



# 440-450W

NORD EcoSeries II DAS-DH108NA

# SEE-THROUGH

Bifacial module with double glass and transparent foil



Blackframe NORD EcoSeries SEE-THROUGH Module ▶



### SEE-THROUGH TECHNOLOGY

The see-through technology of the PV module allows daylight to shine through the module thanks to transparent foil. This unique design element offers many possibilities, it can be used for residential applications, for example a terrace, or also in commercial applications such as hall roofing. Anywhere, with natural daylight.



### N-TYPE TOPCON TECHNOLOGY FOR LOWER LCOE

The lower temperature coefficient and better low irradiance performance of Topcon technology can effectively reduce LCOE.



### 30-YEARS POWER WARRANTY

The longest lifespan with dual-glass technology, lasts through generations.



### DOUBLE-SIDED POWER GENERATION, HIGHER INCOME

Bifaciality is up to 80%, up to 30% higher energy yield than conventional modules.



### TIER 1 MANUFACTURER

PV modules are manufactured under strict control on the manufacturer's Tier 1 production lines DAS-Solar.

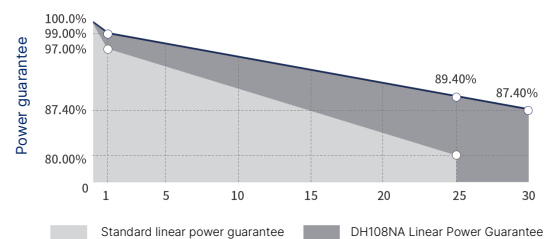
## LINEAR PERFORMANCE WARRANTY

**25**  
years

Product warranty on materials and workmanship

**30**  
years

Linear power output warranty



## CERTIFICATES

ISO 9001: 2015  
Quality Management System

IEC EN 61215 / IEC EN 61730

ISO 14001: 2015  
Environmental Management System





## ELECTRICAL PARAMETERS AT STC

Max. Power Output Pmax (W)	440	445	450
Power Tolerance	0~+3%	0~+3%	0~+3%
Max. Power Voltage Vmp (V)	33.26	33.51	33.76
Max. Power Current Imp (A)	13.23	13.28	13.33
Open circuit Voltage Voc (V)	38.88	39.12	39.36
Short Circuit Current Isc (A)	13.98	14.03	14.08
Module Efficiency (%)	22.5	22.8	23.0

\*STC (Standard Test Condition): Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass 1.5  
 \*Measurement Tolerance (±3.0%)

## BACKSIDE POWER GAIN (For 445W)

Power Gains	10%	15%	20%	25%	30%
Max. Power Output Pmax (W)	495,00	517,55	540,00	562,55	585,00
Open circuit Voltage Voc (V)	40,06	40,06	40,16	40,16	40,16
Max. Power Current Imp (A)	15,81	16,52	17,24	17,96	18,68
Max. Power Voltage Vmp (V)	33,01	33,01	33,11	33,11	33,11
Short Circuit Current Isc (A)	14,5	15,15	15,77	16,42	17,08

## TEMPERATURE COEFFICIENTS

Temperature Coefficients of Pmp	-0.30%/°C
Temperature Coefficients of Voc	-0.25%/°C
Temperature Coefficients of Isc	+0.045%/°C

## MECHANICAL PARAMETERS

Cell Type	N Type
Number of Cells	108pcs (6×18)
Dimensions ( L*W*H )	1722×1134×30mm
Weight	20.5kg
Frame	Anodised Aluminum, blackframe
Junction Box	IP68, 3 bypass diodes
Cable / Length	Original MC4-Evo 2 connectors 4.0mm <sup>2</sup> / 1200mm
Transparent Glass	2×1.6 mm, anti-reflective tempered

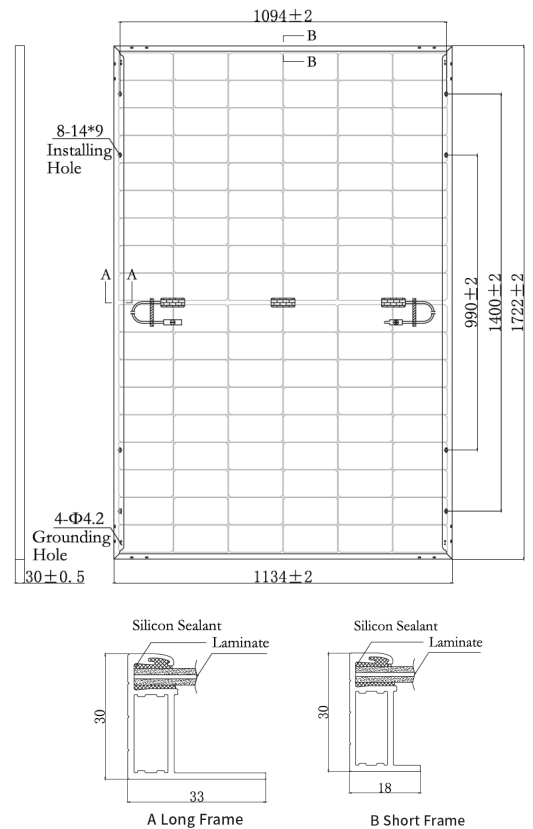
## OPERATING CONDITION

Maximum System Voltage (V)	1500 (DC)
Operating Temperature (°C)	-40~+85
Max. Wind Load / Snow Load (Pa)	2400/5400
Max. Series Fuse Rating (A)	30
Fire Rating	Class C (according to UL790)
Bifaciality	80%±5%
NMOT	42±2°C

## PACKAGE INFORMATION

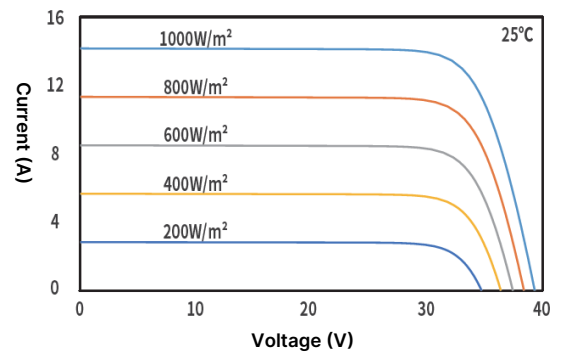
Container 40'HQ	936pcs
Quantity / Pallet	36pcs
Package size / Net weight / Gross weight	1846×1125×1252mm / 882kg / 924kg

## ASSEMBLY DRAWING (Unit: mm)



## I-V CURVES

Test temperature 25 °C



Radiation intensity: AM 1.5, 1000W/m<sup>2</sup>

