RESIDENTIAL

WST-BKX54-B3

WBC Back Contact Series Ultra Black G2

495-500W

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MECHANICAL DATA

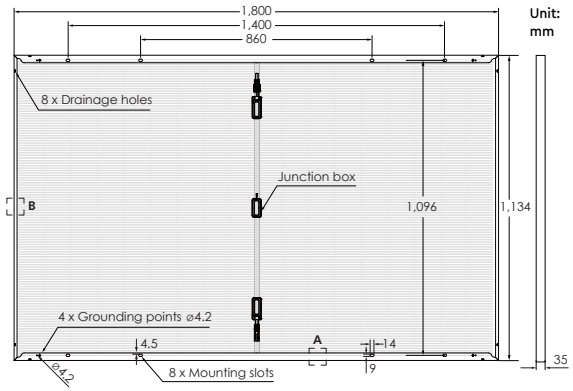
Cell	Monocrystalline, N-type, bifacial
Quantity and wiring of cells	108 (6 strings x 18 cells)
Dimensions	1,800 × 1,134 × 35 mm
Weight	25 kg (55.1 lbs)
Front-side glass	2.0 mm, highly transparent solar glass with anti-reflective coating
Back-side glass	2.0 mm, highly transparent solar glass, partially 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 mm²
Fire safety class[1] (IEC61730)	Class C
Protection class (IEC 61140)	II

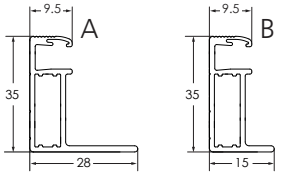
OPERATING CONDITION

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

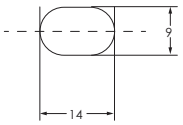
*The installation of additional blocking diodes or fuses is necessary with the parallel connection of module strings.

DIMENSIONS



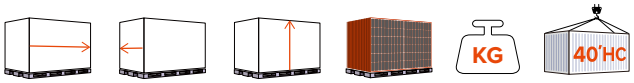


Frame cross section



Mounting slot

PACKAGING



1,810 mm | 1,120 mm | 1,252 mm | 31 modules | 830 kg | 26 pallets

ELECTRICAL DATA

Module type

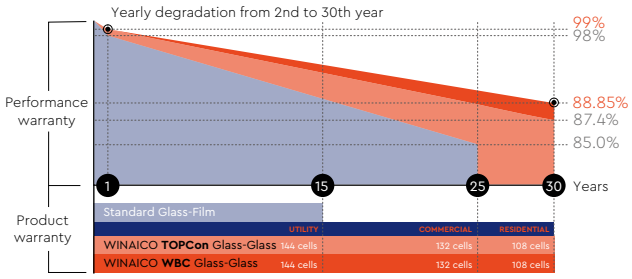
Test Conditions		WST-495BKX54-B3 STC[2]	WST-495BKX54-B3 NOCT[3]	WST-495BKX54-B3 BNPI[4]	WST-500BKX54-B3 STC[2]	WST-500BKX54-B3 NOCT[3]	WST-500BKX54-B3 BNPI[4]	
Nominal performance	P_{MAX}	495	378	540	500	382	545	Wp
Voltage at maximum performance	V_{MP}	33.86	32.09	33.86	33.97	32.19	33.97	V
Current at 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/m² front / 300 W/m² rear irradiance	I_{SC}		18.61			18.73		A
Module efficiency			24.3			24.5		%
Bifacial gain[5] *Depending on irradiation conditions	10 % Pmpp		545 (+50)			550 (+50)		W
	15 % Pmpp		569 (+74)			575 (+75)		W
	20 % Pmpp		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

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.

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 Operation Cell Temperature (NOCT), 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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Specifications included in this datasheet are subject to change without notice. WST-500BKX54-B3_EU.0626