

WST-NCX48 Glass-Glass-Series

450 Watt Full Black

460 Watt

More warranty.

30 years product warranty.
30 years performance warranty.
German guarantor.

More power.

Two-sided power generation (bifacial).
230 watts/m² power.
At least 87.4% residual power after 30 years.

More safety.

35 mm frame thickness.
Increased hail resistance.

More protection.

Insurance cover for the complete solar system included.

 PFAS
FREE



WINAICO®

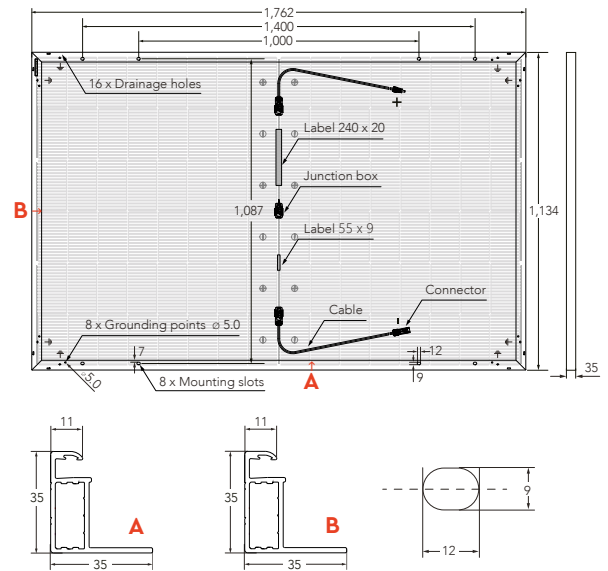
Mechanical Data WINAICO WST-NCX48 GLASS-GLASS-SERIES

Cell	Monocrystalline N-type, bifacial
Bifacity	Up to 80 %
Quantity of cells	96 (6 × 16 half cells)
Dimensions	1,762 × 1,134 × 35 mm
Weight	25 kg
Front glass	2.0 mm, tempered, highly transparent glass with anti-reflective coating
Encapsulation	EPE / EVA
Back glass	2.0 mm, tempered, highly transparent glass, partially white/black printed
Frame	Black anodised aluminium
Junction box	IP68, 3 bypass diodes
Connector type	Cable 2 × 1.2 m / 4 mm ² Stäubli MC4 Evo2A
Safety class	II (IEC 61140)
Fire safety class	C (IEC 61730)

Warranty

Product warranty	30 years
Performance warranty	30 years
Annual power degradation	0.40 %
Performance after 30 years	> 87.4 % of rated power
The warranty conditions apply.	

Dimensions in mm



Operating conditions

WST-NCX48

Operating temperature	°C	-40 to +85
Maximum system voltage	V	1,500
Maximum series fuse I _R	A	30
Maximum design load (push/pull)	Pa	3,600 / 1,600
Maximum test load (push/pull)	Pa	5,400 / 2,400
Temperature coefficient of P _{MAX}	%/°C	-0.28
Temperature coefficient of V _{OC}	%/°C	-0.23
Temperature coefficient of I _{SC}	%/°C	0,043
Nominal module operating temperature NMOT	°C	42 ± 2

Electrical data

WST-450NCX48-BW Full Black

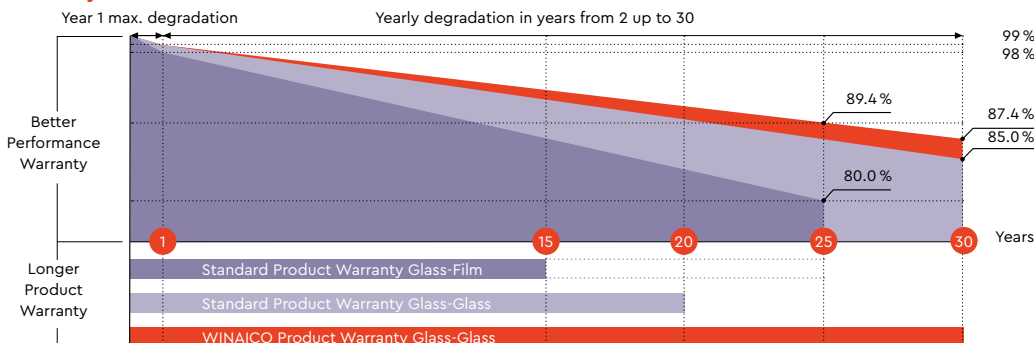
WST-460NCX48-AW

		STC ¹	NMOT ²	STC ¹	NMOT ²
Nominal performance P _{MPP}	Wp	450	343	460	351
Voltage at maximum performance V _{MPP}	V	30,02	28,37	30,41	28,74
Current at maximum performance I _{MPP}	A	14,99	12,08	15,13	12,19
Open circuit voltage V _{OC}	V	35,46	33,94	35,68	34,15
Short circuit current I _{SC}	A	16,08	12,96	16,22	13,07
Module efficiency (STC)	%	22,5 (225 W/m ²)		23,0 (230 W/m ²)	
Increased performance through	10 % P _{MPP} W	495 (+45)		506 (+46)	
Power Bifacity*	15 % P _{MPP} W	518 (+68)		529 (+69)	
*Depending on irradiation conditions	20 % P _{MPP} W	540 (+90)		552 (+92)	
Power tolerance	W	-0/+5			

¹ 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 %.

² 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.

Warranty service



Certifications

Standard IEC certifications:
IEC 61215-1:2021, IEC 61215-2:2021,
IEC 61730-1:2023, IEC 61730-2:2023

Additional certifications:
PID (IEC TS 62804-1)
Ammonia resistance (IEC 62716)
Salt spray resistance (IEC 61701)
Hail storm resistance (under review)

WEEE Registration number:
DE85493209



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