



VOLT X N-type VXNH425-450N-54-B8 425-450 Watt

BIFACIAL MODULE
Dual Glass
All Black

N-Type

Outstanding Visual Appearance

- Lower LCOE (Levelized Cost Of Energy), reduced BOS (Balance of System) cost, shorter payback time
- Lowest guaranteed first year and annual degradation
- Designed for compatibility with existing mainstream system components

Durability Against Extreme Environment

- High salt mist and ammonia resistance.

SMBB Technology

- Better light trapping and current collection to improve module power output and reliability.

Anti-PID Guarantee

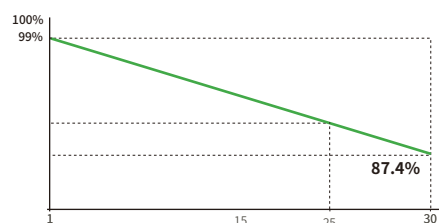
- Minimizes the chance of degradation caused by PID phenomena through optimization of cell production technology and material control.

Ultra-low Degradation, longer warranty, higher output

- First-year degradation 1% and annual degradation at 0.4%
- Up to 25 years product warranty and 30 years power warranty
- Lower temperature coefficient (-0.29 %/°C) and operating temperature

Universal solution for residential and C&I rooftops

- Easy for integration, designed for compatibility with existing mainstream inverters and diverse mounting systems
- Perfect size and low weight for handling and installation
- Most valuable solution on low load capacity rooftops (weight similar to backsheet version)
- Mechanical performance up to 5400 Pa positive load and 4000 Pa negative load



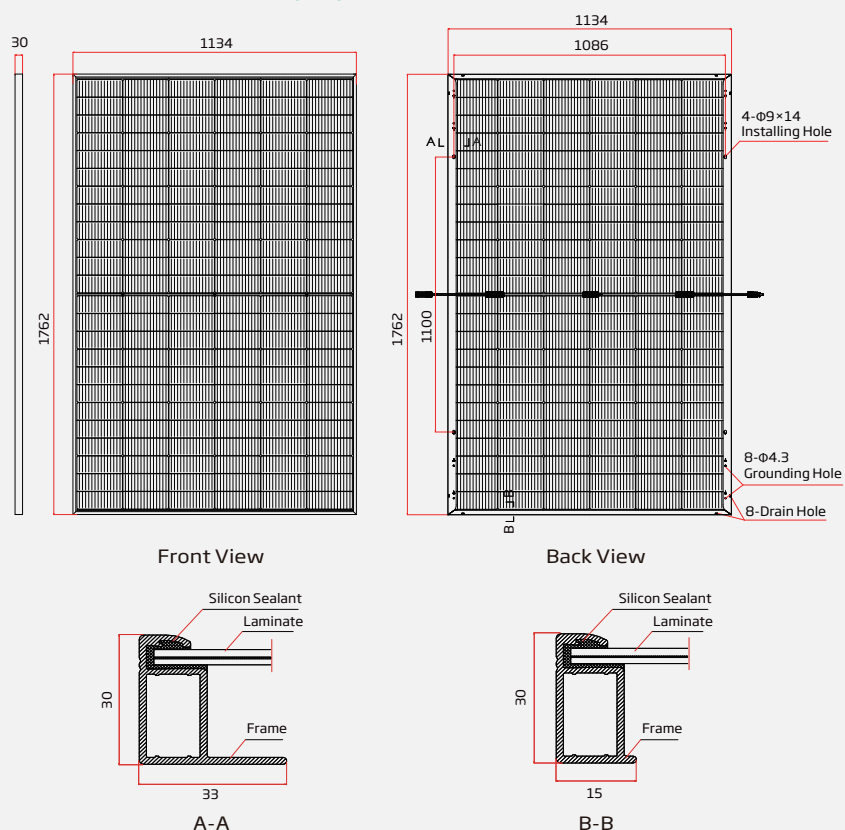
25 Year Product Warranty	30 Year Linear Power Warranty	1% First-year Degradation	0.4% Annual Degradation Over 30 Years
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- IEC61215 (2016) / IEC61730 (2016)
- IEC61701 / IEC62716 / IEC60068 / IEC62804
- ISO9001:2015: Quality Management System
- ISO14001:2015: Environment Management System
- ISO45001:2018: Occupational health and safety management systems

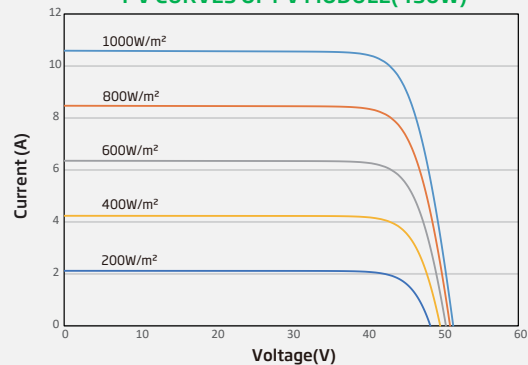


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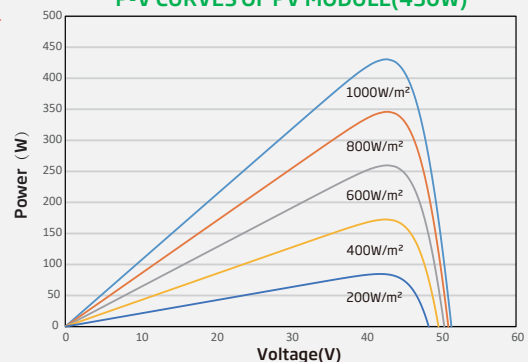
DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(430W)



P-V CURVES OF PV MODULE(430W)



ELECTRICAL DATA (STC)

Peak Power Watts-P _{MAX} (Wp)*	425	430	435	440	445	450
Power Tolerance-P _{MAX} (W)	0 ~ +5					
Maximum Power Voltage-V _{MPP} (V)	32.90	33.08	33.26	33.44	33.61	33.79
Maximum Power Current-I _{MPP} (A)	12.92	13.00	13.08	13.16	13.24	13.32
Open Circuit Voltage-V _{OC} (V)	39.23	39.43	39.63	39.83	40.03	40.23
Short Circuit Current-I _{SC} (A)	13.77	13.84	13.91	13.98	14.05	14.12
Module Efficiency η_m (%)	21.27	21.52	21.77	22.02	22.27	22.52

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM=1.5. *Measuring tolerance: ±3%.

Specifications (BNPI)

Maximum Power-P _{MAX} (Wp)	469	474	480	485	491	496
Maximum Power Voltage-V _{MPP} (V)	32.91	33.06	33.26	33.41	33.61	33.76
Maximum Power Current-I _{MPP} (A)	14.25	14.34	14.43	14.52	14.60	14.69
Open Circuit Voltage-V _{OC} (V)	39.23	39.43	39.63	39.83	40.03	40.23
Short Circuit Current-I _{SC} (A)	15.16	15.24	15.32	15.40	15.48	15.56

BNPI: Irradiance: front 1000W/m², rear 135W/m², Cell Temperature 25°C, AM=1.5

MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	108cells
Module Dimensions	1762×1134×30 mm (69.06×43.15×1.18 inches)
Weight	24.5kg (54.0lb)
Front Glass	2.0 mm, Anti-reflection Coating
Encapsulant material	EVA/POE
Back Glass	2.0 mm, Heat Strengthened Glass
Frame	30mm (1.18 inches) Anodized Aluminium Alloy, Black
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²), Portrait: 350/280 mm (13.78/11.02 inches) Length can be customized
Connector	MC4 EVO2 / TS4*

*Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coefficient of P _{MAX}	-0.30%/°C
Temperature Coefficient of V _{OC}	-0.24%/°C
Temperature Coefficient of I _{SC}	0.04%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
Max Series Fuse Rating	25A

WARRANTY

25 year Product Workmanship Warranty
30 year Power Warranty
1% first year degradation
0.4% Annual Power Attenuation

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per box: 37 pieces
Modules per 40' container: 962 pieces

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NOTE: Please read the safety and installation manual before using the product. We reserve the right of final interpretation. The specifications in this datasheet are subject to change without notice.