

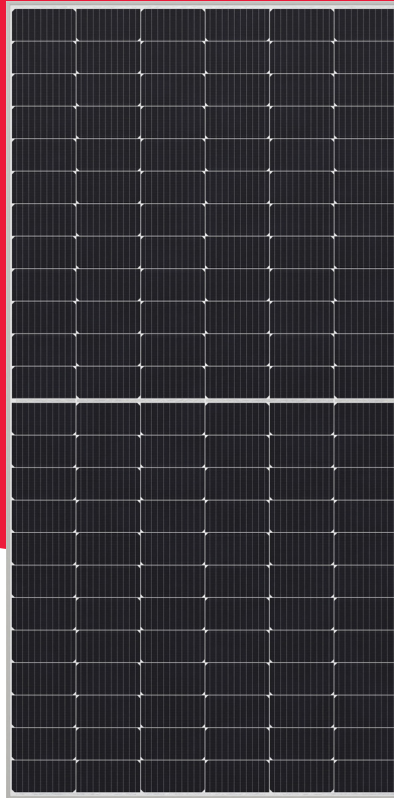
NB-JD Series

# NB-JD540

540 W

The Project Solution

Bifacial



## Powerful product features



Guaranteed positive power tolerance (0/+5 %)



High module efficiency 20.9 %  
PERC monocrystalline silicon photovoltaic modules



Max. system voltage 1,500 V  
Lower BOS costs by longer strings

**MBB** MBB busbar technology

Improved reliability  
Higher efficiency  
Reduced series resistance



Half-cut cell

Improved shading performance  
Lower internal losses  
Reduced hot spot risk



Bifacial module

Additional rear side power gain



Tested and certified

VDE, IEC/EN61215, IEC/EN61730



Safety class II, CE

Fire rating class C



Robust product design

PID resistance test passed  
Salt mist test passed (IEC61701)  
Ammonia test passed (IEC62716)  
Dust and sand test passed (IEC60068)

## Your solar partner for life

**60**  
YEARS

60 years of solar expertise

**30**  
YEARS

Linear power output guarantee

**15\***  
YEARS

Product guarantee



Local support team in Europe

**50**  
MIO

50 million PV modules installed

**1**  
TIER

Tier 1 - BloombergNEF



Energy Solutions

**SHARP**

Be Original.

\* Applicable for modules installed within the EU and additional listed countries.  
Please check the guarantee conditions for your area before purchasing.

## Electrical data (STC, NMOT)

		NB-JD540 (STC)	NB-JD540 (NMOT)	
Maximum power	$P_{max}$	540	402.97	$W_p$
Open-circuit voltage	$V_{oc}$	50.24	46.98	V
Short-circuit current	$I_{sc}$	13.69	11.05	A
Voltage at point of maximum power	$V_{mpp}$	42.06	39.20	V
Current at point of maximum power	$I_{mpp}$	12.84	10.28	A
Module efficiency	$\eta_m$	20.9		%
Bifaciality factor		70 ±5		%

STC = Standard Test Conditions: irradiance 1,000 W/m<sup>2</sup>, AM 1.5, cell temperature 25 °C. Rated electrical characteristics are within ±10 % of the indicated values of  $I_{sc}$ ,  $V_{oc}$  and 0 to +5 % of  $P_{max}$ . Reduction of efficiency from an irradiance change of 1,000 W/m<sup>2</sup> to 200 W/m<sup>2</sup> ( $T_{module} = 25 °C$ ) is less than 3 %.

NMOT = Nominal Module Operating Temperature: 45 °C, irradiance 800 W/m<sup>2</sup>, air temperature of 20 °C, wind speed of 1 m/s.

## Bifacial Generation Data (STC)

		NB-JD540						
Power gain rear side		5	10	15	20	25	%	
Maximum power	$P_{max}$	566.96	594.06	620.80	648.06	675.06	$W_p$	
Open-circuit voltage	$V_{oc}$	50.24	50.24	50.24	50.24	50.24	V	
Short-circuit current	$I_{sc}$	14.37	15.06	15.74	16.43	17.11	A	
Voltage at point of maximum power	$V_{mpp}$	42.06	42.06	42.06	42.06	42.06	V	
Current at point of maximum power	$I_{mpp}$	13.48	14.12	14.76	15.41	16.05	A	

## Mechanical data

Length	2,278 mm
Width	1,134 mm
Depth	30 mm
Weight	32.5 kg

## Temperature coefficient

$P_{max}$	-0.349 %/°C
$V_{oc}$	-0.267 %/°C
$I_{sc}$	0.049 %/°C

## Limit values

Maximum system voltage	1,500 V DC
Over-current protection	30 A
Temperature range	-40 to 85 °C
Max. mechanical load (snow/wind)	2,400 Pa
Tested snow load (IEC61215 test pass*)	5,400 Pa

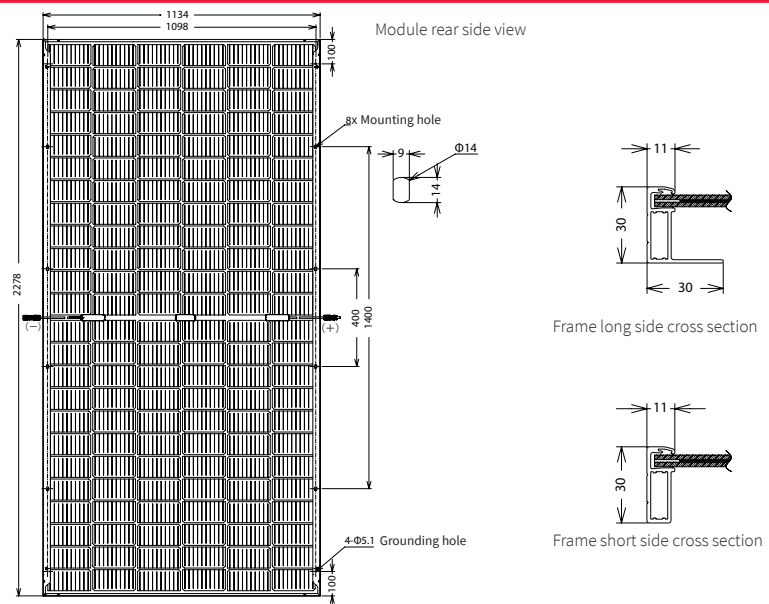
## Packaging data\*\*

Modules per pallet	36 pcs
Pallet size (L × W × H)	2.31 m × 1.12 m × 1.21 m
Pallet weight	Approx. 1.210 kg

\*\*Special offloading requirements, please refer to QR code or: [www.sharp.co.uk/NB.JD540-offloading](http://www.sharp.co.uk/NB.JD540-offloading)



## Dimensions (mm)



\*Please refer to SHARP's installation manual for details.

## General data

Cells	Half-cut cell mono, 182 mm x 91 mm, MBB, 2 strings of 72 cells in series
Front glass	Anti-reflective high transmissive low iron tempered glass, 2 mm
Rear glass	Tempered glass, 2 mm
Frame	Anodized aluminium alloy, silver
Cable	Ø 4.0 mm <sup>2</sup> , length (+) 397 mm, (-) 50 mm [or on request (+)/(-) 1,500 mm]
Connection box	IP68 rating, 3 bypass diodes
Connector	C1, IP68

Note: Technical data is subject to change without prior notice. Before using SHARP products, please request the latest data sheets from SHARP. SHARP accepts no responsibility for damage to devices which have been equipped with SHARP products on the basis of unverified information. The specifications may deviate slightly and are not guaranteed. Installation and operating instructions are to be found in the corresponding handbooks, or can be downloaded from [www.sharp.eu](http://www.sharp.eu). This module should not be directly connected to a load.