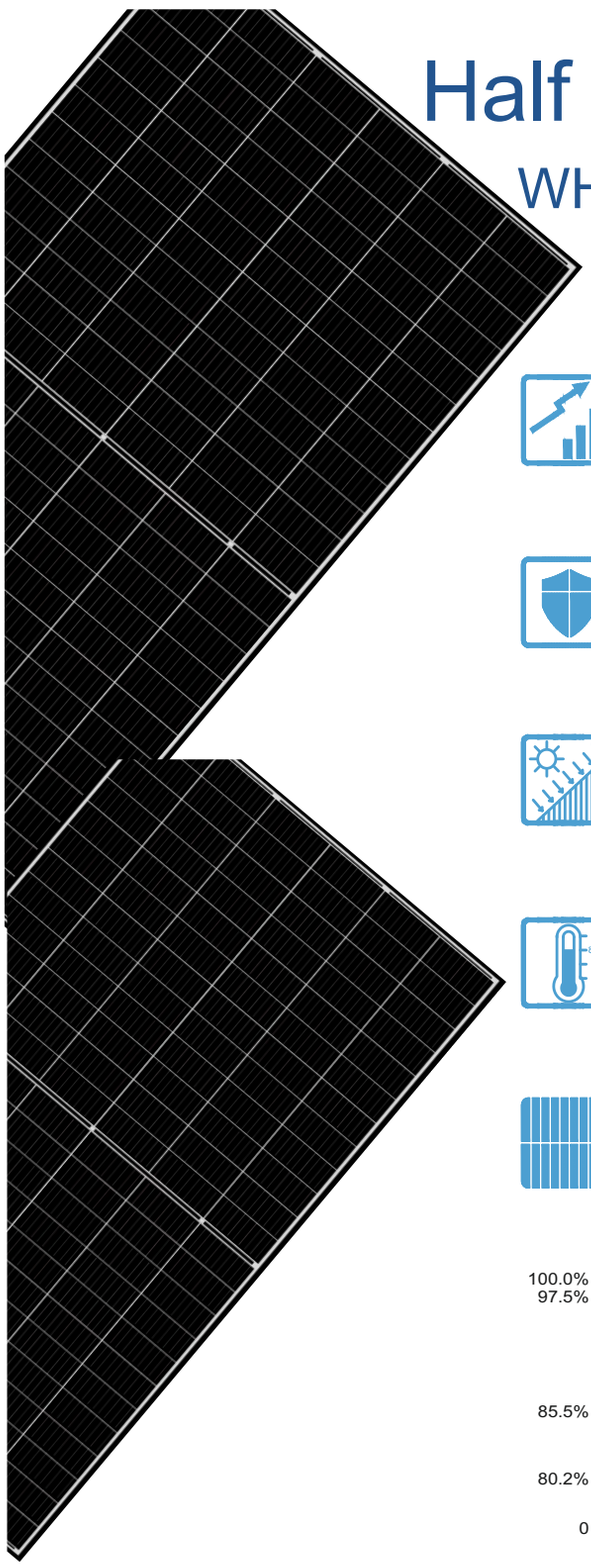
NEOSOL

NEOSOL EMERALD SERIES



Half Cell Mono PERC

WHM72H 430W-450W

High Conversion Efficiency

The leading module conversion efficiency, Up to 20.0%

High Reliability

Passed 3*IEC standard test

Low Hot-spot Effect

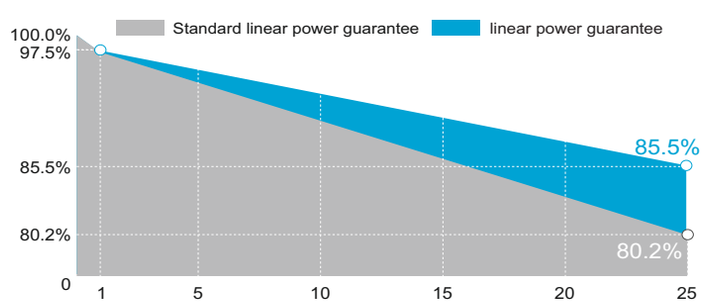
1/2 current, reduce the hot spot temperature

Low Work Temperature

Work temperature less than 43℃, improve the power generation efficiency

Half Cell, MBB Technology

Series-then-parallel cell connection design, high reliable welding technology



-2.50% First year power degradation

-0.50% Power degradation per year

IEC CAS CE CERTIFIED ISO 9001:2008 COMPANY Govt. of India MNRE APPROVED MAKE IN INDIA

www.neosoltechnologies.com

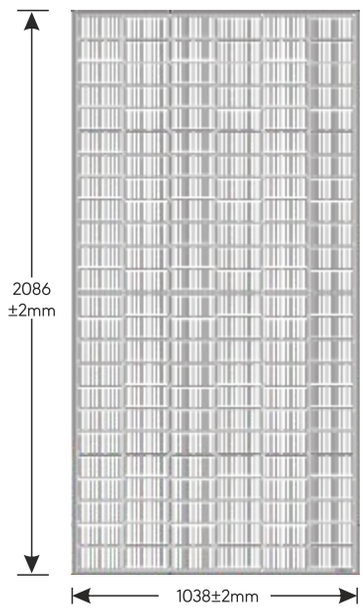
NEO SOL

Solar Module Specification

Half Cell Mono PERC WHM72H 430W-450W

Electrical Parameters (STC*)

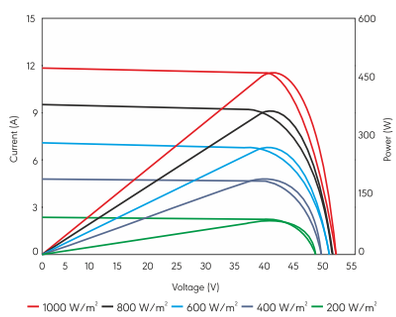
Conditions	STC	NOCT	STC	NOC	STC	NOCT	STC	NOC	STC	NOCT
Module Type	NS144P-450		NS144P-445		NS144P-440		NS144P-435		NS144P-430	
Normal Max Power (Pmax/W)	450	331	445	327	440	323	435	320	430	316
Open Circuit Voltage (VOC/V)	50.20	46.44	49.99	46.24	49.79	46.06	49.59	45.87	49.41	45.70
Short Circuit Current (Isc/A)	11.20	9.03	11.14	8.98	11.08	8.93	11.02	8.88	10.96	8.83
Operating Voltage (Vmp/V)	41.82	38.25	41.62	38.25	41.43	38.00	41.23	37.91	41.03	37.71
Operating Current (Imp/A)	10.76	8.55	10.69	8.55	10.62	8.50	10.55	8.44	10.48	8.38
Module Efficiency (%)	≥ 20.05%		≥ 20.03%		≥ 20.00%		≥ 19.80%		≥ 19.60%	



Mechanical Parameters

Module size	2086×1038×35mm(L×W×H)
Glass Thickness	3.2mm
Module Weight	24.2Kg
Output Cable	4mm², cable length 300mm (can be customized)
Connector	MC4 compatible

I-V Curves of PV Module (for Ref)

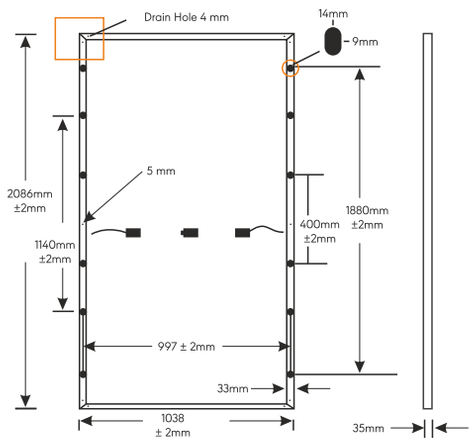


Temperature Coefficients

Short Circuit Current(Isc)	+0.048%/℃
Open Circuit Voltage(Voc)	-0.31%/℃
Nominal Max. Power(Pmax	-0.38%/℃
NMOT	43±2℃

Work Environmental Parameters

Max. System Voltage	DC1000V/DC1500V
Power Tolerance	0 ~ +5 W
Operating Temperatue	-40℃ ~ +85℃
Max. Fuse Rated Current	15A
Front Static Load	Snow load 5400Pa, Wind load 2400Pa
Application Classifcation	Class A



HALF-CELL MODULE

Functions like two parallel modules, enabling the **half-cell** string to work in partial shading

IEC CAS CE CERTIFIED ISO 9001:2008 COMPANY Govt. of India MNRE APPROVED MAKE IN INDIA