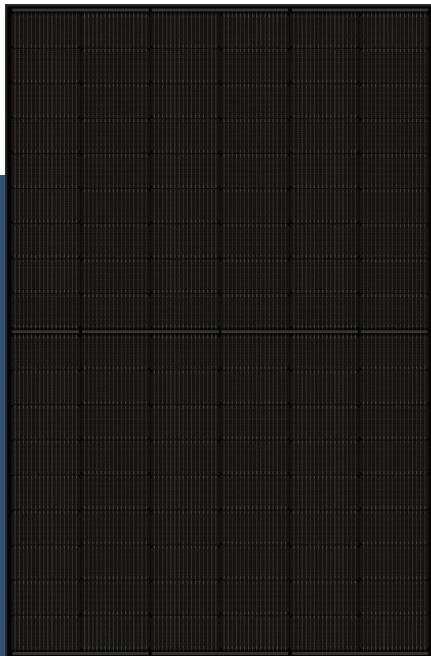


## Bifacial Double Glass Module (Black Pro)

DAS-DH108NA

# 420W~440W



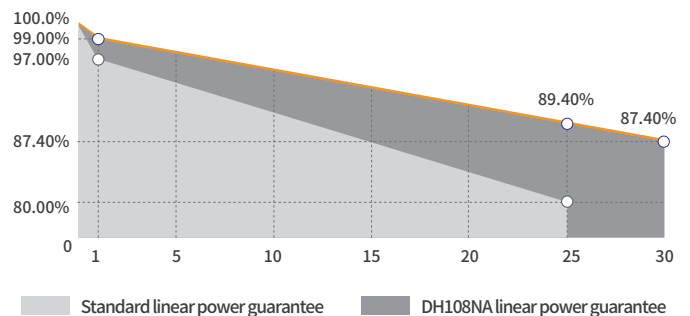
### Key Features

- High Efficiency**  
 Leading module efficiency in industry, up to 22.5%
- Excellent Appearance and Performance**  
 Bifacial solar cell, symmetrical design, low risk of micro-crack
- High Reliability**  
 Passed 3\*IEC standard test, 15 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
<b>440W</b>	<b>22.5%</b>	<b>0~+5W</b>

### Product and Quality Certifications

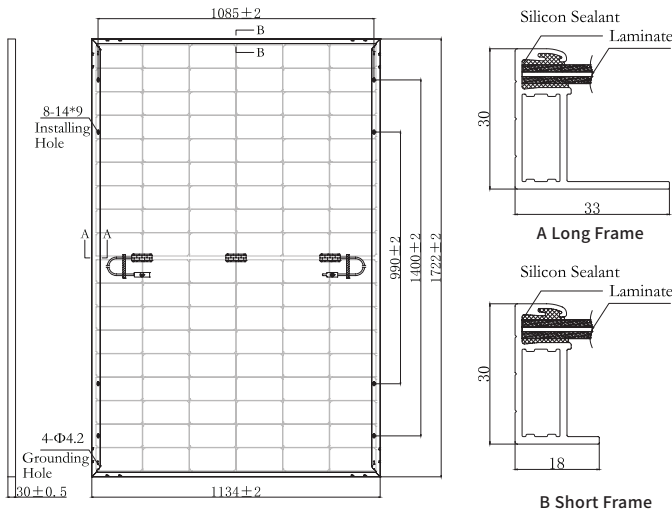
- IEC 61215, IEC 61730
- ISO 9001: Quality Management System
- ISO 14001: Environment Management System
- ISO 45001: Occupational Health and Safety Management System
- IEC 62716, IEC 61701: Ammonia, Salt mist corrosion test
- IEC TS 62804-1, IEC 60068-2-68: PID test, Dust and Sand test



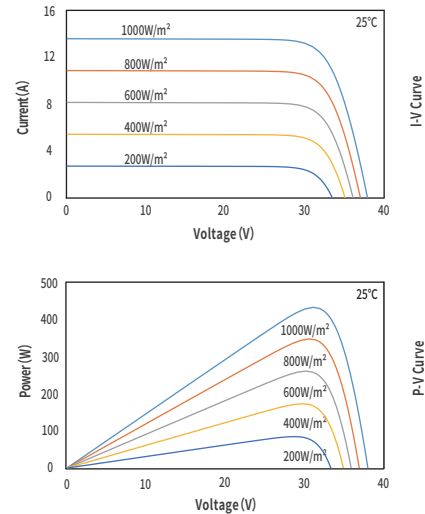
### Leading Product and Power Warranty

**-1.00%** 1st-year Degradation **-0.40%** Annual Degradation **15** Years materials and workmanship warranty **30** Years linear power warranty

## Engineering Drawing (MM)



## Characteristic Curves(430W)



## Electrical Parameters (STC \*)

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

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
Module Weight	20.5Kg
Output Cable	4mm <sup>2</sup> , 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)	316.0	319.0	322.0	325.0	329.0
Open Circuit Voltage(Voc/V)	36.40	36.46	36.52	36.82	36.69
Short Circuit Current(Isc/A)	11.11	11.11	11.12	11.20	11.27
Operating Voltage(Vmp/V)	30.05	30.28	30.51	30.83	31.04
Operating Current(Imp/A)	10.52	10.54	10.56	10.58	10.60

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 430W)

Power Gain	10%	15%	20%	25%	30%
Nominal Max. Power(Pmax/W)	473.0	494.5	516.0	537.5	559.0
Open Circuit Voltage(Voc/V)	38.60	38.60	38.70	38.70	38.70
Short Circuit Current(Isc/A)	15.18	15.87	16.56	17.25	17.94
Operating Voltage(Vmp/V)	32.68	32.68	32.78	32.78	32.78
Operating Current(Imp/A)	14.47	15.13	15.74	16.40	17.05

## 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)