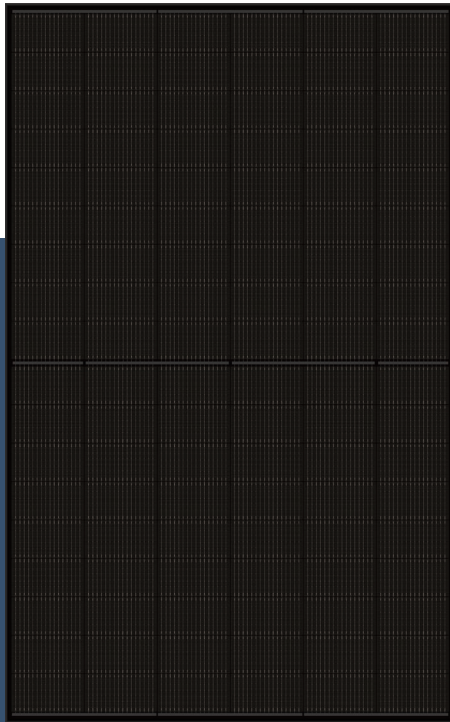


Bifacial Double Glass Module (Black Pro)

DAS-DH108ND

435W~465W



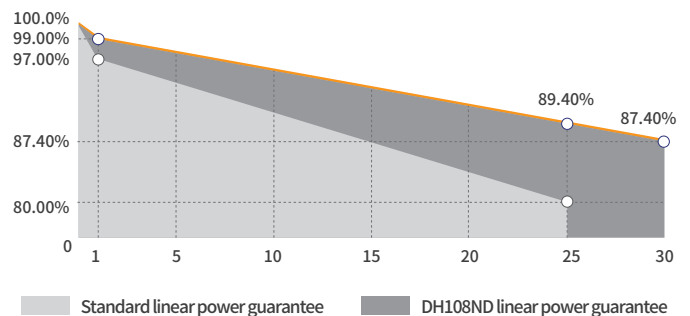
Key Features

- 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

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

Product and Quality Certifications

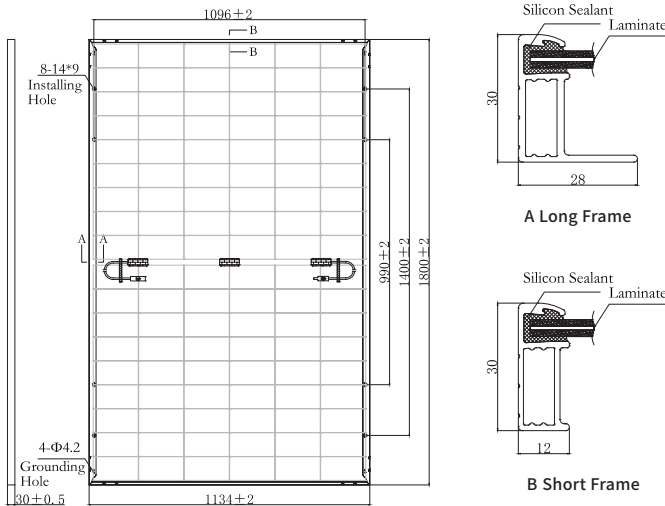
- IEC 61215, IEC 61730
- ISO 9001: Quality Management System
- ISO 14001: Environment Management System
- ISO 45001: Occupational Health and Safety Management System
- IEC 62716, IEC 61701: Ammonia, Salt mist corrosion test
- IEC TS 62804-1, IEC 60068-2-68: PID test, Dust and Sand test



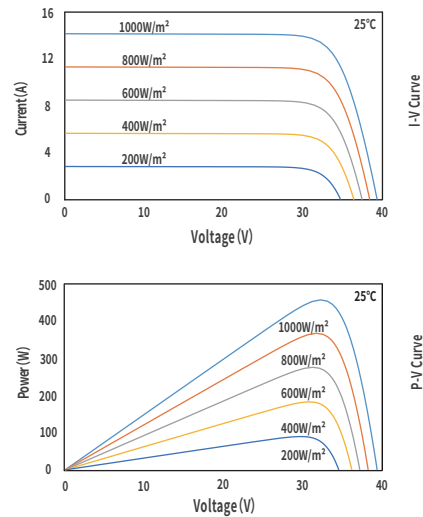
Leading product and power warranty

-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	4mm ² , cable length 1200mm (can be customized)
Connector	MC4 Series
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)