



Tier1
BloombergNEF

FE0C
FREE

Power the future

N-Type 182 BIFACIAL 435-450W

High efficiency bifacial modules



Module efficiency

23.04%



Better leveled cost of energy



Better high temperature stability

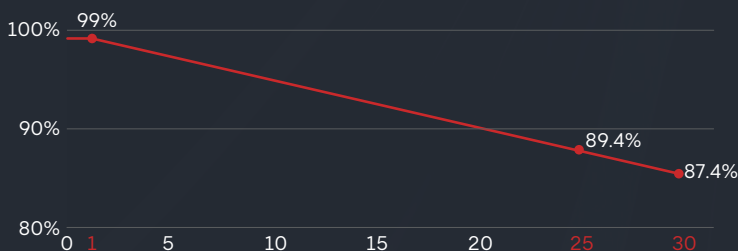


Improved low-light performance



Excellent bifacial performance

Linear performance guarantee for 30 years



WARRANTY

Extended warranty is available at additional cost

Quality Guarantee **15** years

Power Warranty **30** years

CERTIFICATE



| Model of modules | SPDG435-N108M10 | | SPDG440-N108M10 | | SPDG445-N108M10 | | SPDG450-N108M10 | |
|-------------------------------|-----------------|--------|-----------------|--------|-----------------|-------|-----------------|-------|
| | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT |
| Power (Pmax/W) | 435 | 325.00 | 440 | 329.00 | 445 | 332.4 | 450 | 336.2 |
| Maximu power current (Vmp) | 31.94 | 29.80 | 32.09 | 29.90 | 32.25 | 30 | 32.41 | 30.1 |
| Maximu power current (Imp) | 13.62 | 10.91 | 13.72 | 11.00 | 13.8 | 11.08 | 13.89 | 11.16 |
| Open circuit voltage (Voc) | 38.43 | 36.00 | 38.53 | 36.10 | 38.64 | 36.2 | 38.75 | 36.3 |
| Short circuit current (Isc) | 14.34 | 11.56 | 14.43 | 11.63 | 14.53 | 11.71 | 14.63 | 11.79 |
| Module efficiency | 22.28% | | 22.53% | | 22.79% | | 23.04% | |

STC (Electrical parameters at standard test conditions (STC:AM=1.5, 1000W/m², Cells Temperature25°C)

NMOT (Irradiance 800W/m², Ambient Temperature 20°C,AM1.5,Wind Speed 1m/s)

ELECTRICAL CHARACTERISTICS WITH 15% REAR SIDE POWER GAIN

| | | | | |
|-------------------------------|--------|--------|--------|--------|
| Front power Pmax/W | 500.25 | 506.00 | 511.75 | 517.50 |
| Maximu power voltage (Vmp) | 31.94 | 32.09 | 32.25 | 32.41 |
| Maximu power current (Imp) | 15.66 | 15.77 | 15.87 | 15.97 |
| Open circuit voltage (Voc) | 38.43 | 38.53 | 38.64 | 38.75 |
| Short circuit current (Isc) | 16.49 | 16.59 | 16.71 | 16.82 |

STRUCTURAL CHARACTERISTICS

| | |
|-----------------------|--|
| Module size (L*W*H) | 1722x1134x30mm |
| Weight | 23.3kg |
| Cell | 108 cells,N type Mono-Crystalline , 182mm×91mm |
| Front glass | 2.0mm , Anti-Reflection Coating |
| Back glass | 2.0mm , Heat Strengthened Glass |
| Frame | Anodized aluminum alloy |
| Junction box | IP68 , 3 bypass diodes |
| Output wire | 4mm ² |
| Wire length | Line length 1100mm/customized |
| Connector | Staubli MC4 |
| Packing Specification | 36 pcs/Pallet ; 936pcs/40' HQ |

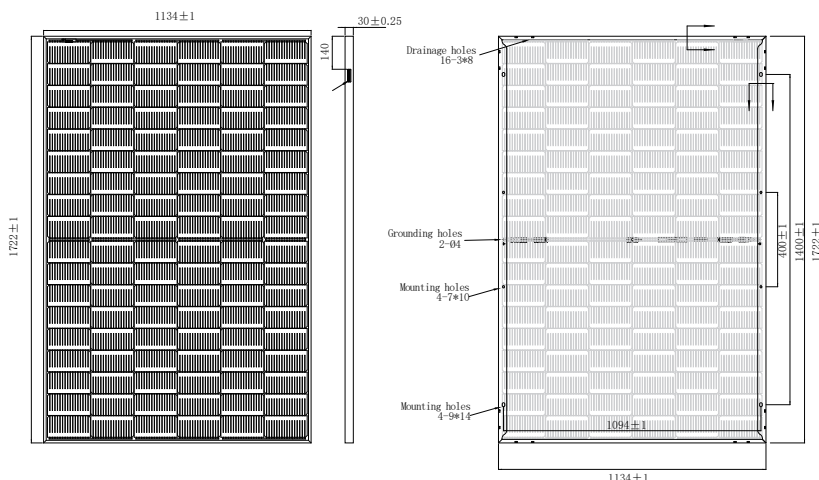
OPERATING PARAMETERS

| | |
|-----------------------------------|-----------------|
| Power tolerance (W) | (0~+5W) |
| Maximum system voltage (V) | 1500V |
| Maximum rated fuse current (A) | 30A |
| Current operating temperature (C) | -40~+85°C |
| Mechanical load | +8000Pa/-5400Pa |

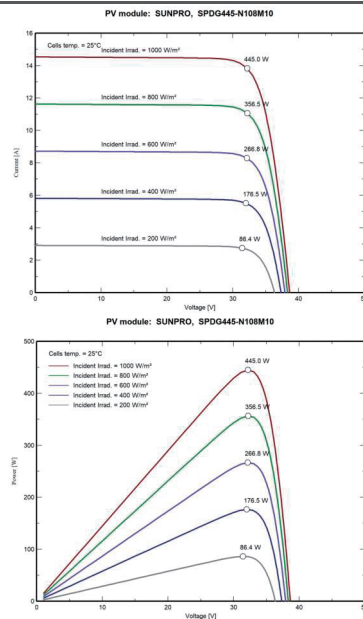
TEMPERATURE CHARACTERISTICS

| | |
|----------------------------------|-------------|
| Temp. Coeff. of Isc (TK Isc) | 0.046% / °C |
| Temp. Coeff. of Voc (TK Voc) | -0.25% / °C |
| Temp. Coeff. of Pmax (TK Pmax) | -0.30% / °C |
| Normal Operting Cell Temperature | 45±2°C |

MODULE DIMENSIONS(MM)



I-V CHARACTERISTICS AT DIFFERENT IRRADIATION



SUNPRO POWER NORTH AMERICA INC.

ADD: STE 2, 206 N Randolph St, Champaign, IL 61820

E-MAIL: info@sunpropower.com WEBSITE: www.sunpropower.us

*All data may have a lag, for reference only. Sunpro has the final right of interpretation.