

## Bifacial Double Glass Module DAS-DH144ND

# 590W~615W



### 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, 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

## 615W

Maximum Module Efficiency

## 22.8%

Power Output Tolerance

## 0~+5W

### Product and Quality Certifications

IEC 61215, IEC 61730

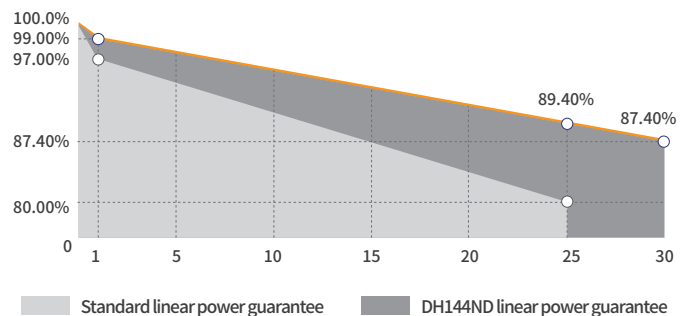
ISO 9001: Quality Management System

ISO 14001: Environment Management System

ISO 45001: Occupational Health and Safety Management System

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

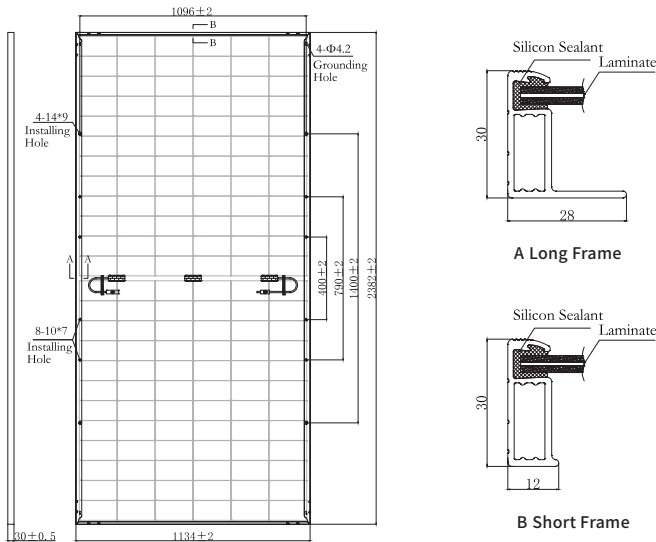
IEC TS 62804-1, IEC 60068-2-68: PID test, Dust and Sand test



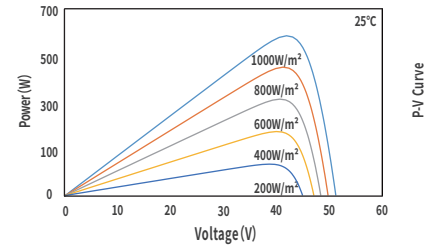
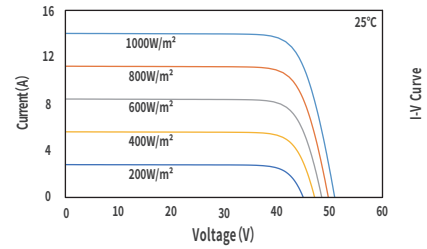
### Leading product and power warranty

**-1.00%** 1st-year Degradation **-0.40%** Annual Degradation **15** Materials and workmanship warranty **30** Linear power warranty

## Engineering Drawing (mm)



## Characteristic Curves(610W)



## Electrical Parameters (STC \*)

Nominal Max. Power(Pmax/W)	590	595	600	605	610	615
Open Circuit Voltage(Voc/V)	51.39	51.55	51.70	51.86	52.02	52.17
Short Circuit Current(Isc/A)	14.56	14.62	14.68	14.74	14.80	14.87
Operating Voltage(Vmp/V)	42.82	42.98	43.14	43.30	43.46	43.62
Operating Current(Imp/A)	13.78	13.85	13.91	13.98	14.04	14.10
Efficiency(%)	21.8	22.0	22.2	22.4	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	2382 × 1134 × 30mm
Glass Thickness	2.0mm
Module Weight	32.5Kg
Output Cable	4mm <sup>2</sup> , cable length +400mm/-200mm (can be customized)
Connector	MC4 Similar
Junction Box	IP68, 3 bypass diodes
Frame	Anodized aluminium alloy

## Electrical Parameters (NMOT \*)

Nominal Max. Power(Pmax/W)	450	453	457	461	465	469
Open Circuit Voltage(Voc/V)	49.21	49.36	49.50	49.66	49.81	49.95
Short Circuit Current(Isc/A)	11.74	11.79	11.83	11.88	11.93	11.99
Operating Voltage(Vmp/V)	40.47	40.60	40.77	40.90	41.07	41.23
Operating Current(Imp/A)	11.11	11.16	11.21	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 610W)

Power Gain	10%	15%	20%	25%	30%
Nominal Max. Power(Pmax/W)	671.0	701.5	732.0	762.5	793.0
Open Circuit Voltage(Voc/V)	52.46	52.46	52.56	52.56	52.56
Short Circuit Current(Isc/A)	16.30	17.04	17.78	18.53	19.27
Operating Voltage(Vmp/V)	43.33	43.33	43.43	43.43	43.43
Operating Current(Imp/A)	15.49	16.19	16.85	17.56	18.26

## 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; 144(20GP); 720(40HQ)