

RESIDENTIAL

# WST-NCX48-AW

## N-TYPE BIFACIAL GLASS-GLASS SERIES

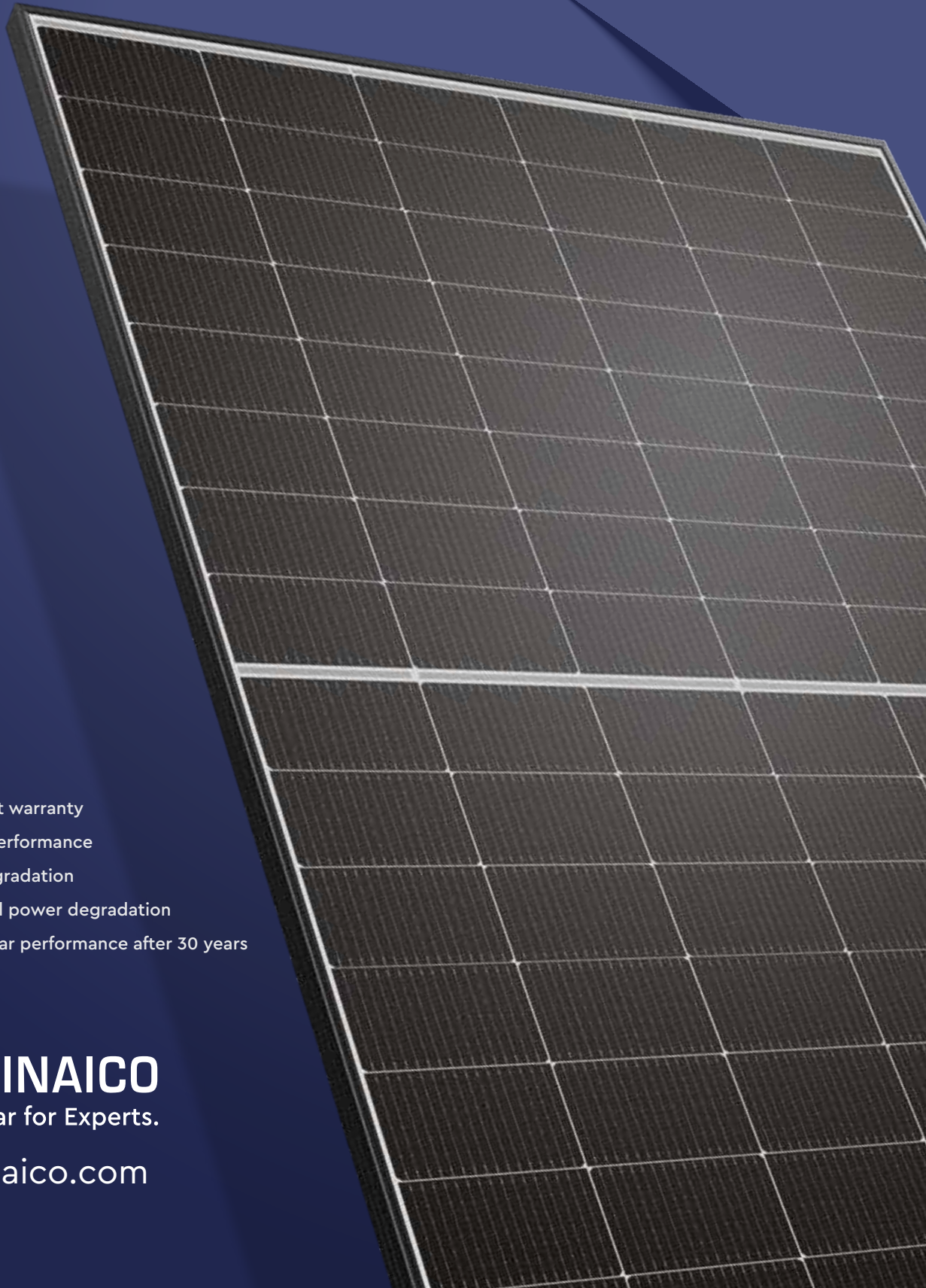
### 470W

30 years product warranty  
30 years linear performance  
-1% 1st-year degradation  
-0.40% annual power degradation  
>87.4% of linear performance after 30 years



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## MECHANICAL DATA

Cell	Monocrystalline, N-type, bifacial
Quantity and wiring of cells	96 (6 strings x 16 cells)
Bifaciality	Up to 80%
Dimensions	1,762 x 1,134 x 35 mm
Weight	25 kg (55.1 lbs)
Front-side glass	2.0 mm, semi-tempered solar glass with anti-reflective coating
Back-side glass	2.0 mm, semi-tempered solar glass, partially white printed
Frame	Black anodised aluminium
Junction box	IP68, 3 bypass diodes
Connector type	PV-KST4-EVO2A/xy, PV-KBT4-EVO2A/xy
Cable length (IEC/UL)	Cable x 2 1,200 mm / 4 mm <sup>2</sup>
Fire safety class <sup>1</sup> (IEC61730)	Class A
Protection class (IEC 61140)	II

## OPERATING CONDITION

Operating temperature	-40 °C to +85 °C / -40 °F to +185 °F
Maximum system voltage IEC	1,500 V
Maximum series fuse	30 A <sup>1</sup>
Maximum design load (push/pull)	5,400 Pa / 2,400 Pa
Maximum test load (push/pull) <sup>2</sup>	8,100 Pa / 3,600 Pa
Nominal module operating temperature NMOT	42 ± 2°C
Temperature coefficient of P <sub>MAX</sub>	-0.28%/°C
Temperature coefficient of V <sub>OC</sub>	-0.23%/°C
Temperature coefficient of I <sub>SC</sub>	0.043%/°C

<sup>1</sup> The installation of additional blocking diodes or fuses is necessary with the parallel connection of module strings.  
<sup>2</sup> Depending on the type of installation according to the installation instructions.

## ELECTRICAL DATA

Module type

WST-470NCX48-AW

Test Conditions		STC <sup>2</sup>	NMOT <sup>3</sup>	BNPI <sup>4</sup>	
Nominal performance	P <sub>MAX</sub>	470	358	515	Wp
Voltage at maximum performance	V <sub>MP</sub>	30.79	29.10	30.79	V
Current at maximum performance	I <sub>MP</sub>	15.27	12.31	16.73	A
Open circuit voltage	V <sub>OC</sub>	35.90	34.36	35.90	V
Short circuit current	I <sub>SC</sub>	15.93	13.17	18.08	A
BSI: 1000 W/m <sup>2</sup> front / 300 W/m <sup>2</sup> rear irradiance	I <sub>SC</sub>		20.22		A
Module efficiency			23.5		%
Bifacial gain <sup>5</sup>	10 % P <sub>mpp</sub>		517 (+47)		W
	15 % P <sub>mpp</sub>		541 (+71)		W
*Depending on irradiation conditions	20 % P <sub>mpp</sub>		564 (+94)		W
Power tolerance			0~+5		W

## PRODUCT AND QUALITY CERTIFICATES

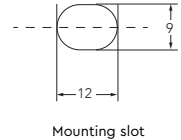
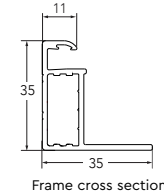
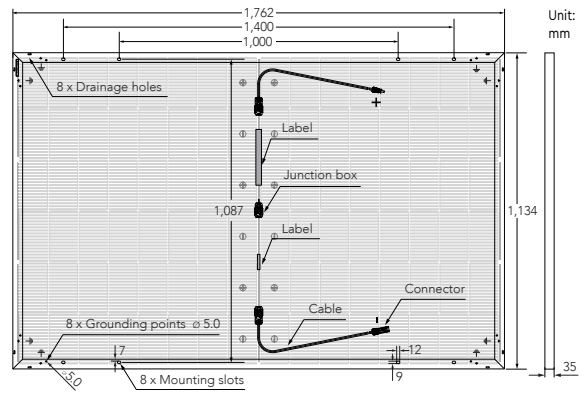
IEC 61215:2021, IEC 61730:2023  
 IEC 61701 Salt Mist Resistance  
 IEC 62716 Ammonia Resistance  
 IEC 61215-2 Hail Storm Resistance (45mm at ~30.7m/s)  
 IEC TS 62804-1 Anti-PID

ISO 9001 Quality Management System  
 ISO 45001 Occupational Health and Safety Management System  
 ISO 14001 Environment Management System  
 SA 8000 Social Accountability



- The fire safety test methods according to IEC 61730-2, Fire Tests of Roof Coverings.
- Electrical data applies under standard test conditions (STC): solar radiation 1,000 W/m<sup>2</sup> with light spectrum AM 1.5, with cell temperature 25 °C. Measurement tolerance of P<sub>max</sub>:±3%; V<sub>oc</sub>:±3%; I<sub>sc</sub>:±3% at STC.
- Electrical data applies under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m<sup>2</sup>, spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.
- BNPI: The front side 1,000 W/m<sup>2</sup> solar irradiance and rear 135 W/m<sup>2</sup>.
- The additional power gain from the rear side depends on the irradiance conditions at the installation site and the mounting situation.

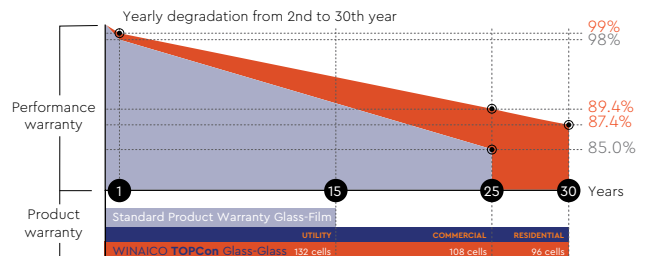
## DIMENSIONS



## PACKAGING



## WINAICO PERFORMANCE GUARANTEE



30 year product guarantee.  
 Linear performance guarantee for 30 years.  
 ≤1% degradation in 1st year.  
 No more than 0.4% degradation per year from 2nd year to 30th year.

Specifications included in this datasheet are subject to change without notice. WST-470NCX48-AW\_EU.0126



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