

RESIDENTIAL

WST-BKX54-B3

WBC Back Contact Series Ultra Black G2

495-500W



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MECHANICAL DATA

Cell	Monocrystalline, N-type, bifacial
Quantity and wiring of cells	108 (6 strings x 18 cells)
Dimensions	1,800 × 1,134 × 35 mm
Weight	26.5 kg (58.4 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 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 operation cell 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

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

ELECTRICAL DATA

Module type		WST-495BKX54-B3			WST-500BKX54-B3			
Test Conditions		STC ²	NOCT ³	BNPI ⁴	STC ²	NOCT ³	BNPI ⁴	
Nominal performance	P _{MAX}	495	378	540	500	382	545	Wp
Voltage at maximum performance	V _{MP}	33.86	32.09	33.86	33.97	32.19	33.97	V
Current at maximum performance	I _{MP}	14.62	11.80	16.00	14.72	11.88	16.11	A
Open circuit voltage	V _{OC}	40.66	39.14	40.66	40.77	39.25	40.77	V
Short circuit current	I _{SC}	15.38	12.41	16.83	15.48	12.49	16.94	A
BSI: 1000 W/m ² front / 300 W/m ² rear irradiance	I _{SC}	18.61			18.73			A
Module efficiency		24.3			24.5			%
Bifacial gain ⁵	10 % P _{mpp}	545 (+50)			550 (+50)			W
[*] Depending on irradiation conditions	15 % P _{mpp}	569 (+74)			575 (+75)			W
	20 % P _{mpp}	594 (+99)			600 (+100)			W
Power tolerance		0~+5			0~+5			W

PRODUCT AND QUALITY CERTIFICATES

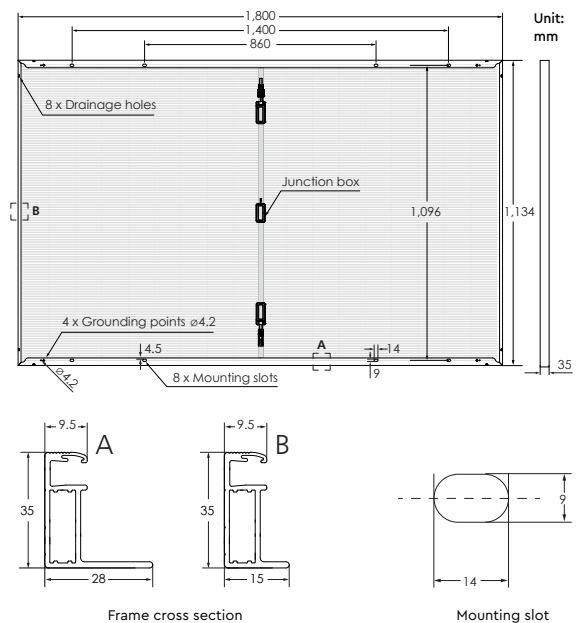
IEC 61215:2021, IEC 61730:2023

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}:±5% 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.

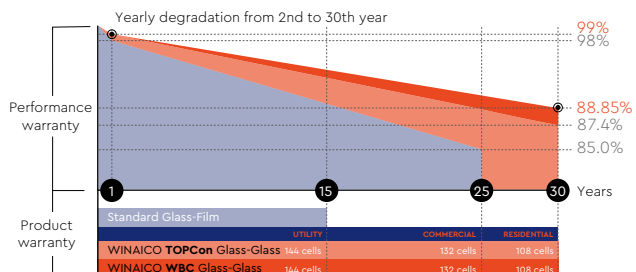
DIMENSIONS



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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Specifications included in this datasheet are subject to change without notice. WST-500BKX54-B3_EU_0626