

RESIDENTIAL

WST-BKX54-A2

WBC Back Contact Series

495-505W

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
(Applicable to front-side power at STC only)



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PERFORMANCE
WARRANTY



COMPLIMENTARY
INSURANCE

MECHANICAL DATA

Cell	Monocrystalline, N-type, bifacial
Quantity and wiring of cells	108 (6 strings x 18 cells)
Bifaciality	40 ± 5%
Dimensions	1,800 x 1,134 x 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 white printed
Frame	Black anodised aluminium
Junction box	IP68, 3 bypass diodes
Connector type	Stäubli Electrical Connectors AG PV-KST4-EVO2A/xy, PV-KBT4-EVO2A/xy
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
Module [T98] _{MAX}	70 °C
Maximum system voltage IEC	1,500 VDC
Maximum series fuse	25 A ¹
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 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

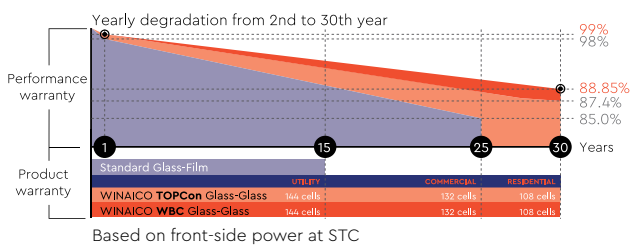
¹The installation of additional blocking diodes or fuses is necessary with the parallel connection of module strings.

ELECTRICAL DATA

Module type

Test Conditions		WST-495BKX54-A2			WST-500BKX54-A2			WST-505BKX54-A2			
		STC ²	NOCT ³	BNPI ⁴	STC ²	NOCT ³	BNPI ⁴	STC ²	NOCT ³	BNPI ⁴	
Nominal performance	P _{MAX}	495	377	520	500	381	525	505	385	530	Wp
Voltage at maximum performance	V _{MP}	35.44	32.28	35.44	35.54	32.38	35.54	35.64	32.48	35.64	V
Current at maximum performance	I _{MP}	13.98	11.69	14.68	14.08	11.78	14.78	14.18	11.87	14.88	A
Open circuit voltage	V _{OC}	40.74	38.28	40.74	40.84	38.38	40.84	40.94	38.48	40.94	V
Short circuit current	I _{SC}	15.08	12.30	15.86	15.18	12.36	15.96	15.28	12.42	16.06	A
BSI: 1000 W/m ² front / 300 W/m ² rear irradiance	I _{SC}	16.91			16.96			17.01			A
Maximum power bifaciality coefficient	ΦP _{MAX}	40±5			40±5			40±5			%
Open circuit current bifaciality coefficient	ΦV _{OC}	100±5			100±5			100±5			%
Short circuit current bifaciality coefficient	ΦI _{SC}	40±5			40±5			40±5			%
Module efficiency		24.3			24.5			24.7			%
Bifacial gain ⁵	10 % P _{mpp}	545 (+50)			550 (+50)			556 (+51)			W
	15 % P _{mpp}	569 (+74)			575 (+75)			581 (+76)			W
	20 % P _{mpp}	594 (+99)			600 (+100)			606 (+101)			W
Power tolerance		0~+5			0~+5			0~+5			W

WINAICO PERFORMANCE GUARANTEE



PRODUCT AND QUALITY CERTIFICATES

IEC 61215:2021, IEC 61730:2023

ISO 9001 Quality Management System

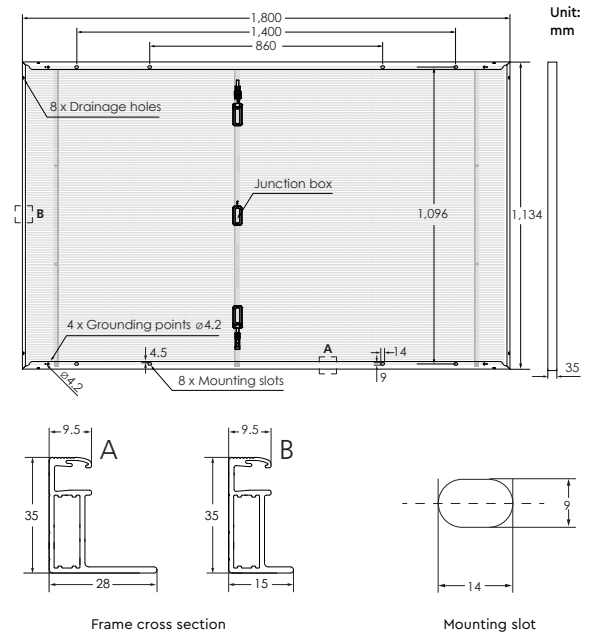
ISO 45001 Occupational Health and Safety Management System

ISO 14001 Environment Management System

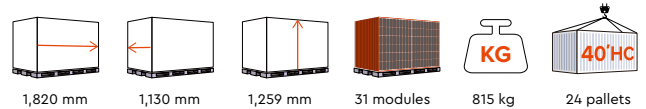
SA 8000 Social Accountability



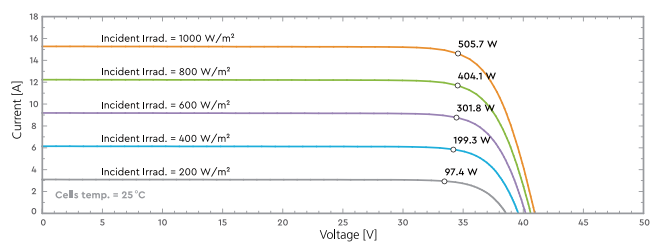
DIMENSIONS



PACKAGING



CHARACTERISTIC CURVES



- 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}: ±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. NMOT/BNPI: Measurement tolerance of P_{max}: ±3%; V_{oc}: ±3%; I_{sc}: ±3%.
- The additional power gain from the rear side depends on the irradiance conditions at the installation site and the mounting situation.

Specifications included in this datasheet are subject to change without notice. WST-505BKX54-A2_AUS_CEC.0926



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