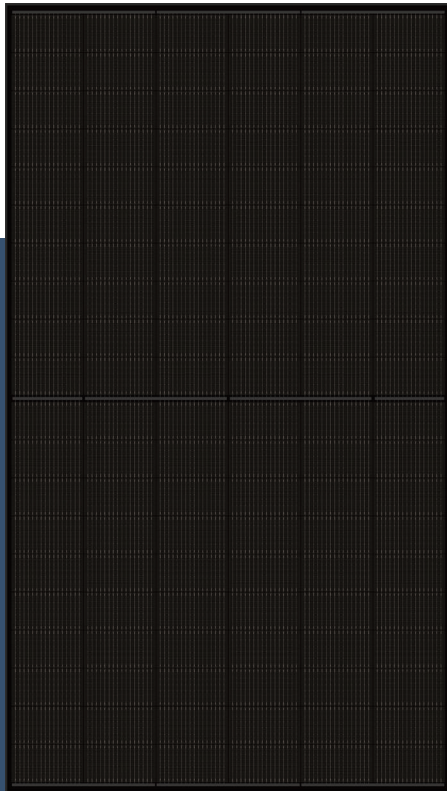


## Bifacial Double Glass Module (Black Pro)

DAS-DH120ND

# 490W~515W



### 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

## 515W

Maximum Module Efficiency

## 22.8%

Power Output Tolerance

## 0~+5W

### Product and Quality Certifications

IEC 61215, IEC 61730

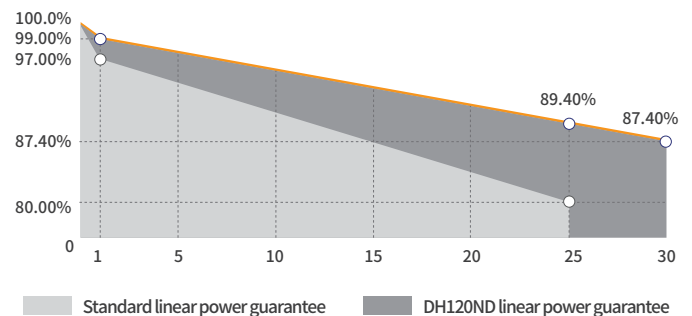
ISO 9001: Quality Management System

ISO 14001: Environment Management System

ISO 45001: Occupational Health and Safety Management System

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

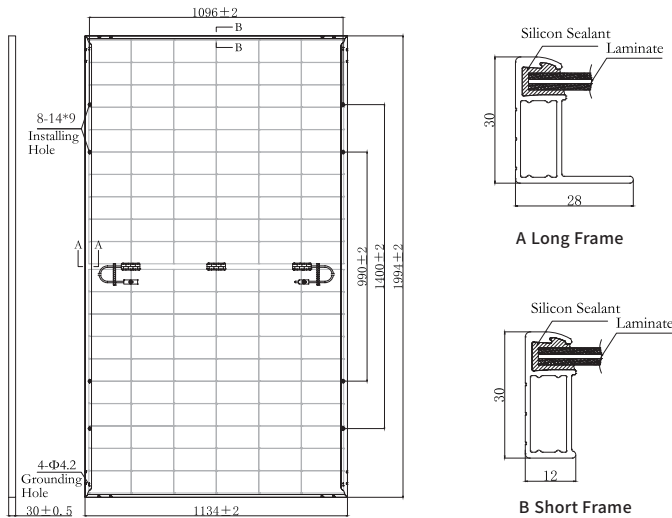
IEC TS 62804-1, IEC 60068-2-68: PID test, Dust and Sand test



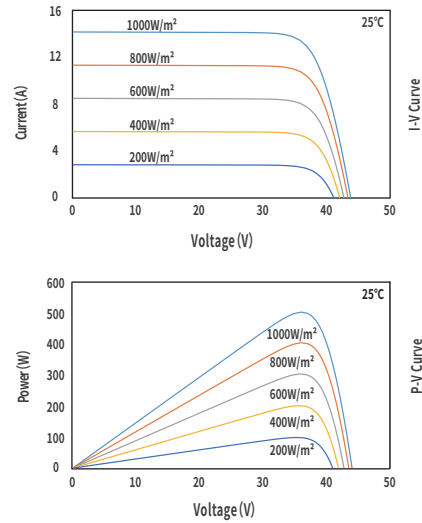
### Leading product and power warranty

-1.00% 1st-year Degradation -0.40% Annual Degradation 25 Materials and workmanship warranty 30 Linear power warranty

## Engineering Drawing (mm)



## Characteristic Curves(505W)



## Electrical Parameters (STC \*)

Nominal Max. Power(Pmax/W)	490	495	500	505	510	515
Open Circuit Voltage(Voc/V)	42.71	42.91	43.10	43.30	43.50	43.71
Short Circuit Current(Isc/A)	14.54	14.60	14.66	14.72	14.78	14.84
Operating Voltage(Vmp/V)	35.51	35.72	35.92	36.13	36.33	36.53
Operating Current(Imp/A)	13.80	13.86	13.92	13.98	14.04	14.10
Efficiency(%)	21.7	21.9	22.1	22.3	22.6	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	1994 × 1134 × 30mm
Glass Thickness	2.0mm + 2.0mm
Module Weight	27.5Kg
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)	373	377	381	385	389	392
Open Circuit Voltage(Voc/V)	40.89	41.09	41.27	41.46	41.65	41.85
Short Circuit Current(Isc/A)	11.72	11.77	11.82	11.87	11.91	11.96
Operating Voltage(Vmp/V)	33.56	33.76	33.95	34.14	34.33	34.52
Operating Current(Imp/A)	11.12	11.17	11.22	11.27	11.32	11.37

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)	-0.280%/°C
NMOT	42 ± 2°C

## Backside Power Gain (For 505W)

Power Gain	10%	15%	20%	25%	30%
Nominal Max. Power(Pmax/W)	555.5	580.8	606.0	631.3	656.5
Open Circuit Voltage(Voc/V)	43.30	43.30	43.40	43.40	43.40
Short Circuit Current(Isc/A)	16.19	16.93	17.66	18.40	19.14
Operating Voltage(Vmp/V)	36.13	36.13	36.23	36.23	36.23
Operating Current(Imp/A)	15.38	16.07	16.73	17.42	18.12

## 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; 180(20GP); 792(40HQ)