



SUNNIVA - M18/108

430-445W

182±1.5x91±1.5mm
Cells 108

Bifacial Single Glass

N-Type Half-Cell Module

Max Power Out: 445W
Max Efficiency: 22.79%
Power Tolerance: 0~+5W



SMBB Technology

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



PID Resistance

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



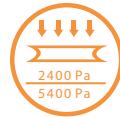
Durability Against Extreme Environmental Conditions

High salt mist and ammonia resistance.



Reduced Hot Spot Loss

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



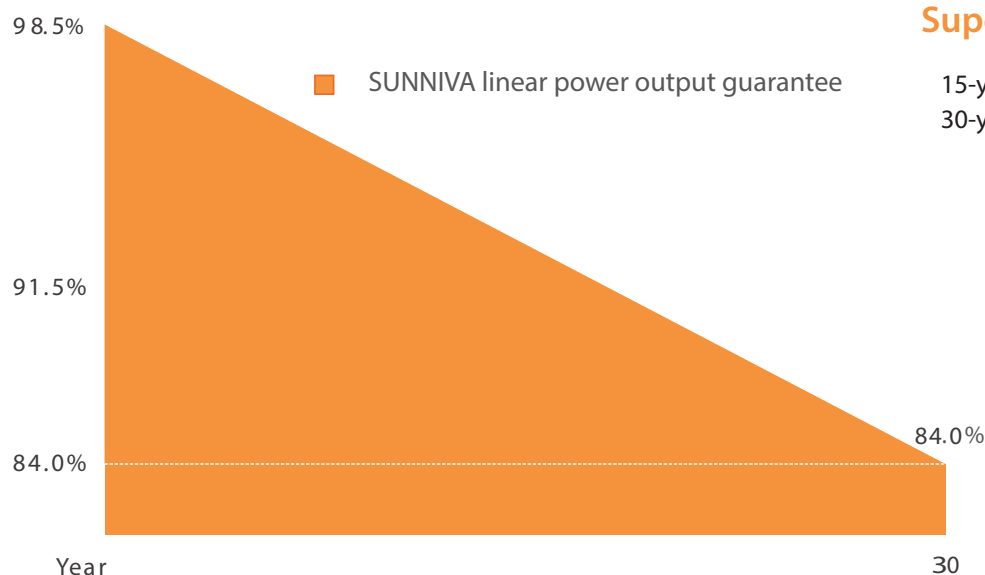
Enhanced Mechanical Load

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



High Energy Generation, Low LCOE

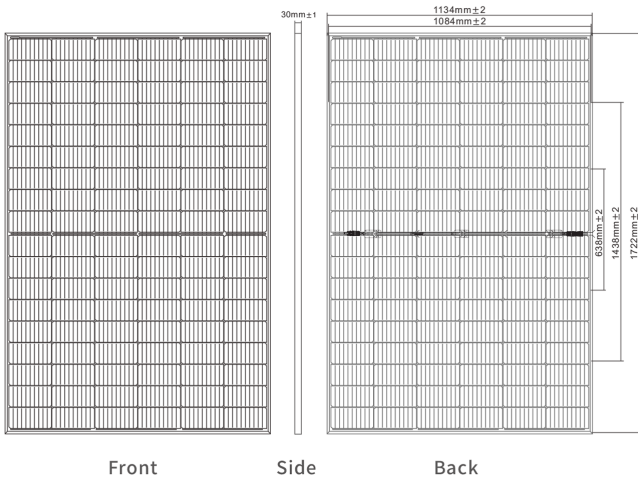
Low Pmax temp coefficient increases energy production.



Superior Warranty

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

Engineering Drawings



Structural Parameter

| | |
|----------------------|-------------------------------------|
| Dimensions of Module | 1722x1134x30mm |
| Weight | 21.3kg |
| J-Box | IP68, three diodes |
| Glass | High Transparency Solar Glass 3.2mm |
| Frame | Black Frame |
| Cable | 4mm ² , 300mm |
| Wind/ Snow Load | 2400Pa/5400Pa |
| Connector | MC4 Compatible |

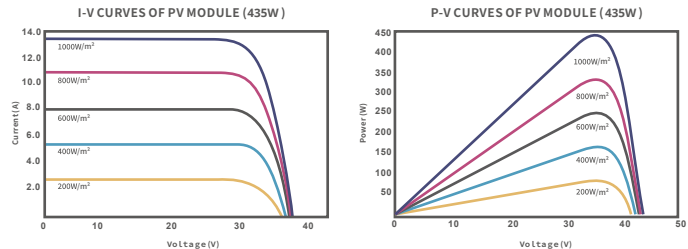
Electrical Specification (STC: Irradiance 1000W/m², Cell temperature 25°C, AM1.5G — NOCT: Irradiance 800W/m², Ambient temperature 20°C, Wind speed 1m/s)

| Module Type | SUNNIVA M18/108430 | | SUNNIVA M18/108435 | | SUNNIVA M18/108440 | | SUNNIVA M18/108445 | |
|---------------------------------|--------------------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|
| | STC | NOCT | STC | NOCT | STC | NOCT | STC | NOCT |
| Maximum Power (Pmax) [W] | 430 | 319.06 | 435 | 322.77 | 440 | 326.48 | 445 | 330.19 |
| Maximum Power Voltage (Vmp) [V] | 32.03 | 29.79 | 32.20 | 29.95 | 32.27 | 30.10 | 32.54 | 30.26 |
| Maximum Power Current (Imp) [A] | 13.42 | 10.71 | 13.51 | 10.78 | 13.59 | 10.85 | 13.68 | 10.91 |
| Open Circuit Voltage (Voc) [V] | 37.61 | 34.98 | 37.70 | 35.06 | 37.79 | 35.14 | 37.88 | 35.23 |
| Short Circuit Current (Isc) [A] | 14.38 | 11.48 | 14.49 | 11.56 | 14.59 | 11.64 | 14.69 | 11.72 |
| Module Efficiency [%] | 22.02 | | 22.28 | | 22.53 | | 22.79 | |
| Cell Type [mm] | Mono 182±1.5×91±1.5, 108 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 (Reference to 10% Irradiance Ratio)

| | 473 | 478.5 | 484 | 489.5 |
|------------------------------------|-------|-------|-------|-------|
| Total Equivalent Power (Pmax) [Wp] | 473 | 478.5 | 484 | 489.5 |
| Maximum Power Voltage (Vmp) [V] | 32.03 | 32.20 | 32.37 | 32.54 |
| Maximum Power Current (Imp) [A] | 14.77 | 14.86 | 14.95 | 15.04 |
| Open Circuit Voltage (Voc) [V] | 37.61 | 37.70 | 37.79 | 37.88 |
| Short Circuit Current (Isc) [A] | 15.82 | 15.93 | 16.05 | 16.16 |
| Irradiance Ratio (Rear/Front) | 10% | | | |