

SF- DN54G2-2

TOPCon



N-Type Double-glass Bifacial Half-cell Solar Module

Maximum Power Output **445W**

Maximum Module Efficiency **22.27%**

Power Tolerance **0~+5W**



Ultra-high Power Output

- Power output up to 445W
- Additional power generation gain up to 30%



Outstanding Weather Resistance

- Dual-glass design, with a broader application range
- Suitable for use in deserts, farms and near coastal areas
- Front side can withstand a load of 5400 Pa, and the back side can withstand a load of 2400 Pa



Higher Power Generation Gain

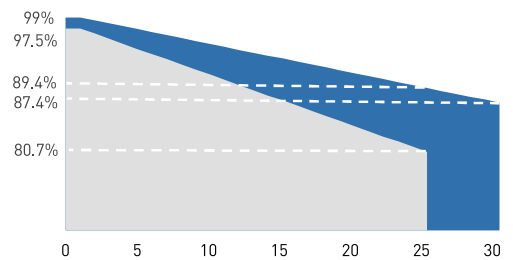
- Lower first-year degradation rate (1%) and annual degradation rate (0.4%)
- Half-cell technology reduces localized power loss
- Lower temperature coefficient and operating temperature, leading to more power generation



Safe and Reliable

- Class C fire resistance test passed
- IP68 ensures long-term reliability
- New generation TOPCon technology, with no wraparound coating, no leakage, and low hot spot risk

Industry-leading linear warranty



1%
First year degradation

0.4%
Annual degradation

15 Year Product Warranty

30 Year Linear Power Output Warranty

Electrical Parameters (STC)

Maximum Power	P _{max} (W)	425	430	435	440	445
Open Circuit Voltage	V _{oc} (V)	38.45	38.66	38.84	39.03	39.22
Short Circuit Current	I _{sc} (A)	14.05	14.11	14.17	14.23	14.29
Maximum Power Voltage	V _{mp} (V)	31.92	32.09	32.26	32.43	32.60
Maximum Power Current	I _{mp} (A)	13.32	13.40	13.49	13.57	13.66
Module Efficiency	(%)	21.27	21.52	21.77	22.02	22.27

* Irradiance 1000W/m², Cell Temperature 25°C, Air Mass 1.5, Testing Tolerance ±3%

Electrical Specification (NOCT)

Maximum Power	P _{max} (W)	320	323	327	331	335
Open Circuit Voltage	V _{oc} (V)	36.72	36.83	36.94	37.06	37.17
Short Circuit Current	I _{sc} (A)	11.18	11.26	11.34	11.42	11.50
Voltage at Maximum Power	V _{mp} (V)	30.24	30.38	30.51	30.64	30.77
Current at Maximum Power	I _{mp} (A)	10.57	10.65	10.73	10.80	10.88

Electrical Characteristics (BNPI)

Maximum Power	P _{max} (W)	469	474	479	484	489
Open Circuit Voltage	V _{oc} (V)	38.56	38.77	38.95	39.14	39.33
Short Circuit Current	I _{sc} (A)	15.22	15.28	15.34	15.40	15.46
Voltage at Maximum Power	V _{mp} (V)	31.87	32.04	32.21	32.38	32.55
Current at Maximum Power	I _{mp} (A)	14.72	14.80	14.88	14.96	15.04

Mechanical Parameters

Cell	108 Half-Cut Cells
Cell Type	Monocrystalline / N-Type, 16BB
Dimension	1722×1134×30mm
Weight	23.5kg
Connector	PV-GZX1500, NINGBO GZX / PV-LY02, Yongan Anhui / PV-DA01M2-XY, DAS SOLAR Co., Ltd
Junction Box	IP68 rated, with 3 Diodes
Cable Length	4mm ² , Wire length of 300mm (customizable)
Front Glass	3.2mm Semi-tempered glass
Back Glass	2.0mm Semi-tempered glass

Temperature Characteristics

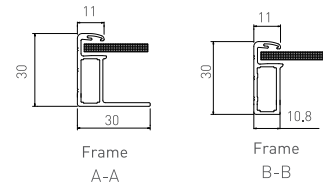
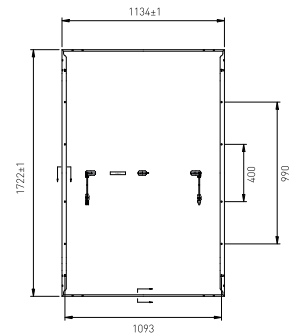
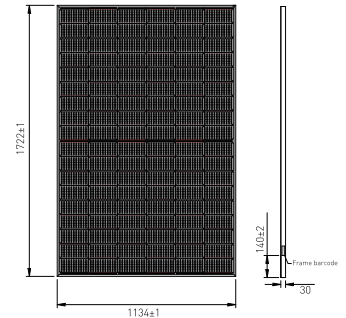
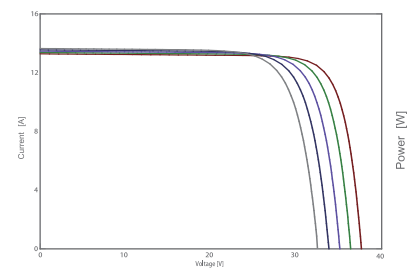
Nominal Operating Cell Temperature (NOCT)	42±2°C
Peak Power (P _{max}) Temperature Coefficient	-0.295%/°C
Open Circuit Voltage (V _{oc}) Temperature Coefficient	-0.257%/°C
Short Circuit Current (I _{sc}) Temperature Coefficient	+0.044%/°C

Limit Parameters

Operating Temperature	-40°C~+85°C
Maximum System Voltage	1500V DC (IEC)
Maximum Fuse Rating Current	30A
Power Tolerance	0~+5W

Packaging Configuration

Module per box	36 pieces
Module per 40' container	936 pieces

Module Dimensions

Curve Chart
I-V Curve at Different Temperature (460W)

I-V/P-V Curve at Different Irradiation (460W)
