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SF- TOPCon DN48G3-2

N-Type Bifacial Black-Frame Solar Module

Maximum Power Output	Maximum Module Efficiency	Power Tolerance
455W	22.77%	0~+5W

Ultra-high Power Output

- Power output up to 455W
- Additional power generation gain up to 30%

Multi Scenario Usage

- Black-frame design, with a broader application range
- Suitable for use in deserts, farms and near coastal areas
- Installation on balcony/roofs is more aesthetically pleasing

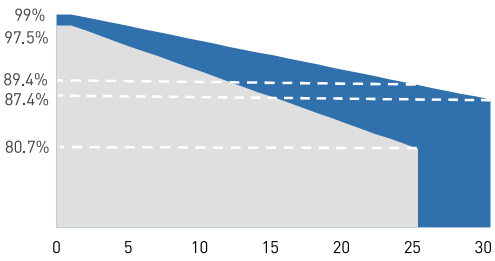
Higher Power Generation Gain

- 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

Note：
Certificate holder: Jiangsu Linyang Photovoltaic Technology Co., LTD.
Country of Solar Module manufacture：China

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SF-DN48G3-2 425-455W

Electrical Parameters (STC)

Maximum Power	Pmax[W]	425	430	435	440	445	450	455
Open Circuit Voltage	Voc[V]	34.51	34.95	35.18	35.42	35.70	35.93	35.91
Short Circuit Current	Isc[A]	15.38	15.46	15.54	15.61	15.69	15.77	15.84
Maximum Power Voltage	Vmp[V]	28.93	29.08	29.22	29.37	29.51	29.66	29.80
Maximum Power Current	Imp[A]	14.71	14.81	14.90	15.00	15.09	15.19	15.28
Module Efficiency	[%]	21.27	21.52	21.77	22.02	22.27	22.52	22.77

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

Electrical Specification (NOCT)

Maximum Power	Pmax[W]	320	323	327	331	335	338	342
Open Circuit Voltage	Voc[V]	32.78	33.20	33.42	33.65	33.91	34.14	34.11
Short Circuit Current	Isc[A]	12.42	12.48	12.55	12.61	12.67	12.73	12.79
Voltage at Maximum Power	Vmp[V]	26.95	27.09	27.23	27.36	27.50	27.63	27.77
Current at Maximum Power	Imp[A]	11.87	11.95	12.03	12.10	12.18	12.26	12.33

Electrical Characteristics with Different Power Bin (Reference to 15% Irradiance Ratio)

Maximum Power	Pmax[W]	489	495	500	506	512	518	523
Open Circuit Voltage	Voc[V]	34.51	34.95	35.18	35.42	35.70	35.93	35.91
Short Circuit Current	Isc[A]	17.67	17.76	17.85	17.94	18.02	18.11	18.20
Voltage at Maximum Power	Vmp[V]	28.93	29.08	29.22	29.37	29.51	29.66	29.80
Current at Maximum Power	Imp[A]	16.89	17.01	17.12	17.23	17.34	17.45	17.56

* Bifaciality Ratio: 80% ±10%

Mechanical Parameters

Cell	96 Half-Cut Cells
Cell Type	Monocrystalline / N-Type,
Dimension	1762x1134x30 mm
Weight	25.0±1.0kg
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	4mm², Wire length of 350mm (customizable)
Front Glass	2.0mm Semi-tempered glass
Back Glass	2.0mm Semi-tempered glass

Temperature Characteristics

Nominal Operating Cell Temperature (NOCT)	44±2°C
Peak Power (Pmax) Temperature Coefficient	(-0.28±0.028)%/°C
Open Circuit Voltage (Voc) Temperature Coefficient	-0.23%/°C
Short Circuit Current (Isc) Temperature Coefficient	+0.045%/°C

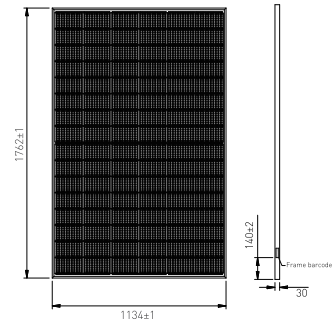
Limit Parameters

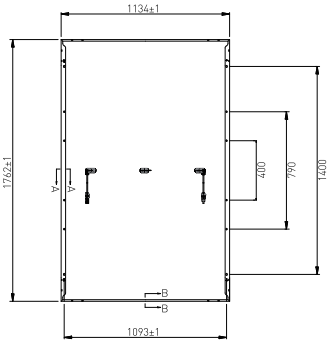
Operating Temperature	-40°C~+85°C
Maximum System Voltage	1500V DC (IEC)
Maximum Fuse Rating Current	30A
Power Tolerance	0~+5W

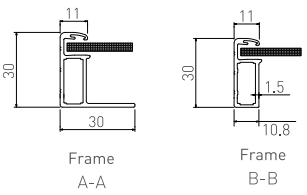
Packaging Configuration

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

Module Dimensions

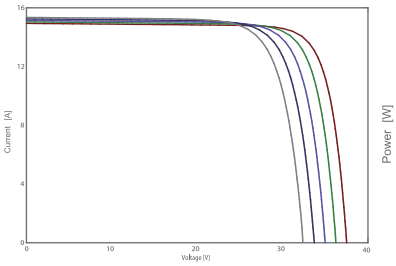






Curve Chart

I-V Curve at Different Temperature (455W)



I-V/P-V Curve at Different Irradiation (455W)