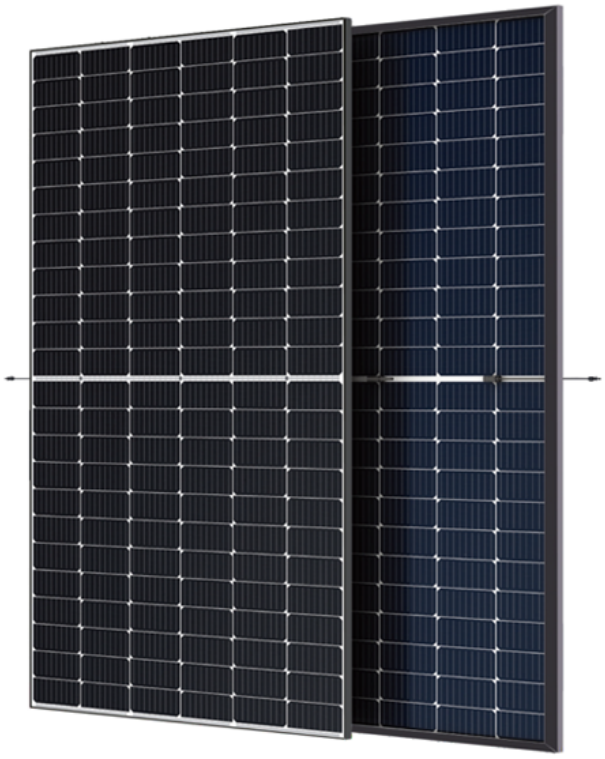
SUNNIVA - M18/144 580-595W

182±1.5x91±1.5mm
Cells 144



Bifacial Single Glass

N-Type Half-Cell Module

Max Power Out: 595W
Max Efficency: 23.03%
Power Tolerance: 0~+5W

SMBB Technology

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

Reduced Hot Spot Loss

Optimized electrical design and lower operating current for reduced hot spot loss and better temperature coefficient.

PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.

Enhanced Mechanical Load

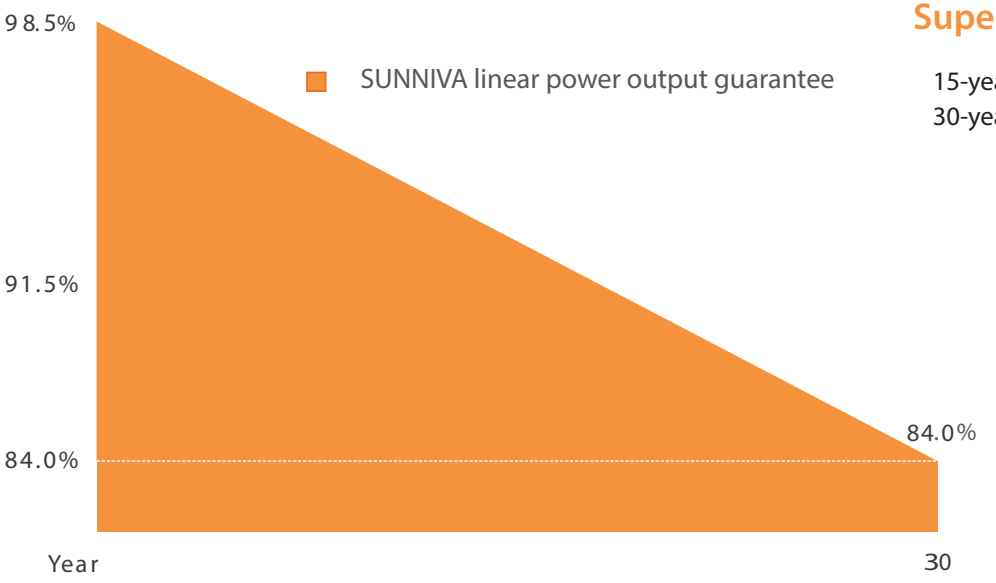
Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).

Durability Against Extreme Environmental Conditions

High salt mist and ammonia resistance.

High Energy Generation, Low LCOE

Low Pmax temp coefficient increases energy production.



Superior Warranty

15-year material & technology warranty
30-year linear power output warranty

Engineering Drawings

Front Side Back

Structural Parameter

Dimensions of Module	2278x1134x30mm
Weight	26.5kg
J-Box	IP68, three diodes
Glass	High Transparency Solar Glass 3.2mm
Frame	Black Frame
Cable	4mm², 300mm
Wind/ Snow Load	2400Pa/5400Pa
Connector	MC4 Compatible
Cell Orientation	144 (6x24)

Electrical Specification

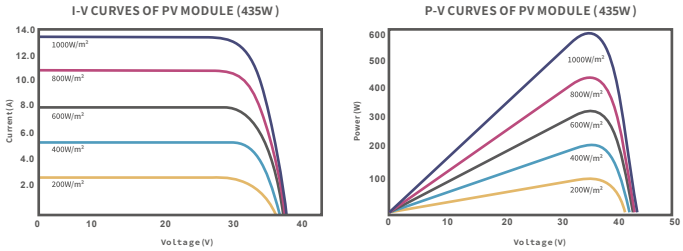
(STC: Irradiance 1000W/m², Cell temperature 25°C, AM1.5G — NOCT: Irradiance 800W/m2, Ambient temperature 20°C, Wind speed 1m/s)

Module Type	SUNNIVA M18/144580		SUNNIVA M18/144585		SUNNIVA M18/144590		SUNNIVA M18/144595	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax) [W]	580	434.42	585	438.17	590	441.91	595	445.66
Maximum Power Voltage (Vmp) [V]	42.91	40.12	43.07	40.27	43.23	40.42	43.39	40.57
Maximum Power Current (Imp) [A]	13.52	10.83	13.58	10.88	13.65	10.93	13.71	10.98
Open Circuit Voltage (Voc) [V]	50.80	47.50	50.95	47.64	51.10	47.78	51.25	47.92
Short Circuit Current (Isc) [A]	14.55	11.65	14.62	11.71	14.70	11.77	14.77	11.83
Module Efficiency [%]	22.45		22.65		22.84		23.03	
Cell Type [mm]	Mono 182±1.5×91±1.5, 144 Cells							
Operational Temperature [°C]	-40~+85°C							
Maximum System Voltage	1500V DC							
Max Series Fuse Rating	25A							

Temperature Ratings

Nominal Operating Cell Temperature	45±2°C
Temperature Coefficient of Isc	+ 0.05 %/°C
Temperature Coefficient of Voc	- 0.23 %/°C
Temperature Coefficient of Pmax	- 0.30 %/°C

Curve Diagram



Electrical Characteristics With Different Power Bin (Refference to 10% Irradiance Ratio)

Total Equivalent Power (Pmax) [Wp]	638	644	649	655
Maximum Power Voltage (Vmp) [V]	42.91	43.07	43.23	43.39
Maximum Power Current (Imp) [A]	14.87	14.94	15.01	15.08
Open Circuit Voltage (Voc) [V]	50.80	50.95	51.10	51.25
Short Circuit Current (Isc) [A]	16.00	16.08	16.17	16.25
Irradiance Ratio (Rear/Front)	10%			