

COMMERCIAL

WST-NCX54-AW

N-TYPE BIFACIAL GLASS-GLASS SERIES

520-525W



Better low-light performance

Enhanced electricity production in low-irradiance environments



Excellent durability in extreme environments

WINAICO modules are tested above and beyond international standards



PID & LID Resistant

To reduce power degradation and ensure long-term sustained performance

25 years product warranty

30 years linear performance

-1 % 1st-year degradation

-0.40 % annual power degradation

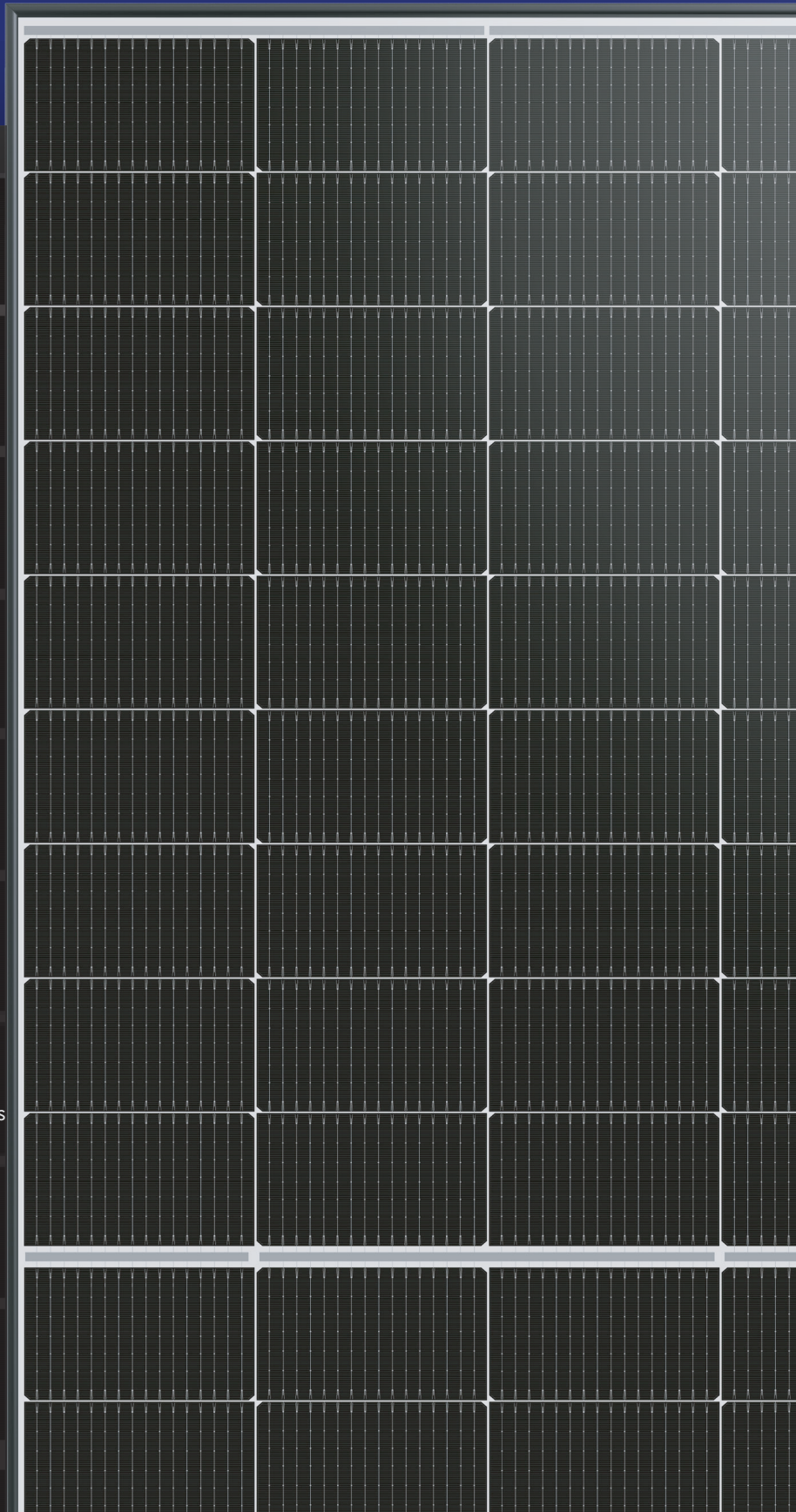
>87.4 % of linear performance after 30 years



WINAICO

Solar for Experts.

www.winaico.com



MECHANICAL DATA

Cell	Monocrystalline, N-type, bifacial
Quantity and wiring of cells	108 (6 strings x 18 cells)
Bifaciality	Up to 80%
Dimensions	1,960 × 1,134 × 30 mm
Weight	27.4 kg (60.4 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 1,250 mm / 4 mm ²
Fire safety class ¹ (IEC61730)	Class C
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*
Maximum design load (push/pull)	3,600 Pa / 1,600 Pa
Maximum test load (push/pull)	5,400 Pa / 2,400 Pa
Nominal module operating temperature NMOT	42 ± 2 °C
Temperature coefficient of P _{MAX}	-0.28%/°C
Temperature coefficient of V _{OC}	-0.23%/°C
Temperature coefficient of I _{SC}	0.043%/°C

*The installation of additional blocking diodes or fuses is necessary with the parallel connection of module strings.

ELECTRICAL DATA

Module type

Electrical data		WST-520NCX54-AW			WST-525NCX54-AW			
		STC ²	NMOT ³	BNPI ⁴	STC ²	NMOT ³	BNPI ⁴	
Nominal performance	P _{MAX}	520	396	570	525	400	575	Wp
Voltage at maximum performance	V _{MP}	33.96	32.09	33.96	34.14	32.26	34.14	V
Current at maximum performance	I _{MP}	15.32	12.35	16.80	15.39	12.40	16.87	A
Open circuit voltage	V _{OC}	40.19	38.46	40.19	40.28	38.55	40.28	V
Short circuit current	I _{SC}	16.31	13.15	18.02	16.39	13.21	18.09	A
BSI: 1000 W/m ² front / 300 W/m ² rear irradiance	I _{SC}	20.40			20.49			A
Module efficiency		23.4			23.6			%
Bifacial gain ⁵	10 % P _{mpp}	572 (+52)			578 (+53)			W
	15 % P _{mpp}	598 (+78)			604 (+79)			W
	20 % P _{mpp}	624 (+104)			630 (+105)			W
Power tolerance		0~+5W			0~+5			W

PRODUCT AND QUALITY CERTIFICATES

IEC 61215:2021, IEC 61730:2023

IEC 61701 Salt Mist Resistance

IEC 62716 Ammonia Resistance

IEC TS 62804-1 Anti-PID

ISO 9001 Quality Management System

ISO 45001 Occupational Health and Safety Management System

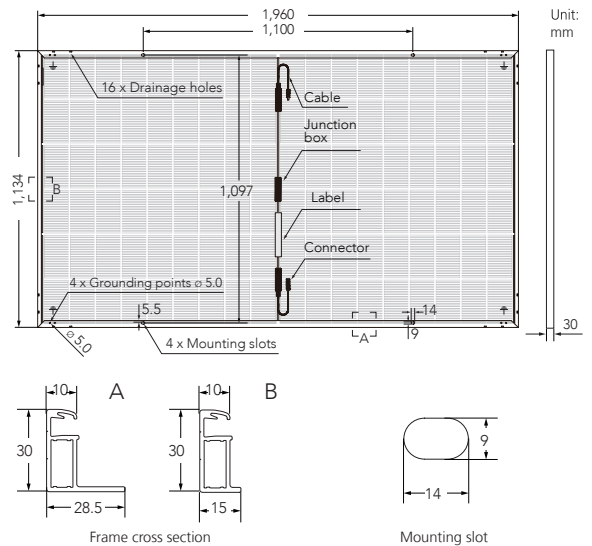
ISO 14001 Environment Management System

SA 8000 Social Accountability

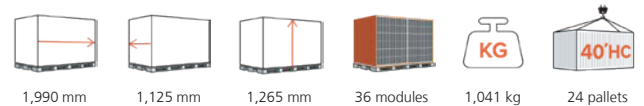


- The fire safety test methods according to IEC 61730-2, Fire Tests of Roof Coverings.
- Electrical data applies under standard test conditions (STC): solar radiation 1,000 W/m² with light spectrum AM 1.5, with cell temperature 25 °C. Measurement tolerance of P_{max}: ±3%; V_{oc}: ±3%; I_{sc}: ±3% at STC.
- Electrical data applies under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20 °C, wind speed 1 m/s.
- BNPI: The front side 1,000 W/m² solar irradiance and rear 135 W/m².
- The additional power gain from the rear side depends on the irradiance conditions at the installation site and the mounting situation.

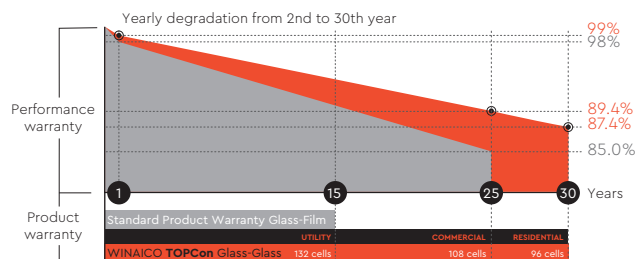
DIMENSIONS



PACKAGING



WINAICO PERFORMANCE GUARANTEE



25 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.



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