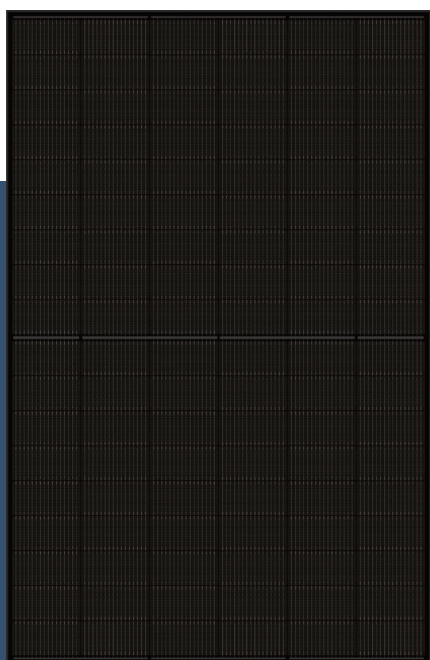


## Bifacial Double Glass Module (Black Pro)

DAS-DH108NA

# 425W~450W



### Key Features



#### High Efficiency

Leading module efficiency in industry, up to 23.0%



#### 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

## 450W

Maximum  
Module Efficiency

## 23.0%

Power Output  
Tolerance

## 0~+5W

### Product and Quality Certifications

IEC 61215, IEC 61730

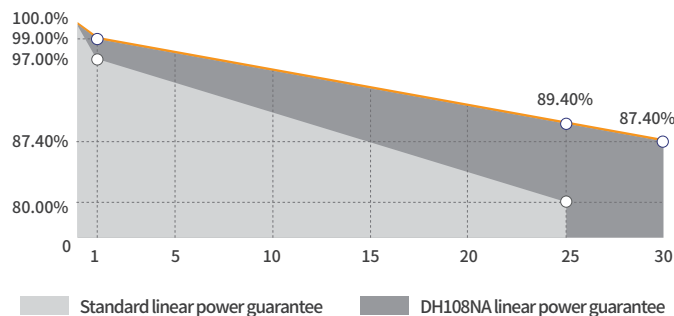
ISO 9001: Quality Management System

ISO 14001: Environment Management System

ISO 45001: Occupational Health and Safety Management System

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

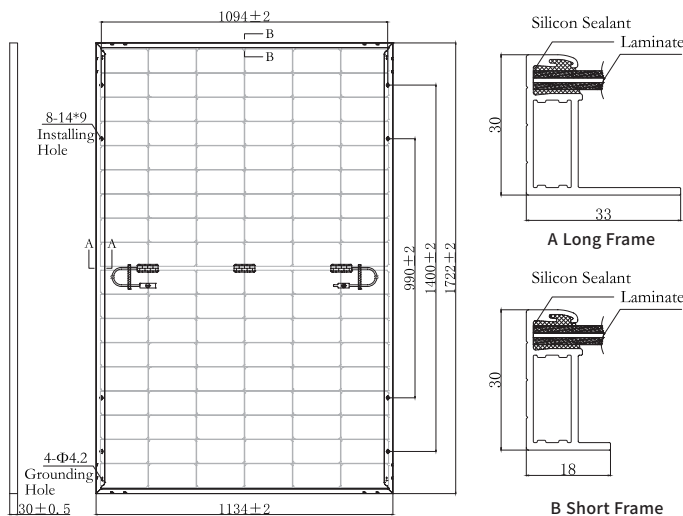
IEC TS 62804-1, IEC 60068-2-68: PID test, Dust and Sand test



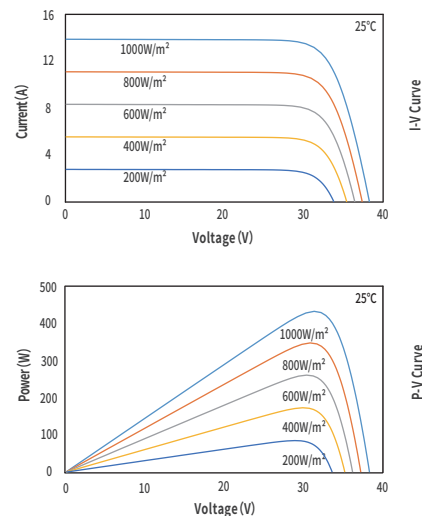
### Leading product and power warranty

**-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)   | 425   | 430   | 435   | 440   | 445   | 450   |
|------------------------------|-------|-------|-------|-------|-------|-------|
| Open Circuit Voltage(Voc/V)  | 38.54 | 38.60 | 38.72 | 38.88 | 39.12 | 39.36 |
| Short Circuit Current(Isc/A) | 13.79 | 13.80 | 13.89 | 13.98 | 14.03 | 14.08 |
| Operating Voltage(Vmp/V)     | 32.35 | 32.68 | 33.01 | 33.26 | 33.51 | 33.76 |
| Operating Current(Imp/A)     | 13.14 | 13.16 | 13.18 | 13.23 | 13.28 | 13.33 |
| Efficiency(%)                | 21.8  | 22.0  | 22.3  | 22.5  | 22.8  | 23.0  |

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     | 1722×1134×30mm                                |
| Glass Thickness | 1.6mm + 1.6mm                                 |
| Module Weight   | 20.5Kg                                        |
| Output Cable    | 4mm², 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)   | 323   | 326   | 330   | 334   | 338   | 342   |
|------------------------------|-------|-------|-------|-------|-------|-------|
| Open Circuit Voltage(Voc/V)  | 36.90 | 36.96 | 37.07 | 37.23 | 37.46 | 37.69 |
| Short Circuit Current(Isc/A) | 11.12 | 11.12 | 11.20 | 11.27 | 11.31 | 11.35 |
| Operating Voltage(Vmp/V)     | 30.46 | 30.77 | 31.08 | 31.32 | 31.56 | 31.79 |
| Operating Current(Imp/A)     | 10.59 | 10.61 | 10.62 | 10.66 | 10.71 | 10.75 |

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)   | -0.300%/°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                                 |
| Bifaciality             | 80%±5%                              |
| Static Load             | Front 5400Pa, Back 2400Pa           |
| Packing Data            | 36 pcs/Pallet; 216(20GP); 936(40HQ) |