

# ABC INFINITE

Latest 3rd Generation

# 475-490W

## 23.8-24.5% Efficiency

**Partial Shading Optimisation**

Better Temperature Coefficient

High Temperature Restriction

Microcrack Resistance

Highly Trusted Warranty

Award Winning Design

Maximum Power



**German**  
R&D Excellence



Product  
Warranty



Performance  
Warranty

The  
**World's Most  
Powerful  
& Efficient**

Full Black Panels

**harrisons solar** Aiko's Exclusive NZ Partner



Munich RE

# The AIKO INFINITE - A Solar Milestone

The new AIKO INFINITE True All-Black, is the world's most powerful, compact and efficient module. The revolutionary multi-ribbon busbars at the rear of the module creates the ultimate in designer looks with no visible metal grid lines. This new cell technology has set a new standard of innovation and is the result of AIKO's commitment to world-class R&D investment and quality.

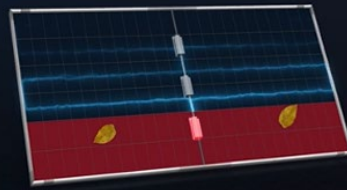


## AIKO's ultra premium panels have changed the game

### Partial Shading Scenario



ABC Module

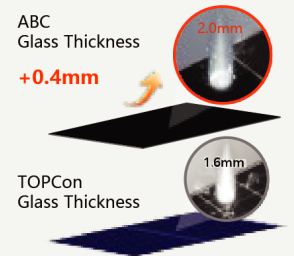


Traditional Module

Up to 30% more electricity

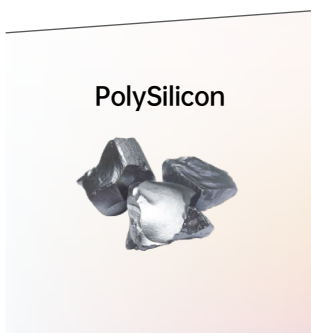
### Robust construction

ABC Dual-glass Module:  
2.0+2.0mm glass, copper grid wire, single-sided soldering, micro-crack resistance, partial shading optimisation, high temperature restriction, fire rating Class A.

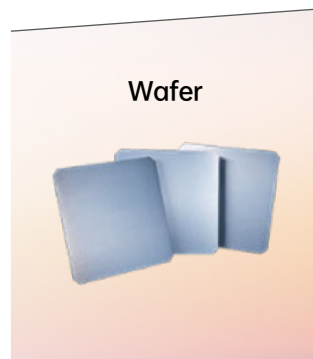


## Vertical Integrated Manufacturing = Ultimate Quality Control

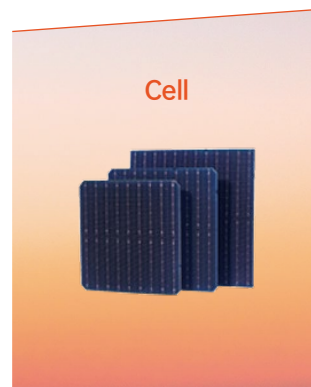
AIKO controls the full production chain – PolySilicon, wafers and cells, all the way to module production. This allows us to implement a very high quality control regime. Our solar cells are sold to many key module manufacturers, but the most efficient and advanced cells with ABC technology are exclusively used in our premium AIKO panel collection.



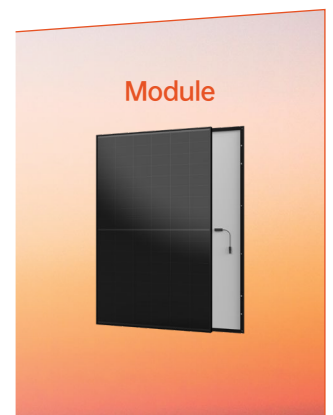
PolySilicon



Wafer



Cell



Module

# Key Features



## European R&D Excellence

With a dedicated R&D facility in Germany, AIKO demonstrates a strong commitment to product innovation and strict quality controls within the European technological landscape.



## Partial Shading Optimisation

Under shaded conditions the AIKO module can produce up to 30% more electricity than traditional modules, thanks to the patented ABC cell design.



## Integrated Manufacturing

AIKO's vertical integration, from making polysilicon, to wafers, cells and panels ensures exceptional quality control from the raw material all the way to the panels.



## Highly Trusted Warranty

The AIKO 25-year product & 30-year performance warranty is a testament to our build quality. Not all panel warranties are robust or credible. AIKO's is one of the most trusted in the industry. The product warranty covers any failure due to manufacturing faults.



## Stunning Appearance

The AIKO Full Black premium panels have been designed with appearance in mind. Their black cells, black frames and no metal wires or grid lines on the front, is an industry first. Provides an ultra sleek, pure black appearance, enhancing roof aesthetics and potentially increasing home resale value.



## Innovative Design Increases Power

The AIKO NeoStar multi-ribbon back contact busbar technology lowers electrical resistance and front of panel shading, therefore increasing panel efficiency & giving more power per m<sup>2</sup> of your valuable roof space.



## More Electricity For You

Because of the higher efficiency, the lower degradation and the better performance in hot weather the AIKO ABC technology can deliver up to 5-7% more output from the same roof space as standard panels.



## Microcrack Resistant

The unique cell properties & back contact technology create a very robust cell structure, resulting in high resistance to microcracks, a common issue in PV modules.



## Industry-Leading Efficiency

AIKO is the first panel manufacturer to achieve over 24% cell efficiency in a fully manufactured panel, not just a lab setting. It's All Back Contact (ABC) technology surpasses many competitor technologies in efficiency.



## Proven Field Performance

AIKO panels have been involved in many comparison tests against other panels and have consistently performed very well. The AIKO NeoStar panel series, are the highest quality full black panel on the market.



## Improved High Temperature Performance

Solar panels slowly lose ability to generate power as they get hotter. The AIKO Full Black has an improved temperature coefficient to many competitor modules, which means in hot weather the AIKO panels will deliver higher electricity output.



## Design Recognition

Proud winner of the industry's most prestigious Red Dot award in Munich for excellence in design and innovation.



## Ethical Standards

The panel and the components are all manufactured by one entity, so all inputs can be traced to demonstrate ethical manufacturing.



## World Leading Producer

AIKO annually produces solar cells for nearly 150 million panels. AIKO's scale ensures the reliability and consistency of their product.

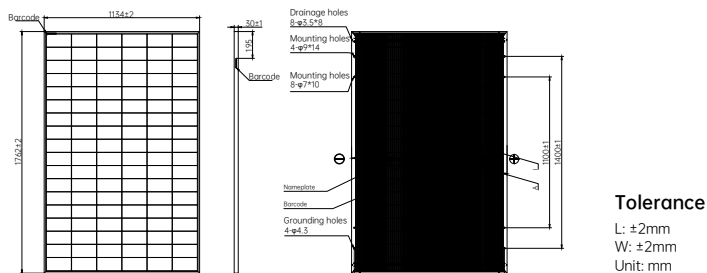
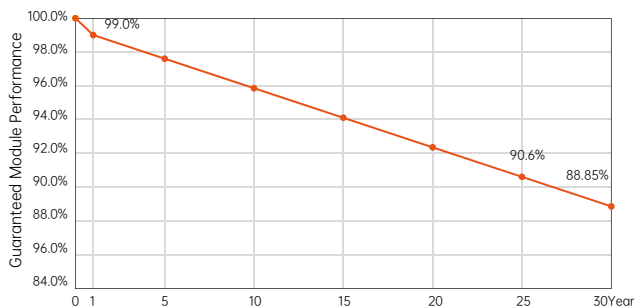
**475-490W**  
Output

**23.8-24.5%**  
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-A460-MCE54Db		AIKO-A465-MCE54Db		AIKO-A470-MCE54Db		AIKO-A475-MCE54Db		AIKO-A480-MCE54Db		AIKO-A485-MCE54Db		AIKO-A490-MCE54Db	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
P <sub>max</sub> [W]	460	349	465	352	470	356	475	360	480	364	485	367	490	371
V <sub>oc</sub> [V]	40.50	38.42	40.60	38.52	40.70	38.61	40.80	38.71	40.90	38.80	41.00	38.90	41.10	38.99
V <sub>mp</sub> [V]	34.10	32.35	34.20	32.45	34.30	32.54	34.40	32.64	34.50	32.73	34.60	32.83	34.70	32.92
I <sub>sc</sub> [A]	14.66	11.85	14.69	11.87	14.72	11.89	14.76	11.93	14.80	11.96	14.84	11.99	14.88	12.02
I <sub>mp</sub> [A]	13.50	10.89	13.60	10.87	13.71	10.96	13.81	11.04	13.92	11.13	14.02	11.21	14.13	11.29
<b>Module Efficiency</b>	<b>23.0%</b>		<b>23.3%</b>		<b>23.5%</b>		<b>23.8%</b>		<b>24.0%</b>		<b>24.3%</b>		<b>24.5%</b>	

### Product 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	106(6*18)
Junction Box	IP68, 3 bypass diodes
Connector	Original MC4
Weight	24.2kg±3%
Dimension	1762*1134*30mm
Package Detail	37pcs per pallet / 222pcs per 20'GP / 962pcs per 40'HC

### Temperature Ratings (STC)

Temperature Coefficient of I <sub>sc</sub>	+ 0.05%/ °C
Temperature Coefficient of V <sub>oc</sub>	- 0.22%/ °C
Temperature Coefficient of P <sub>max</sub>	- 0.26%/ °C

### Installation Guide

Operation Temperature	-40°C - +85°C
Maximum Series Fuse Rating	25A
Protection Class	Class II
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 A

