

Tier 1

BloombergNEF



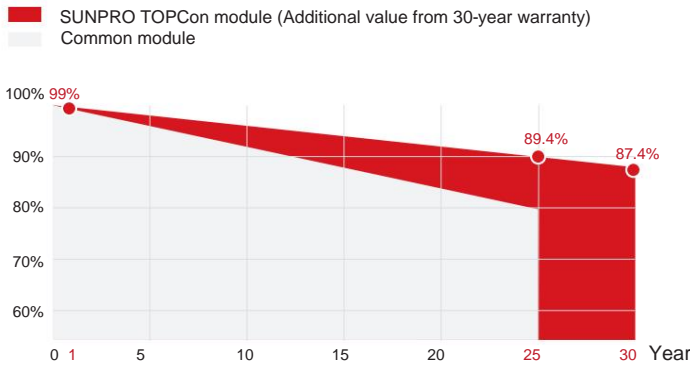
M10 TOPCON MONO

SPxxx-N108M10

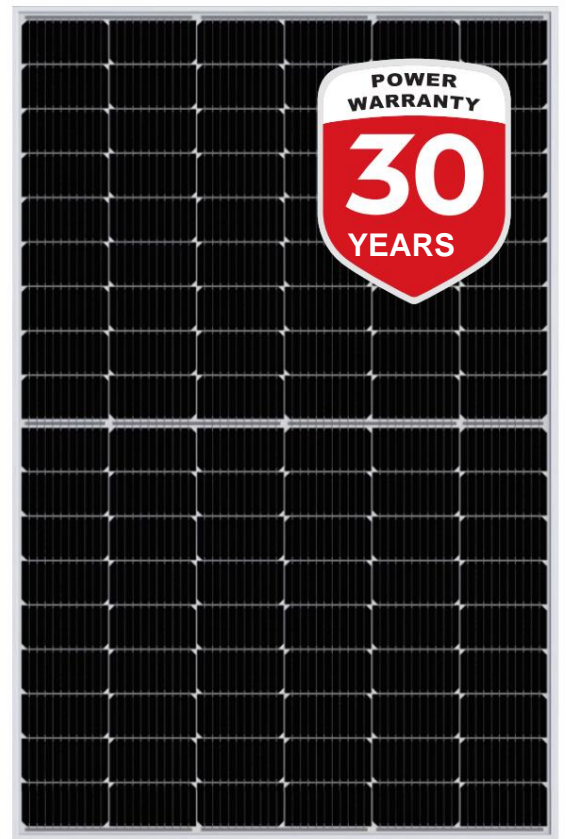
410~440W

- Silver frame
- Black frame
- Full black

15 Yr quality guarantee | 30 Yr power warranty



*SUNPRO Standard tiered warranty



WARRANTY & GUARANTEE WITHSTAND STRONG

Linear output power guarantee
25 years: 89.4% power output
30 years: 87.4% power output

Snow load 5400Pa
Wind load 2400Pa

PID RESISTANCE

Power positive tolerance 0~+5W.
The attenuation probability of PID phenomenon is minimized through battery production technology optimization and material control

R&D AND PRODUCTION HIGH EFFICIENCY

Advanced production line. The leading solar cell cutting process and multi busbar design with SUNPRO Technology.

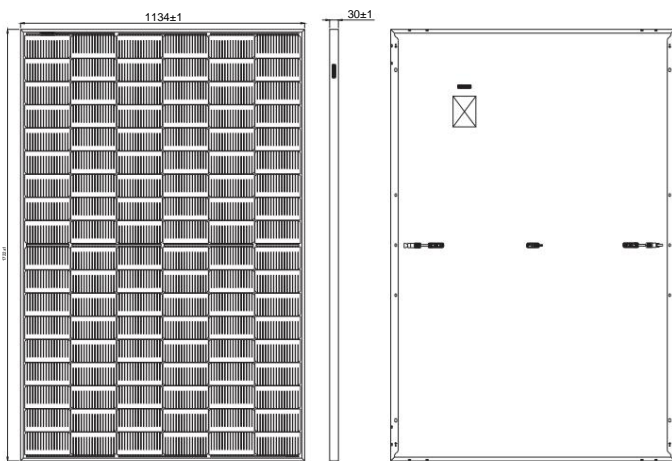
N-type, Components have better reliability and lower LID/LETID attenuation. Efficiency can reach 22.53%. Excellent low light performance. Higher power output under the conditions of haze, overcast, etc.

Electrical parameters at standard test conditions (STC:AM=1.5, 1000W/m², Cells Temperature 25°C)

Typical type

| | 410W | 415W | 420W | 425W | 430W | 435W | 440W |
|----------------------------|----------------|-------|-------|-------|-------|-------|-------|
| Max power(Pmax) | 410 | 415 | 420 | 425 | 430 | 435 | 440 |
| Max power voltage(Vmp) | 31.25 | 31.37 | 31.49 | 31.64 | 31.79 | 31.94 | 32.09 |
| Max power current(Imp) | 13.12 | 13.23 | 13.34 | 13.44 | 13.53 | 13.62 | 13.72 |
| Open circuit voltage (VOC) | 37.94 | 38.04 | 38.13 | 38.24 | 38.34 | 38.43 | 38.53 |
| Short circuit current(Isc) | 13.85 | 13.96 | 14.07 | 14.16 | 14.25 | 14.34 | 14.43 |
| Module Efficiency(%) | 21.00 | 21.25 | 21.51 | 21.76 | 22.02 | 22.28 | 22.53 |
| Max system voltage | DC 1500V (TÜV) | | | | | | |
| Maximum Series Fuse Rating | 25A | | | | | | |

DIMENSIONS AND STRUCTURE

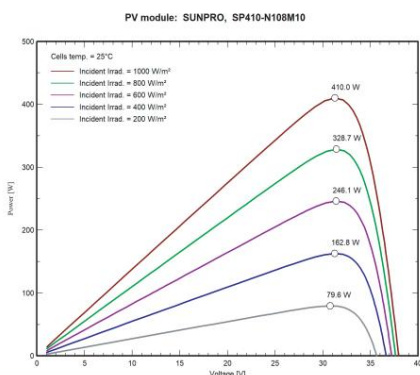
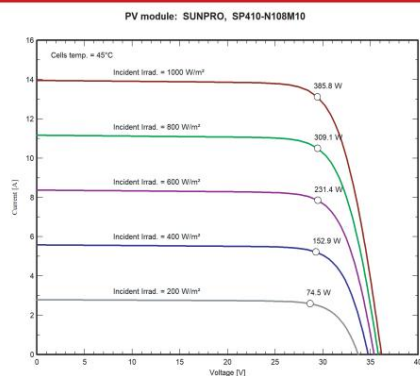
Electrical parameters at NMOT test conditions
(Irradiance 800W/m², Ambient Temperature 20 °C, AM 1.5, Wind Speed 1m/s)

| Typical type | 410W | 415W | 420W | 425W | 430W | 435W | 440W |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|
| Max power(Pmax) | 308 | 312 | 316 | 320 | 324 | 325 | 329 |
| Max power voltage(Vmp) | 29.4 | 29.5 | 29.6 | 29.7 | 29.9 | 29.8 | 29.9 |
| Max power current(Imp) | 10.49 | 10.58 | 10.67 | 10.75 | 10.84 | 10.91 | 11.00 |
| Open circuit voltage (VOC) | 35.7 | 35.8 | 35.9 | 36 | 36.1 | 36.00 | 36.10 |
| Short circuit current(Isc) | 11.16 | 11.25 | 11.34 | 11.41 | 11.48 | 11.56 | 11.63 |

Mechanical Data

| | |
|-----------------|--|
| Dimensions | 1722x1134x30mm |
| Weight | 21kg |
| Glass | 3.2mm ultra clear embossed tempered coated glass |
| Output cables | 4mm ² , symmetrical lengths 1100mm |
| Connectors | MC4 compatible IP68 |
| Cell type | N type Mono-Crystalline, 182x91mm |
| Number of cells | 108cells (Half-Cell) |

IV CHARACTERISTICS AT DIFFERENT IRRADIATION



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 |
| Operating temperature | -40~+85 °C |
| Normal operating cell temperature | 45±2 °C |

Packing Configuration

| | |
|-----------------------|-------|
| Container | 40'HQ |
| Pieces per pallet | 36 |
| Pallets per container | 26 |
| Pieces per container | 936 |

Tests, Certifications and Warranties

| | |
|-------------------------------------|---|
| Standard tests | IEC 61215, IEC 61730 |
| System certificates | ISO 9001, ISO14001, ISO45001 |
| Certifications | TÜV, CE, CEC, WEEE |
| Extreme wind and snow loads testing | Withstand extreme wind(2400 Pascal) and snow loads(5400 Pascal) |
| Power tolerance | 0~+5W |
| Junction box | IP 68 |
| Warranties | 15 years product warranty and 30 years 87.4% of power |