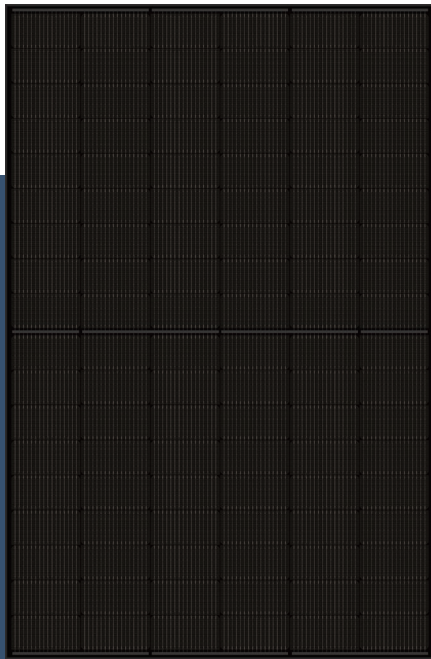


## Bifacial Double Glass Module (Black Pro)

DAS-DH108NA

# 420W~445W



### 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

**445W**

Maximum Module Efficiency

**22.8%**

Power Output Tolerance

**0~+5W**

### Product and Quality Certifications

IEC 61215, IEC 61730

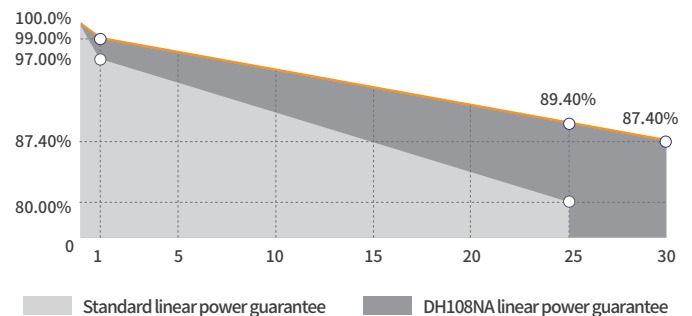
ISO 9001: Quality Management System

ISO 14001: Environment Management System

ISO 45001: Occupational Health and Safety Management System

IEC 62716, IEC 61701: Ammonia, Salt mist corrosion test

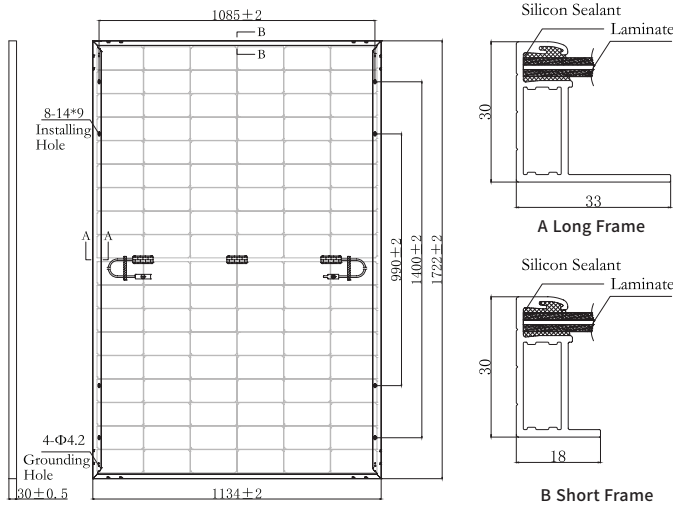
IEC TS 62804-1, IEC 60068-2-68: PID test, Dust and Sand test



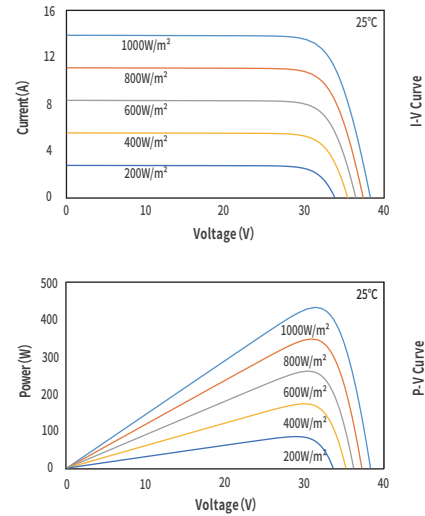
### Leading product and power warranty

**-1.00%** 1st-year Degradation **-0.40%** Annual Degradation **25** Years materials and workmanship warranty **30** Years linear power warranty

## Engineering Drawing (mm)



## Characteristic Curves(435W)



## Electrical Parameters (STC \*)

Nominal Max. Power(Pmax/W)	420	425	430	435	440	445
Open Circuit Voltage(Voc/V)	38.48	38.54	38.60	38.72	38.88	39.12
Short Circuit Current(Isc/A)	13.78	13.79	13.80	13.89	13.98	14.03
Operating Voltage(Vmp/V)	32.02	32.35	32.68	33.01	33.26	33.51
Operating Current(Imp/A)	13.12	13.14	13.16	13.18	13.23	13.28
Efficiency(%)	21.5	21.8	22.0	22.3	22.5	22.8

STC \*: Irradiance = 1000 W/m<sup>2</sup>, Cell Temperature = 25°C, AM = 1.5  
Test condition is based on the front side

## Mechanical Parameters

Cell Type	N Type
Module Size	1722×1134×30mm
Glass Thickness	1.6mm + 1.6mm
Module Weight	20.5Kg
Output Cable	4mm <sup>2</sup> , cable length 1200mm (can be customized)
Connector	Original MC4 Series
Junction Box	IP68, 3 bypass diodes
Frame	Anodized aluminium alloy (Black)

## Electrical Parameters (NMOT \*)

Nominal Max. Power(Pmax/W)	319	323	326	330	334	338
Open Circuit Voltage(Voc/V)	36.84	36.90	36.96	37.07	37.23	37.46
Short Circuit Current(Isc/A)	11.11	11.12	11.12	11.20	11.27	11.31
Operating Voltage(Vmp/V)	30.15	30.46	30.77	31.08	31.32	31.56
Operating Current(Imp/A)	10.58	10.59	10.61	10.62	10.66	10.71

NMOT \*: Irradiance = 800 W/m<sup>2</sup>, 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)	-0.300%/°C
NMOT	42±2°C

## Backside Power Gain (For 435W)

Power Gain	10%	15%	20%	25%	30%
Nominal Max. Power(Pmax/W)	478.5	500.3	522.0	543.8	565.5
Open Circuit Voltage(Voc/V)	38.72	38.72	38.82	38.82	38.82
Short Circuit Current(Isc/A)	15.28	15.97	16.67	17.36	18.06
Operating Voltage(Vmp/V)	33.01	33.01	33.11	33.11	33.11
Operating Current(Imp/A)	14.50	15.15	15.77	16.42	17.08

## Operating Parameters

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