

Bifacial Double Glass Module(Black Thru)  
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

440W

Maximum Module Efficiency

22.5%

Power Output Tolerance

0~+5W

## Product and Quality Certifications

IEC 61215, IEC 61730

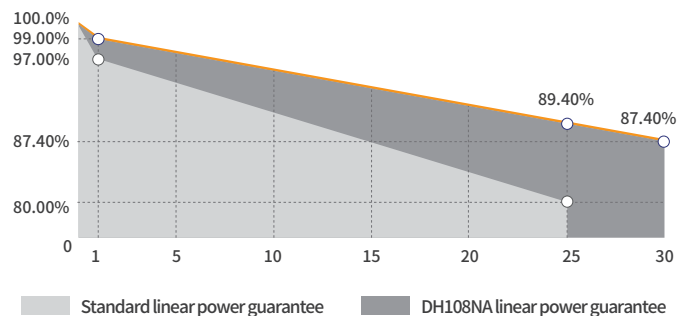
ISO 9001: Quality Management System

ISO 14001: Environment Management System

ISO 45001: Occupational Health and Safety Management System

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

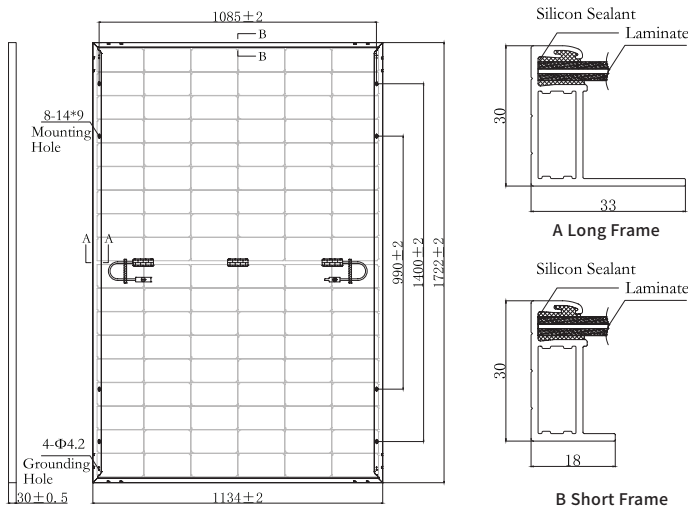
IEC TS 62804-1, IEC 60068-2-68: PID test, Dust and Sand test



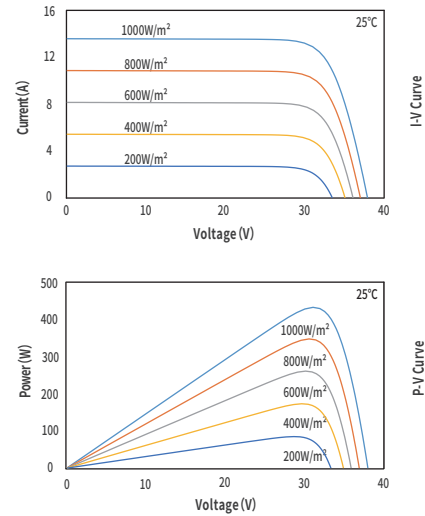
## Leading product and power warranty

-1.00% 1st-year Degradation -0.40% Annual Degradation 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 300mm (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)   | 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) |

