

N-TYPE BIFACIAL GLASS-GLASS SERIES

530/540 watt
WST-NGX-D3



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.

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



Power to Perform

www.winaico.com



MECHANICAL DATA

Cell	Monocrystalline, N-type, bifacial
Quantity and wiring of cells	132 (6 strings x 22 cells)
Bifaciality	Up to 80 %
Dimensions	2,093 x 1,134 x 35 mm
Weight	29.7 kg (65.48 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	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)	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}	-0.30%/°C
Temperature coefficient of V _{OC}	-0.25%/°C
Temperature coefficient of I _{SC}	0.045%/°C

ELECTRICAL DATA

Module type	WST-530NGX-D3			WST-540NGX-D3			Wp
	STC ²	NMOT ³	BNPI ⁴	STC ²	NMOT ³	BNPI ⁴	
Electrical data							
Nominal performance	P _{MAX}	530	396	580	540	404	590
Voltage at maximum performance	V _{MP}	40.16	37.97	39.46	40.79	38.63	39.86
Current at maximum performance	I _{MP}	13.20	10.44	14.88	13.24	10.48	15.02
Open circuit voltage	V _{OC}	47.27	44.70	47.78	47.63	44.87	47.94
Short circuit current	I _{SC}	13.89	11.14	15.30	14.01	11.16	15.32
BSI: 1000 W/m ² front / 300 W/m ² rear irradiance	I _{SC}		17.22			17.39	A
Module efficiency			22.3			22.8	%
Bifacial gain ⁵	10 % P _{mpp}		583 (+53)			594 (+54)	W
*Depending on irradiation conditions	15 % P _{mpp}		610 (+80)			621 (+81)	W
	20 % P _{mpp}		636 (+106)			648 (+108)	W
Power tolerance			0~+5			0~+5	W

PRODUCT AND QUALITY CERTIFICATES

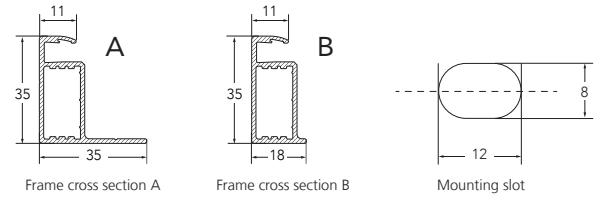
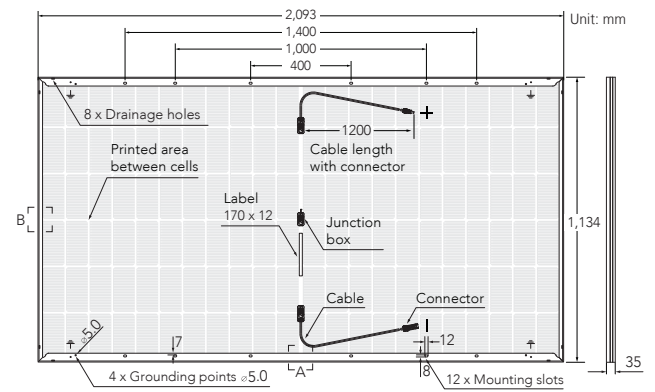
IEC 61215: 2021, IEC 61730: 2023
 IEC 61701 Salt Mist Resistance
 IEC 62716 Ammonia Resistance
 IEC 61215-2 Hail Storm Resistance (25mm at ~23.0m/s)
 IEC TS 62804-1 Anti-PID
 IEC 61730-2 & UNI 9177:1987 Fire Resistance

ISO 9001 Quality Management System
 ISO 50001 Occupational Health and Safety Management System
 ISO 14001 Environment Management System
 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 1,000W/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.

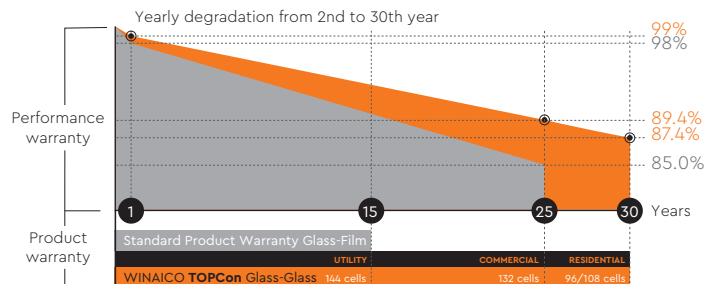
DIMENSIONS



PACKAGING



WINAICO PERFORMANCE GUARANTEE



25 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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