RESIDENTIAL

N-TYPE BIFACIAL GLASS-GLASS SERIES

440/445 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

30 YEARS PERFORMANCE WARRANTY

2 YEARS COMPLIMENTARY INSURANCE

SOLAR PRO SUMER AWARD GERMANY MODULES

EUPD RESEARCH TOP BRAND PV MODULES GERMANY 2022

PFAS FREE

WINAICO®

Power to Perform

www.winaico.com.au

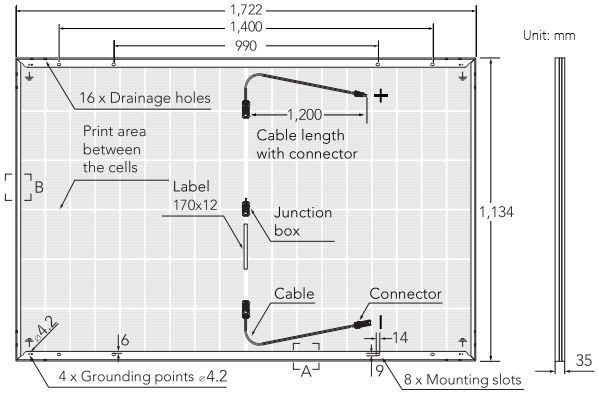
MECHANICAL DATA

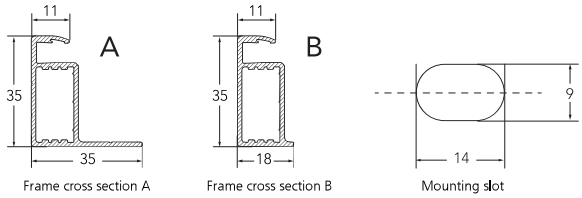
Cell	Monocrystalline, N-type, bifacial
Quantity and wiring of cells	108 (6 strings x 18 cells)
Bifaciality	Up to 80 %
Dimensions	1,722 x 1,134 x 35 mm
Weight	24 kg (52.9 lbs)
Front-side glass	2.0 mm, semi-tempered solar glass with anti-reflective coating
Back-side glass	2.0 mm, semi-tempered solar glass, partially black printed
Frame	Black anodised aluminium
Junction box	IP68, 3 bypass diodes
Connector type	Stäubli PV-KST4-EVO2A/xy (M), PV-KBT4-EVO2A/xy (F) IP68
Cable length (IEC/UL)	Cable 2 x 1,200 mm / 4 mm²
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

DIMENSIONS





Frame cross section A | Frame cross section B | Mounting slot

PACKAGING

1,764 mm	1,145 mm	1,257 mm	31 modules	795 kg	26 pallets

ELECTRICAL DATA

Module type		WST-440NGXB-D3 Full Black			WST-445NGXB-D3 Full Black			
Electrical data		STC[2]	NMOT[3]	BNPI[4]	STC[2]	NMOT[3]	BNPI[4]	
Nominal performance	P_{MAX}	440	334	480	445	338	485	Wp
Voltage at maximum performance	V_{MP}	33.26	31.32	33.26	33.51	31.56	33.51	V
Current at maximum performance	I_{MP}	13.23	10.6	14.49	13.28	10.71	14.70	A
Open circuit voltage	V_{OC}	38.88	37.23	38.88	39.12	37.46	39.12	V
Short circuit current	I_{SC}	13.98	11.27	15.30	14.03	11.31	15.52	A
BSI: 1000 W/m² front / 300 W/m² back irradiance	I_{SC}	17.34			17.33			A
Module efficiency		22.5			22.8			%
Bifacial gain[4] *Depending on irradiation conditions	10 % Pmpp	484 (+44)			490 (+45)			W
	15 % Pmpp	506 (+66)			512 (+67)			W
	20 % Pmpp	528 (+88)			534 (+89)			W
Power tolerance		0~+5			0~+5			W

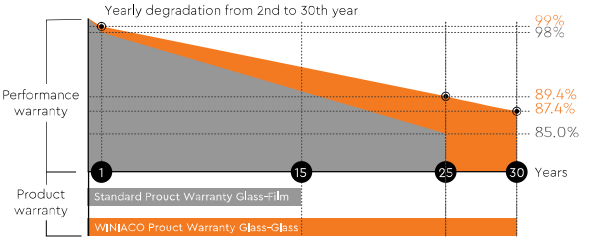
PRODUCT AND QUALITY CERTIFICATES

IEC 61215:2021, IEC 61730:2023

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

APPROVED PRODUCT
Certificate Number BABT 8529
Solar Photovoltaic Products

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.

1. The fire safety test methods according to IEC 61730-2, Fire Tests of Roof Coverings.
2. 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 Pmax: ±3%; Voc: ±3%; Isc :± 5% at STC.
3. 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.
4. BNPI: The front side 1,000 W/m² solar irradiance and rear 135 W/m².
5. 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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