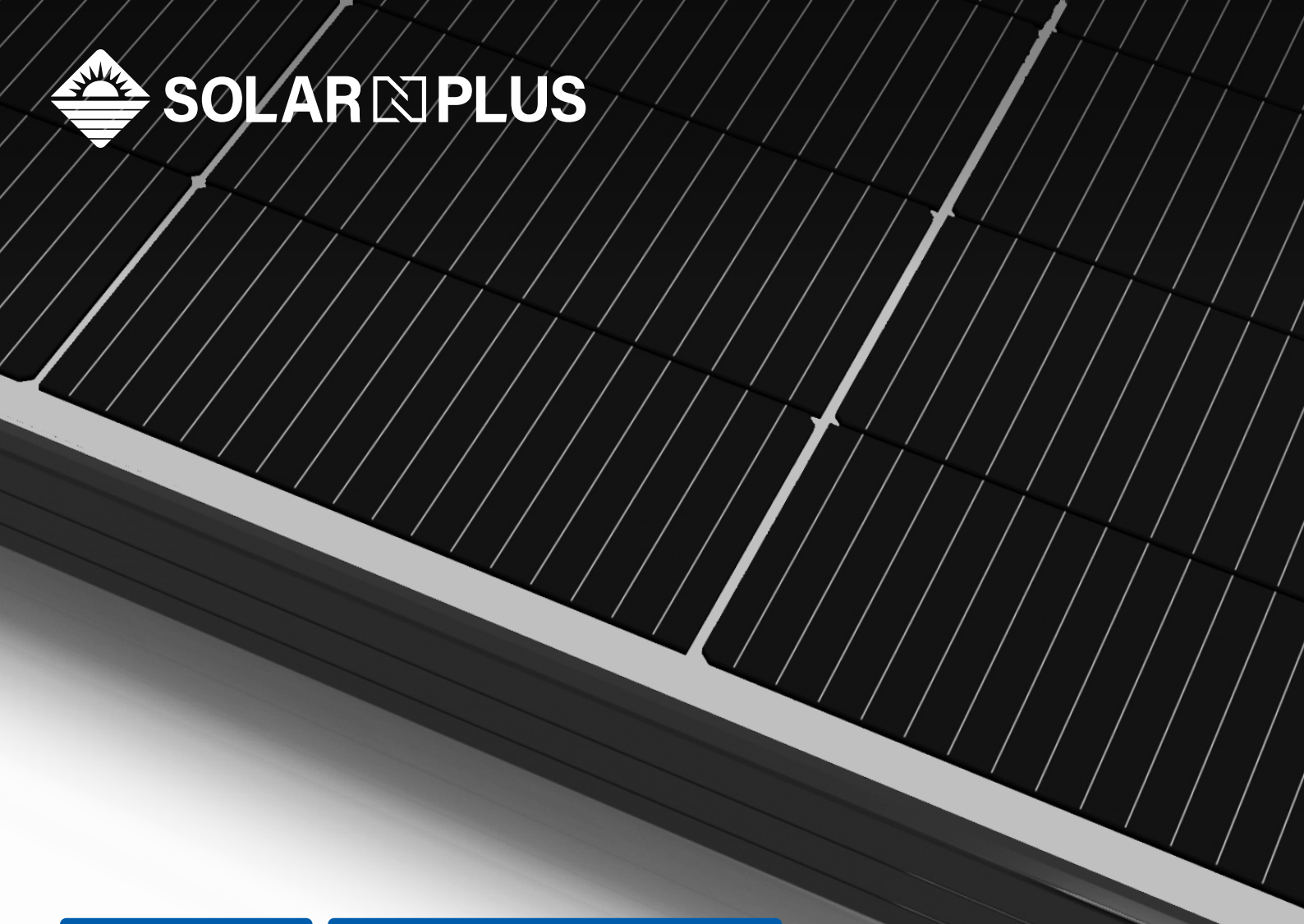
SOLAR N PLUS



SP-N16/108H | Black Frame Monofacial

Lightweight Module 420-440W

LIGHTWEIGHT
5.5kg/㎡, 50% lighter than conventional module; Perfect for residential

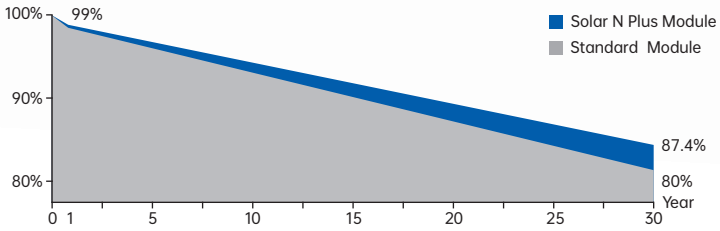
EASY INSTALLATION
Easy to install and remove

HIGH STRENGTH
Fully tempered glass, good hail resistance, UV resistance, corrosion resistance,capacity resistance performance

WARRANTY

15 YEARS Guarantee on product material and workmanship

30 YEARS Linear power output warranty



INSURANCE

Ariel Re 中国平安 PING AN

CERTIFICATION

TÜV NORD Type Tested CE ISO

- ISO 9001: 2015/quality management system
- ISO 14001: 2015/environment management system
- ISO 45001: 2018/occupation health safety management system

420-440W SP-N16/108H

ELECTRICAL CHARACTERISTICS (STC)

Maximum Power (Pm)	W	420	425	430	435	440
Power Tolerance	W			0~+5		
Maximum Power Voltage (Vm)	V	31.97	32.15	32.33	32.51	32.69
Maximum Power Current (Im)	A	13.14	13.22	13.30	13.38	13.46
Open Circuit Voltage (Voc)	V	38.46	38.59	38.72	38.85	38.98
Short Circuit Curren (Isc)	A	14.09	14.17	14.25	14.33	14.41
Module Efficiency (ηm)	%	21.6	21.8	22.1	22.3	22.5

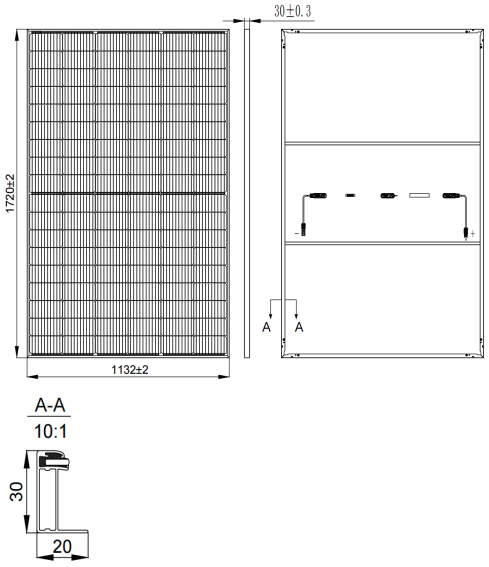
STC:AM=1.5, irradiance=1000W/m², module temperature=25℃

ELECTRICAL CHARACTERISTICS (NMOT)

Maximum Power (Pm)	W	323	326	329	333	337
Maximum Power Voltage (Vm)	V	30.00	30.10	30.20	30.40	30.50
Maximum Power Current (Im)	A	10.75	10.82	10.89	10.96	11.04
Open Circuit Voltage (Voc)	V	36.60	36.70	36.80	36.90	37.00
Short Circuit Current (Isc)	A	11.35	11.42	11.49	11.55	11.62

NMOT: irradiance=800W/m², environment temperature=20℃, wind speed=1m/s

TECHNICAL DRAWING

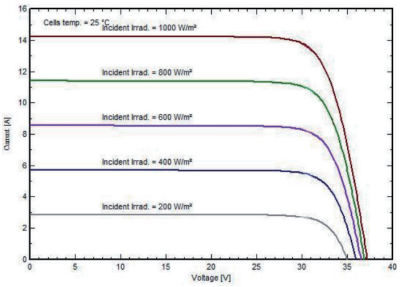


MECHANICAL SPECIFICATIONS

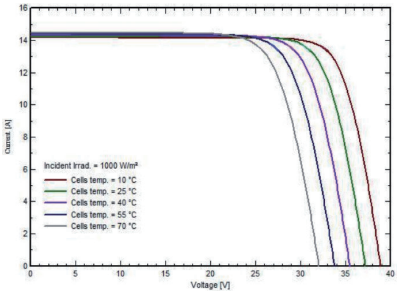
External Dimension (L×W×H)	1720×1132×30mm
Weight	10.8kg
Number of Cells	108 (6x18)
Front Glass	1.6mm AR-coating heat-strengthened glass
Frame	Anodized aluminum alloy, black color
Junction Box	IP68
Output Cables	4mm², 300mm or customized length
Connector	MC4 Compatible

I-V CURVE

I-V characteristics at different irradiance
(SP-N16/108H440W)



I-V characteristics at different temperatures
(SP-N16/108H440W)



APPLICATION CONDITIONS

Maximum System Voltage	DC1500V (IEC)
Maximum Series Fuse Rating	25A
Operating Temperature	-40℃ ~ +85℃
Mechanical Load	+3600Pa/-2400Pa
Hail Test	25mm diameter hail at 23m/s
Application Rating	Class A

TEMP CHARACTERISTICS

Nominal Module Operating Temperature	43±2℃
Temperature Coefficient of Pmax	-0.35%/℃
Temperature Coefficient of Voc	-0.26%/℃
Temperature Coefficient of ISC	0.048%/℃

PACKING CONFIGURATION

Container	40'HC
Pieces per Pallet	36 pcs
Pieces per Container	936 pcs

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Solar N Plus reserves the sole right of interpretation.

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