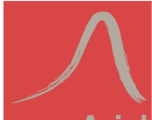


Tier1

BloombergNEF



Ariel Re

Lloyd's Syndicate 1910



ISO14001

ISO9001

ISO45001



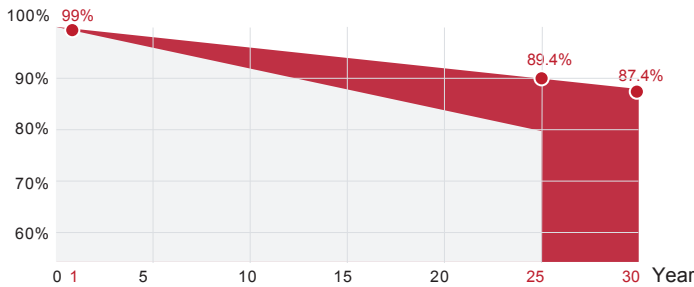
## M10 N TYPE MONO

### SPxxx-N108M10

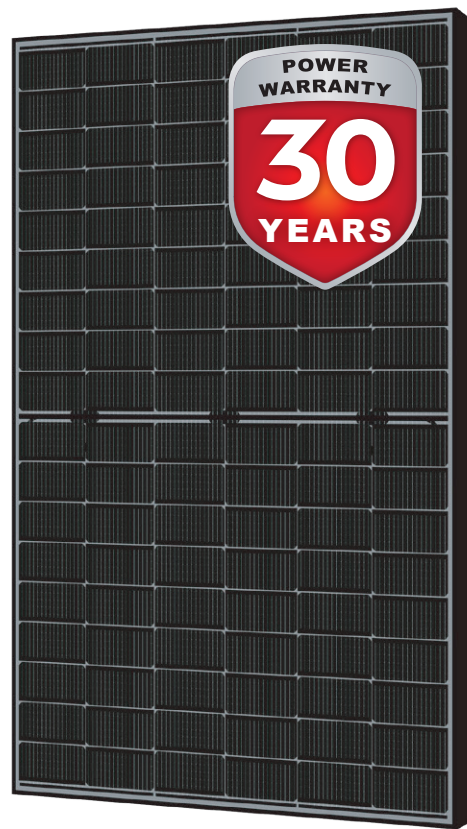
- Full black (xxx=410~425W)
- Silver frame
- Black frame

12 Yr quality guarantee | 30 Yr power warranty

- SUNPRO TOPCon module (Additional value from 30-year warranty)
- Common module



\*SUNPRO Standard tiered warranty



#### WARRANTY & GUARANTEE

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



#### WITHSTAND STRONG

Snow load 5400Pa  
Wind load 2400Pa



#### PID RESISTANCE

Power positive tolerance: 0~+3%.  
The attenuation probability of PID phenomenon is minimized through battery production technology optimization and material control



#### R&D AND PRODUCTION

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



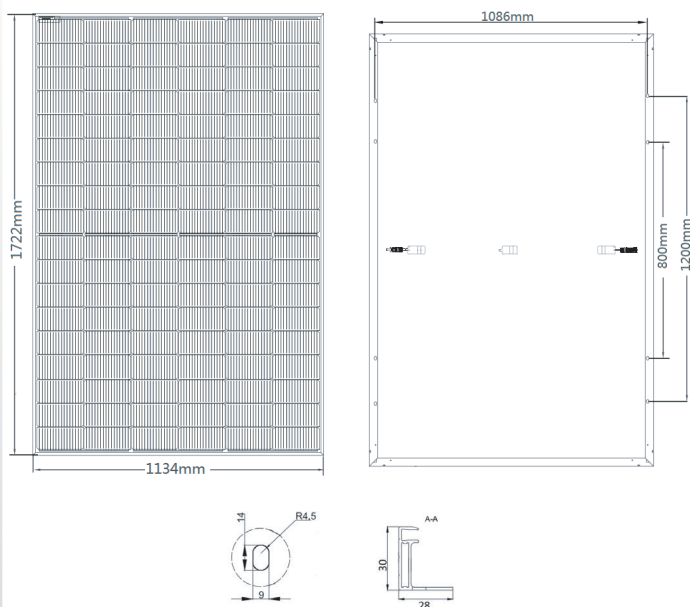
#### HIGH EFFICIENCY

N-type, Components have better reliability and lower LID/LETID attenuation. Efficiency can reach 21.76%. 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/m<sup>2</sup>, Cells Temperature 25°C)

Typical type	410W	415W	420W	425W
Max power(Pmax)	410	415	420	425
Max power voltage(Vmp)	31.13	31.32	31.51	31.70
Max power current(Imp)	13.17	13.25	13.33	13.41
Open circuit voltage(Voc)	37.73	37.92	38.11	38.30
Short circuit current(Isc)	13.91	13.99	14.07	14.15
Module Efficiency(%)	21.00	21.25	21.51	21.76
Max system voltage	DC 1500V (IEC)			
Maximum Series Fuse Rating	25A			

### DIMENSIONS AND STRUCTURE



### Electrical parameters at NMOT test conditions (Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s)

Typical type	410W	415W	420W	425W
Max power(Pmax)	308	312	316	322
Max power voltage(Vmp)	29.06	29.21	29.34	29.50
Max power current(Imp)	10.61	10.68	10.76	10.83
Open circuit voltage(Voc)	35.84	36.02	36.20	36.38
Short circuit current(Isc)	11.23	11.29	11.36	11.42

### Mechanical Data

Dimensions	1722x1134x30mm
Weight	21.2kg
Glass	3.2mm Coated toughened
Output cables	4mm <sup>2</sup> , symmetrical lengths 1100mm
Connectors	MC4 compatible IP68
Cell type	N type Mono-Crystalline, 16BB, 182x91mm
Number of cells	108cells (Half-Cell)

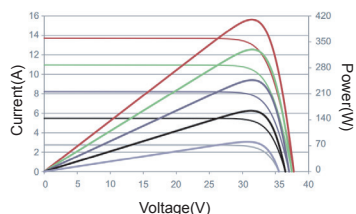
### Temperature Characteristics

### Packing Configuration

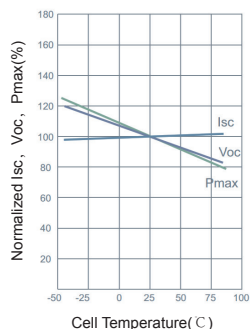
Temp.Coeff.of Isc(TK Isc)	0.046%/°C	Container	40'GP
Temp.Coeff.of Voc(TK Voc)	-0.25%/°C	Pieces per pallet	31
Temp.Coeff.of Pmax(TK Pmax)	-0.30%/°C	Pallets per container	26
Operating temperature	-40~+85°C	Pieces per container	806
Normal operating cell temperature	45±2°C		

### I-V CHARACTERISTICS AT DIFFERENT IRRADIATION

Current-Voltage & Power- Voltage Curves (415W)



Temperature Dependence of Isc, Voc, Pmax(%)



### Tests, Certifications and Warranties

Standard tests	IEC 61215, IEC 61730, IEC 61701, IEC 62716, PPP 58042
System certs	ISO 9001, ISO14001, ISO45001
Certifications	TUV, CE, WEEE, INMETRO FIRE CERTIFICATE C1
Extreme wind and snow loads testing	Withstand extreme wind(2400 Pascal) and snow loads(5400 Pascal)
Power tolerance	0~+3%
Junction box	IP 68
Warranties	12 years product warranty and 30 years 87.4% of power