

RESIDENTIAL

WST-BDX54-B2

WBC Back Contact Series Ultra Black

485W



No frontal gridline

No front-side gridlines maximize light intake and absorption, enabling higher module power output



Anti-shading

BC cells with bypass function limit shading loss to a single cell, improving overall energy yield



Aesthetic advantage

With all electrodes on the back, BC cells have no front busbars, offering a sleek look ideal for rooftop designs



Anti-microcrack advantage

BC modules feature one-line welding structure to reduce edge stress, lowering microcrack risk and improving reliability

30 years product warranty

30 years linear performance

-1% 1st-year degradation

-0.35 % annual power degradation

>88.85 % of linear performance after 30 years



PERFORMANCE
WARRANTY



COMPLIMENTARY
INSURANCE



WINAICO
Solar for Experts.

MECHANICAL DATA

Cell	Monocrystalline, N-type, bifacial
Quantity and wiring of cells	108 (6 strings x 18 cells)
Bifaciality	70 ± 5%
Dimensions	1,800 × 1,134 × 35 mm
Weight	25 kg (55.1 lbs)
Front-side glass	2.0 mm, highly transparent solar glass with anti-reflective coating
Back-side glass	2.0 mm, highly transparent solar glass, partially black printed
Frame	Black anodised aluminium
Junction box	IP68, 3 bypass diodes
Connector type	MC4-EVO2A
Cable length (IEC/UL)	Cable x 2 1,200 mm / 4 mm ²
Fire safety class ¹ (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 ¹
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 NOCT	45 ± 2 °C
Temperature coefficient of P_{MAX}	-0.26%/°C
Temperature coefficient of V_{OC}	-0.22%/°C
Temperature coefficient of I_{SC}	0.05%/°C

¹The installation of additional blocking diodes or fuses is necessary with the parallel connection of module strings.

ELECTRICAL DATA

Module type

WST-485BDX54-B2

Electrical data	STC ²	NOCT ³	BNPI ⁴	
Nominal performance	P_{MAX}	485	368	525
Voltage at maximum performance	V_{MP}	33.94	32.20	33.95
Current at maximum performance	I_{MP}	14.30	11.44	15.47
Open circuit voltage	V_{OC}	40.89	38.80	40.83
Short circuit current	I_{SC}	15.03	12.15	16.26
BSI: 1000 W/m ² front / 300 W/m ² rear irradiance	I_{SC}		17.88	A
Module efficiency			23.8	%
Bifacial gain ⁵	10 % Pmpp		534 (+49)	W
*Depending on irradiation conditions	15 % Pmpp		558 (+73)	W
	20 % Pmpp		582 (+97)	W
Power tolerance		0~+5		W

PRODUCT AND QUALITY CERTIFICATES

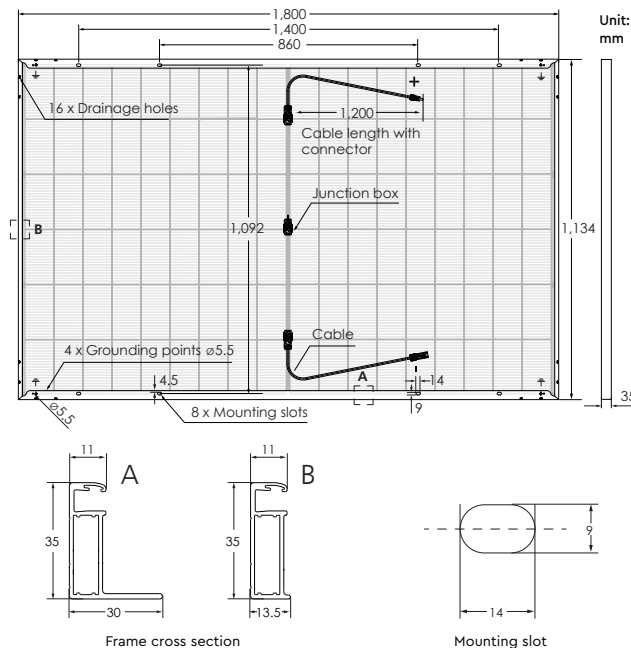
IEC 61215:2021, IEC 61730:2023
 IEC 61701 Salt Mist Resistance
 IEC 62716 Ammonia Resistance
 IEC 61215-2 Hail Storm Resistance (35mm at ~27.2m/s)
 IEC TS 62804-1 Anti-PID

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

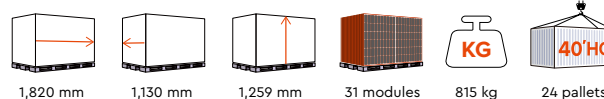


- The fire safety test methods according to IEC 61730-2, Fire Tests of Roof Coverings.
- Electrical data applies under standard test conditions (STC): solar radiation 1,000 W/m² with light spectrum AM 1.5, with cell temperature 25 °C. Measurement tolerance of P_{max} : ±3%; I_{sc} : ±3% at STC.
- Electrical data applies under Nominal Operation Cell Temperature (NOCT), 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.

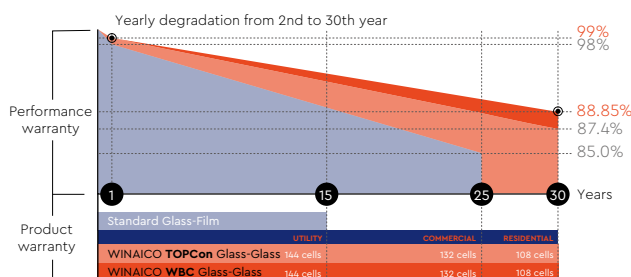
DIMENSIONS



PACKAGING



WINAICO PERFORMANCE GUARANTEE



30 year product guarantee.
 Linear performance guarantee for 30 years.
 ≤1% degradation in 1st year.
 No more than 0.35% degradation per year from 2nd year to 30th year.



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