

EVO 5N

420-440W

SE5-54HBD

N-type TOPCon Ultra Black
Bifacial Dual Glass Solar Module

22.50%

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

Adopted SunEvo latest 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

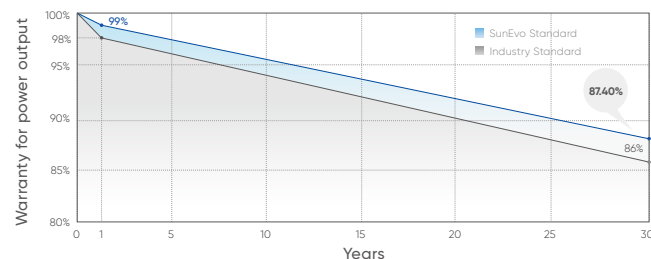
Higher power generation under working conditions, thanks to passivating contact cell technology.

Quality Management System and Product Certification

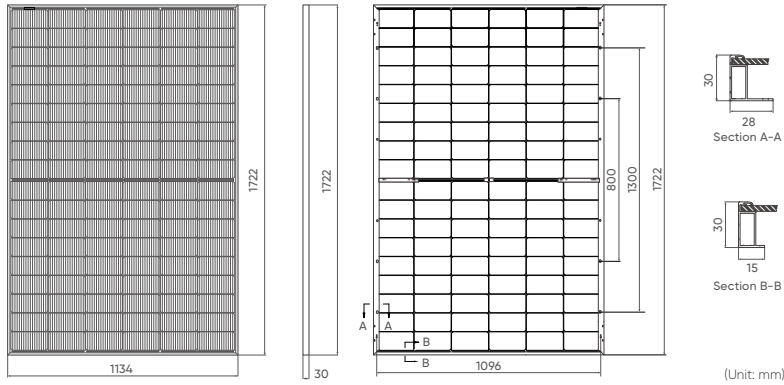
IEC61215/61730, IEC62804(PID), IEC61701(Salt),
IEC62716 (Ammonia), IEC60068-2-68(Sand),
ISO 9001:2015/quality management system,
ISO 14001:2015/environmental management system,
ISO 45001:2018/occupation health safety management system,
ISO 50001:2011/energy management system,
IEC TS 62941-2016/PV industry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

Quality Guarantee

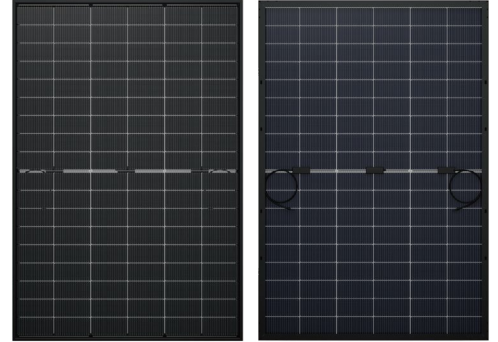
15 year Materials Warranty 30 year Power Warranty



Drawings



Product Image



Mechanical Characteristics

Solar Cells	TNC (N Type Monocrystalline Cell)
No. of Cells	108 (6 × 18)
Dimensions	1722±2 × 1134±2 × 30mm
Weigh/Backsheet	20.5kg/Black inside and white outside/Black
Front Glass	3.2mm high transmittance, AR coated tempered glass
Frame	Anodized aluminum alloy black frame
Junction Box	IP68, 3 diodes
Output Cables	4mm ²
Connectors	±1200mm, length can be customized
Wind/Snow Load	2400Pa/5400Pa
Packaging	36pcs per pallet, 936pcs per 40'HC

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

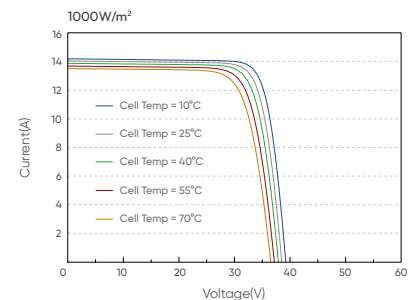
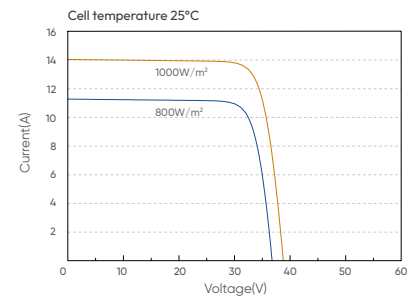
Temperature Characteristics

Nominal Operating Temperature (NMOT)	45±2°C
Temperature Coefficient of Pmax	-0.28%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.046%/°C

Electrical Parameters (STC*)

Module Type: SE5-54HBD	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 (%)	21.50	21.80	22.00	22.30	22.50

I-V Curve



Electrical Parameters (NMOT*)

Maximum Power (Pmax)	316.0	320.0	324.0	327.8	331.8
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%.