

RESIDENTIAL

N-TYPE BIFACIAL GLASS-GLASS SERIES

425/430 watt

WST-NGXB-D3 Full Black



Better low-light performance

Enhanced electricity production
in low-irradiance environments



PID & LID Resistant

To reduce power degradation
and ensure long-term sustained
performance



Excellent durability in extreme environments

WINAICO modules are tested
above and beyond international
standards.

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



Power to Perform

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	1,722 x 1,134 x 35 mm
Weight	24 kg (52.9 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 black printed
Frame	Black anodised aluminium
Junction box	IP68, 3 bypass diodes
Connector type	Stäubli MC4-EVO2A IP68
Cable length (IEC/UL)	Cable 2 x 1,200 mm / 4 mm ²
Fire safety class ¹ (IEC61730)	C
Protection class (IEC 61140)	II

OPERATING CONDITION

Operating temperature	-40 °C to +85 °C / -40 °F to +185 °F
Maximum system voltage IEC/UL	1,500 V / 1,500 V
Maximum series fuse	30 A
Maximum design load (push/pull)	5,400 Pa / 2,400 Pa
Maximum test load (push/pull)	8,100 Pa / 3,600 Pa
Nominal module operating temperature NMOT	42 ± 2 °C
Temperature coefficient of P _{MAX}	-0.30 %/°C
Temperature coefficient of V _{OC}	-0.25 %/°C
Temperature coefficient of I _{SC}	0.045 %/°C

ELECTRICAL DATA

Module type		WST-425NGXB-D3 Full Black			WST-430NGXB-D3 Full Black			
Electrical data		STC ²	NMOT ³	BNPI ⁴	STC ²	NMOT ³	BNPI ⁴	
Nominal performance	P _{MAX}	425	319	465	430	322	470	Wp
Voltage at maximum performance	V _{MP}	32.35	30.28	32.35	32.68	30.51	32.68	V
Current at maximum performance	I _{MP}	13.14	10.54	14.43	13.16	10.56	14.45	A
Open circuit voltage	V _{OC}	38.54	36.46	38.54	38.6	36.52	38.6	V
Short circuit current	I _{SC}	13.79	11.11	15.27	13.8	11.11	15.28	A
BSI: 1000 W/m ² front / 300 W/m ² back irradiance	I _{SC}	17.1			17.11			A
Module efficiency		21.8			22			%
Bifacial gain ⁴	10 % P _{mpp}	467 (+42)			473 (+43)			W
	15 % P _{mpp}	488 (+63)			494 (+64)			W
*Depending on irradiation conditions	20 % P _{mpp}	510 (+85)			516 (+86)			W
Power tolerance		0~+5			0~+5			W

PRODUCT AND QUALITY CERTIFICATES

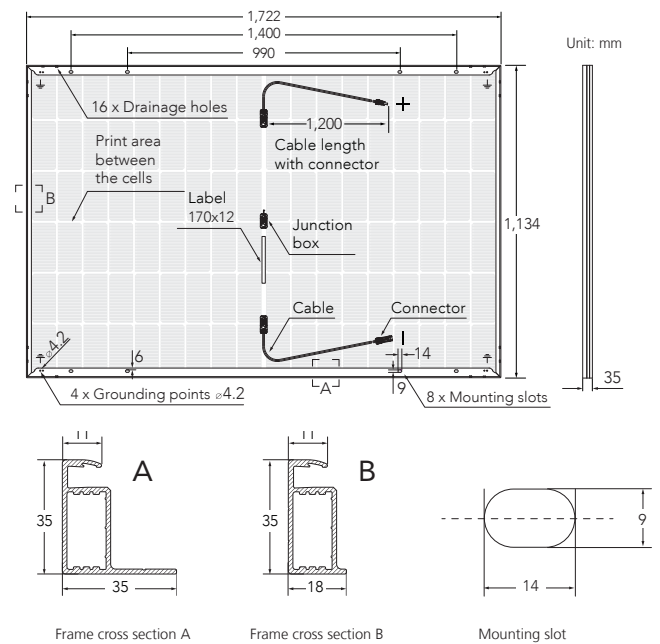
IEC 61215: 2021, IEC 61730: 2023
 IEC 61701 Salt Mist Resistance (in progress)
 IEC 62716 Ammonia Resistance (in progress)
 IEC 61215-2 Hail Storm Resistance (in progress)
 IEC TS 62804-1 Anti-PID (in progress)
 IEC 61730-2 & UNI 9177:1987 Fire Resistance

ISO 9001 Quality Management System
 ISO 50001 Occupational Health and Safety Management System
 ISO 14001 Environment Management System



- 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}: ±5% 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.

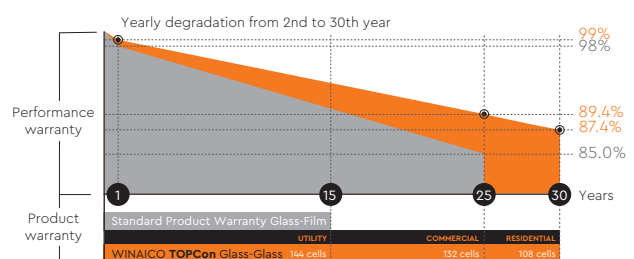
DIMENSIONS



PACKAGING



WINAICO PERFORMANCE GUARANTEE



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

- 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.



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