DASOLAR

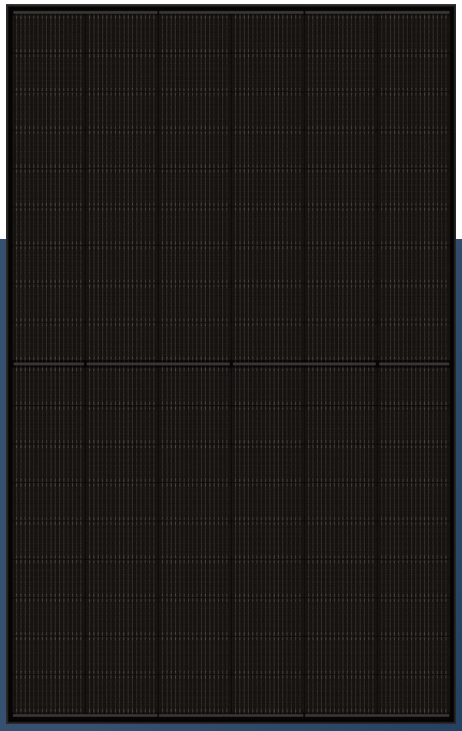
TIER 1 Bloomberg NEW ENERGY FINANCE

N Type

Bifacial Double Glass Module (Black Pro)

DAS-DH108ND

435W~465W



Maximum Power Output	Maximum Module Efficiency	Power Output Tolerance
465W	22.8%	0~+5W

Key Features

High Efficiency
Leading module efficiency in industry, up to 22.8%

Excellent Appearance and Performance
Bifacial solar cell, symmetrical design, low risk of micro-crack

High Reliability
Passed 3*IEC standard test，25 years materials warranty, 30 years power warranty

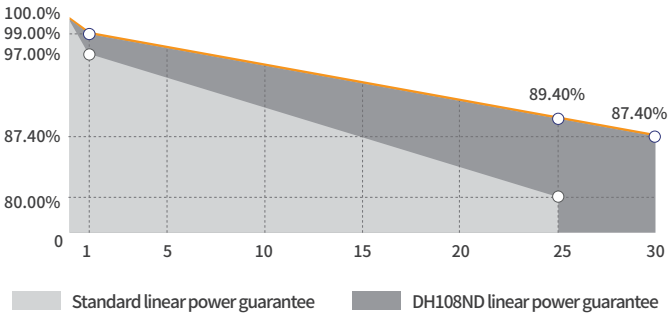
Excellent Rear Side Power Generation
Bifaciality is up to 80%, up to 30% more energy yield than conventional modules

Better low irradiance performance
Higher power output even under low irradiance environments like on cloudy or foggy days

Extensive Application Scenes
More extensive application scenes, such as BIPV, snow field, vertical installation, high humidity, strong wind and desert region

Product and Quality Certifications

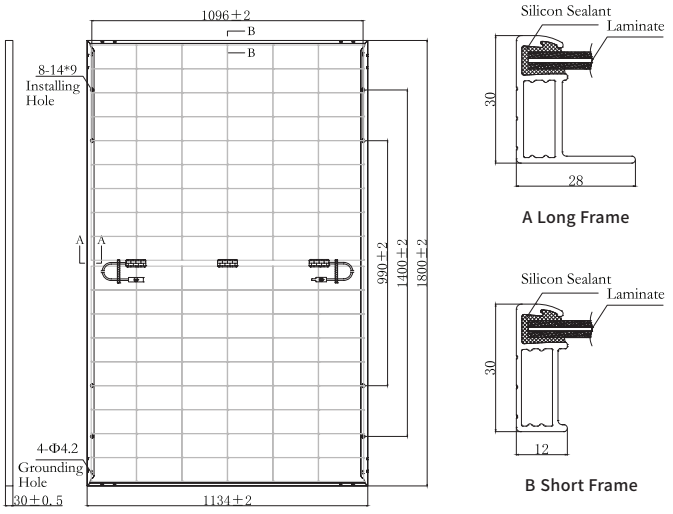
IEC 61215, IEC 61730
ISO 9001：Quality Management System
ISO 14001：Environment Management System
ISO 45001：Occupational Health and Safety Management System
IEC 62716, IEC 61701：Ammonia, Salt mist corrosion test
IEC TS 62804-1, IEC 60068-2-68：PID test, Dust and Sand test



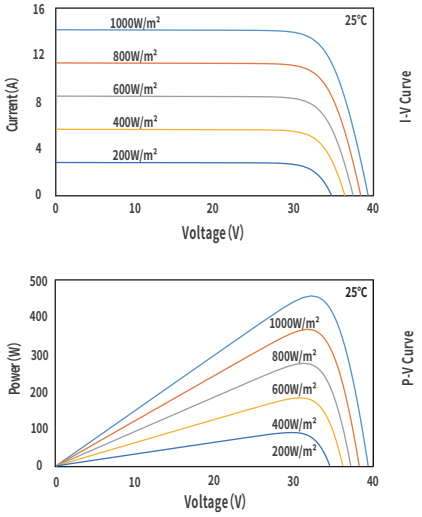
Leading product and power warranty

-1.00% 1st-year Degradation -0.40% Annual Degradation 25 Materials and workmanship warranty 30 Linear power warranty

Engineering Drawing (mm)



Characteristic Curves(455W)



Electrical Parameters (STC *)

Nominal Max. Power(Pmax/W)	435	440	445	450	455	460	465
Open Circuit Voltage(Voc/V)	38.64	38.82	39.00	39.18	39.36	39.54	39.72
Short Circuit Current(Isc/A)	14.53	14.58	14.63	14.68	14.73	14.79	14.85
Operating Voltage(Vmp/V)	31.92	32.10	32.28	32.47	32.65	32.84	33.03
Operating Current(Imp/A)	13.63	13.71	13.79	13.86	13.94	14.01	14.08
Efficiency(%)	21.3	21.6	21.8	22.0	22.3	22.5	22.8

STC * : Irradiance = 1000 W/m², Cell Temperature = 25°C, AM = 1.5
Test condition is based on the front side

Mechanical Parameters

Cell Type	N Type
Module Size	1800×1134×30mm
Glass Thickness	1.6mm
Module Weight	21.7Kg
Output Cable	4mm², cable length 1200mm (can be customized)
Connector	MC4 compatible
Junction Box	IP68, 3 bypass diodes
Frame	Anodized aluminium alloy（Black）

Electrical Parameters (NMOT *)

Nominal Max. Power(Pmax/W)	331	335	339	343	347	350	354
Open Circuit Voltage(Voc/V)	37.00	37.17	37.34	37.51	37.69	37.86	38.03
Short Circuit Current(Isc/A)	11.71	11.75	11.79	11.83	11.87	11.92	11.97
Operating Voltage(Vmp/V)	30.16	30.33	30.50	30.69	30.85	31.03	31.21
Operating Current(Imp/A)	10.99	11.05	11.12	11.17	11.24	11.29	11.35

NMOT *: Irradiance = 800 W/m², Ambient Temperature = 20°C, AM = 1.5,
Wind Speed = 1 m/s
Test condition is based on the front side

Temperature Coefficients

Short Circuit Current(Isc)	+0.045%/°C
Open Circuit Voltage(Voc)	-0.250%/°C
Nominal Max. Power(Pmax)	-0.280%/°C
NMOT	42±2°C

Backside Power Gain （For 455W）

Power Gain	10%	15%	20%	25%	30%
Nominal Max. Power(Pmax/W)	501	523	546	569	592
Open Circuit Voltage(Voc/V)	39.36	39.36	39.46	39.46	39.46
Short Circuit Current(Isc/A)	16.20	16.94	17.68	18.41	19.15
Operating Voltage(Vmp/V)	32.65	32.65	32.75	32.75	32.75
Operating Current(Imp/A)	15.33	16.03	16.67	17.37	18.06

Operating Parameters

Max. System Voltage	DC1500V
Power Tolerance	0 ~ +5 W
Operating Temperature	-40°C ~ +85°C
Max. Fuse Rated Current	30A
Front Static Load	Snow load 5400Pa, Wind load 2400Pa
Packing Data	36 pcs/Pallet；216(20GP)；936(40HQ)