Version: 2023.12.07 V3 F

Leading the
energy evolution

EVO 5N

420-440W

SE5-54H

N-type TOPCon Black Frame Solar Module

22.53%
Max. Module Efficiency

10-30% Additional Power Generation

30 years lifespan brings 10-30% additional power generation comparing with conventional P-type module.

ZERO LID (Light Induced Degradation)

N-type solar cell has no LID naturally which can increase power generation.

Higher Reliability

Adpoted SunEvo lastest S-TOPCo 2.0 technology, No polysilicon wrap around, Full electrical isolation, Zero leakage current; Much Safer for roof.

Better Weak Illumination Response

Higher power output even under low-light environments like on cloudy or foggy days.

Better Temperature Coefficient

Higher power generation under working conditions, thanks to passivating contact cell technology.

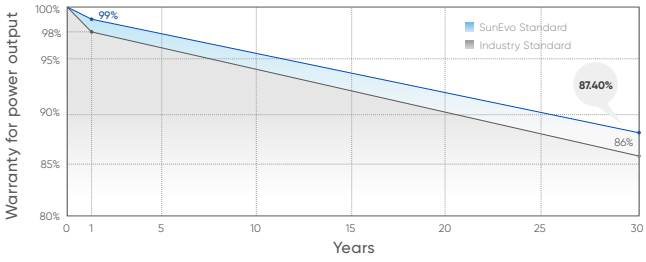
Quality Management System and Product Certification

IEC61215/61730, IEC62804(PID), IEC61701(Salt).
IEC62716 (Ammonia), IEC60068-2-68(Sand).
ISO 9001:2015/quality management system.
ISO 14001:2015/environmental management system.
ISO 45001:2018/occupation health safety management system.
ISO 50001:2011/energy management system.
IEC TS 62941-2016/PV industry quality management system.

Quality Guarantee

25 year Materials Warranty

30 year Power Warranty



SUNEVO
SunEvo Solar Co., Ltd. Add: No. 398 Ganquan Road, Hefei, Anhui, China. Email: info@sunevo.com Tel: +86 551 6262 4885 Web: www.sunevo.com

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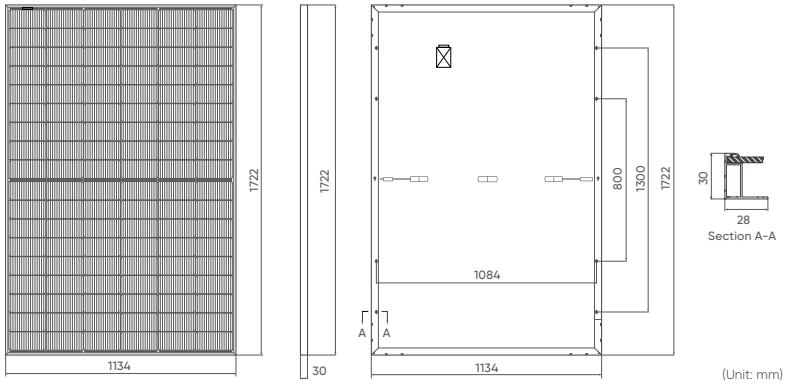
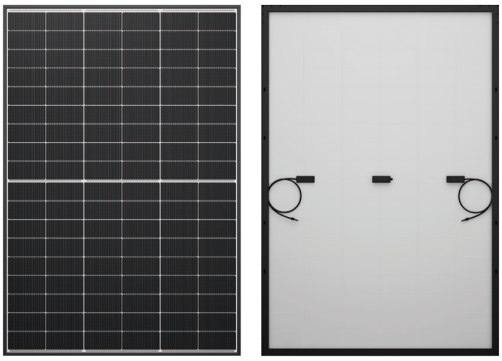
Drawings



Product Image



Mechanical Characteristics

Solar Cells	N-type Mono
No. of Cells	108 (6×18)
Dimensions	1722 × 1134 × 30mm
Weight	21.0kg
Front Glass	3.2mm coated tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP68 rated (3 by pass diodes)
Output Cables	4mm², 300mm (+) / 300mm (-), Length can be customized
Connectors	MC4 compatible
Mechanical Load Test	5400Pa
Packaging	36pcs/box, 216pcs/20'GP, 936pcs/40'HQ

Operating Characteristics

Operating Module Temperature	-40°C to +85°C
Maximum System Voltage	1500V DC (IEC)
Maximum Series Fuse Rating	25A
Power Tolerance	0~+5W

Temperature Characteristics

Nominal Operating Temperature (NMOT)	45±2°C
Temperature Coefficient of Pmax	-0.30%°C
Temperature Coefficient of Voc	-0.25%°C
Temperature Coefficient of Isc	+0.046%°C

Electrical Parameters (STC*)

Module Type: **SE5-54H**	420	425	430	435	440
Maximum Power (Pmax/W)	420	425	430	435	440
Voltage at Maximum Power (Vmpp/V)	32.92	33.09	33.26	33.43	33.60
Current at Maximum Power (Impp/A)	12.76	12.85	12.93	13.01	13.10
Open Circuit Voltage (Voc/V)	38.85	39.00	39.15	39.30	39.45
Short Circuit Current (Isc/A)	13.57	13.62	13.67	13.72	13.77
Module Efficiency (%)	21.51	21.76	22.02	22.27	22.53

Electrical Parameters (NMOT*)

Maximum Power (Pmax)	316	320	324	328	332
Voltage at Maximum Power (Vmpp/V)	30.64	30.81	30.98	31.14	31.30
Current at Maximum Power (Impp/A)	10.31	10.39	10.46	10.52	10.60
Open Circuit Voltage (Voc/V)	36.89	37.04	37.19	37.33	37.47
Short Circuit Current (Isc/A)	10.90	10.96	11.02	11.06	11.10

1. Standard Test Conditions [STC]: irradiance 1000W/m²; AM 1.5; ambient temperature 25°C according to EN 60904-3;
2. Nominal Module Operating Temperature (NMOT): Irradiance 800W/m²; wind speed 1m/s , ambient temperature 20°C.
3. Tolerance of Pm: 0~+5W, Measuring uncertainty of power: ±3%. Performance deviation of Voc [V], Isc [A], Vm [V] and Im [A]: ±3%.

I-V Curve