

# 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



red dot winner 2023



Product  
Warranty



Performance  
Warranty



Munich RE



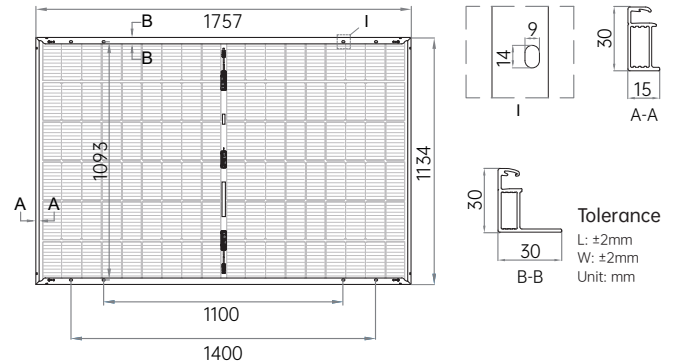
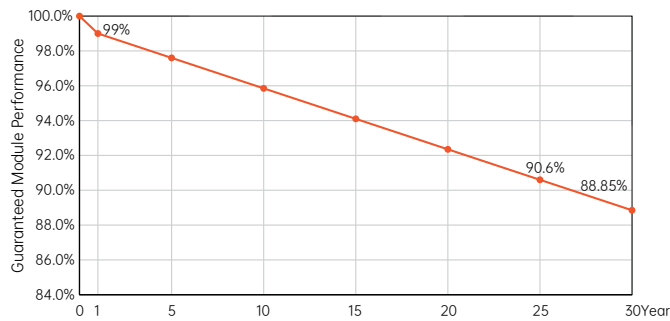
**470W**  
Output

**23.6%**  
Efficiency

 $\leq 1\%$   
First-year Degradation

 $\leq 0.35\%$   
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 |       |
|--------------------------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|
| Test Conditions          | 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                       | 25 mm diameter hail at 23 m/s |
| Fire Rating                     | IEC Class A                   |

