








# NEOSTAR

2S+ Dual-Glass Module  
440W-470W

## Technical Features:

-  Partial Shading Optimisation
-  Better Temperature Coefficient
-  High Temperature Restriction
-  Micro-crack Resistance
-  Higher Power
-  Lower BOS
-  More Aesthetic Values



reddot winner 2023



Product  
Warranty



Performance  
Warranty



Munich RE 

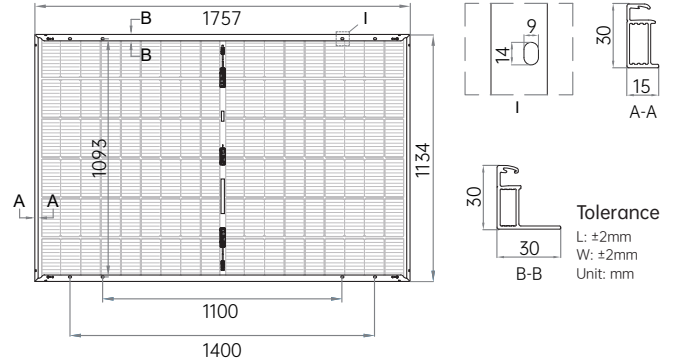
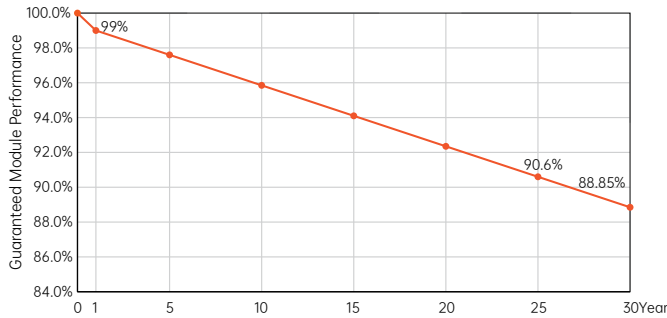
**470W**  
Output

**23.6%**  
Efficiency

**≤1%**  
First-year Degradation

**≤0.35%**  
Annual Degradation from Year 2-30

### 30-year Linear Performance Warranty



### Electrical Characteristics (STC: AM1.5 1000W/m<sup>2</sup> 25°C NOCT: AM1.5 800W/m<sup>2</sup> 20°C 1m/s)

Power Tolerance: 0~ +3%

Module Type	AIKO-A440-MAH54Db		AIKO-A445-MAH54Db		AIKO-A450-MAH54Db		AIKO-A455-MAH54Db		AIKO-A460-MAH54Db		AIKO-A465-MAH54Db		AIKO-A470-MAH54Db	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
$P_{max}$ [W]	440	331	445	335	450	339	455	343	460	346	465	350	470	354
$V_{oc}$ [V]	40.82	38.55	40.88	38.60	40.94	38.66	41.00	38.72	41.06	38.77	41.12	38.83	41.18	38.89
$V_{mp}$ [V]	34.38	32.47	34.44	32.52	34.50	32.58	34.56	32.64	34.62	32.69	34.68	32.75	34.74	32.81
$I_{sc}$ [A]	13.92	11.26	14.02	11.34	14.12	11.42	14.22	11.50	14.25	11.52	14.29	11.55	14.32	11.58
$I_{mp}$ [A]	12.80	10.22	12.93	10.32	13.05	10.41	13.17	10.51	13.29	10.61	13.41	10.71	13.54	10.80
<b>Module Efficiency</b>	<b>22.1%</b>		<b>22.3%</b>		<b>22.6%</b>		<b>22.8%</b>		<b>23.1%</b>		<b>23.3%</b>		<b>23.6%</b>	

### Mechanical Specification

Cell Type	N-Type ABC
Glass	Dual glass, 2.0 + 2.0mm coated semi tempered glass
Frame	Black Anodized aluminum
Cable	4mm <sup>2</sup> (IEC) 12AWG(UL) ±1200mm
No. of Cells	108(6*18)
Junction Box	IP68, 3 bypass diodes
Connector	MC4-Evo2
Weight	24.5kg
Dimension	1757*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	35 mm diameter hail at 27.2 m/s
Fire Rating	IEC Class C

