 15s, 150A / 0.5s
Parallel	Up to 32 units parallelable w/o extra device needed, slave battery drops offline or come back alive does not affect system running
IP Level	IP20
Dimension(W*D*H mm)	428*640*166mm
Weight	58kg/127.9lbs
Communication	CAN/RS485
Compatible Inverter	Victron, Luxpower, Deye, Voltronic, SMA Goodwe, Growatt, Sofar, Solark, SRNE, Must
Humidity	5%~85% RH (No condensation)
Work Temperature	-20 ~ +55 °C
Storage Temperature	-10 ~ +35 °C
Remote Maintenance	Flexible remote upgrade, remote monitoring Original firmware backup to prevent upgrade failure
Warranty *	10 years, 6000 cycles
Certification	CE UN38.3; IEC62619
Protection	Overcharge/discharge/current/voltage/temperature protection Short circuit protection, Reverse connection protection Stronger active balance, Low SOC protection

ECO HYBRID

Single-Phase

SNA 12K

- 2 MPPTs with 4 strings, Max. 24kW PV input
- Max. charging and discharging current: 250A
- Off-grid application for high demand with 12kW output power
- Dual AC output ports for multiple load connections
- Separate GEN port
 - Up to 19.2kW Gen/AC coupling input
 - Auto generator start and stop control
- Integrated Design with Load and Battery Breaker
- PV or AC or Generator wake up battery



Specification

INPUT (PV DC)		SNA 12K
Max. PV array power (W)		24000 (12000/12000)
Rated PV input voltage (V)		320
Number of independent MPPT inputs		2/(2:2)
PV input voltage range (V)		100-480
MPPT voltage range (V)		120-385
Start-up voltage (V)		100
Max. PV input current per MPPT (A)		35/35
Max. PV short-circuit current input per MPPT (A)		44/44
Battery		
Compatible battery type		Lithium-ion/Lead-Acid
Rated battery voltage (V)		48/51.2
Battery voltage range (V)		46.4-60/38.4-60
Max. charging / discharging current (A)		250
Max. charging / discharging power (W)		12000
Force wake up battery from PV and Grid function		YES
Grid		
Rated AC voltage (V)		230
Acceptable Input Voltage Range (V)		90~280
Rated AC frequency (Hz)		60/50
Rated AC input current (A)		100
Rated AC input power (W)		24000
PF		0.99
THDI		<5%
Max. continuous AC passthrough current(A)		100
UPS		
Rated output power (W)		12000
Rated output voltage (V)		230
Rated output current (A)		50
Rated output frequency (Hz)		50/60
Surge power, duration		2Pn, 5s
Switching time (UPS)		<10ms@Single and Parallel
Wave form		Sine wave
THDV		3%
GEN		
Acceptable input voltage range		230
Max. AC input voltage (V)		280
Max. AC input current (A)		63
Rated input frequency		50Hz/60Hz (Auto detection)
Transfer time		<10ms@Single; <20ms@Parallel
THDV		<3%
Overload protection		5s@≥150% load /10s@110%~150% load
Efficiency		
Max. efficiency		93.5%
Max. charging / discharging efficiency		93.0%
Max. MPPT efficiency		99.0%
Protection		
PV reverse polarity protection(Y/N)		YES
Over current / voltage protection(Y/N)		YES
AC Short-circuit current protection(Y/N)		YES
Grid monitoring(Y/N)		YES
DC switch(Y/N)		YES
DC / AC Surge protection Type III		YES
Battery reverse polarity protection(Y/N)		YES
General		
Dimensions (W*H*D mm)		530*830*150mm(17.72*25.59*5.9inch)
Weight		40kg/88.2lbs
Ingress protection rating		IP20
Operating environment temperature range(°C)		0~45
Storage temperature range(°C)		-15~60
Relative humidity		5% ~ 95%
Display & Communication interface		LCD+RGB, RS485 / Wifi / CAN
Warranty		2 years
Cooling method		Smart cooling
Topology on AC / Battery side		Transformer-less / Transformer
Altitude (m)		<2000
Noise emission (typical)		<50dB
Standard & Certification		
CE		