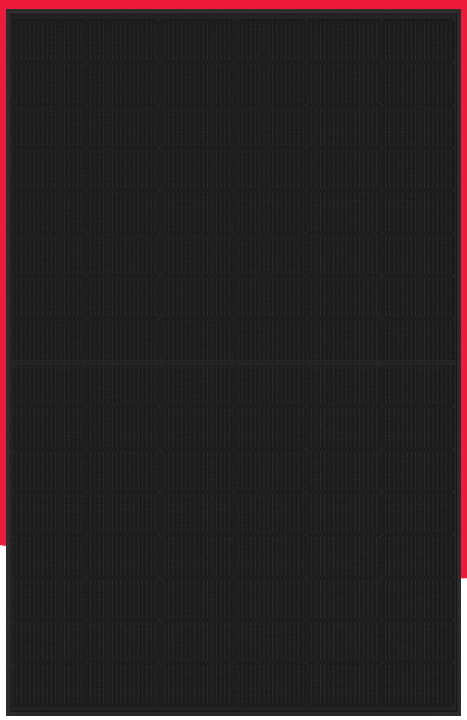
NBJG Series

NBJG435B - 455B

435 - 455W

The Design Solution

Bifacial



Powerful product features

+% Guaranteed positive power tolerance (0/+3 %)

MBB MBB busbar technology
Improved reliability
Higher efficiency
Reduced series resistance

Tested and certified
VDE, IEC/EN61215, IEC/EN61730
Safety class II, CE, UKCA
(MCS under application)
Fire rating class C

High module efficiency
21.77 / 22.02 / 22.27 /
22.52 / 22.77 %
N-Type TOPCon monocrystalline silicon photovoltaic modules

Half-cut cell
Improved shading performance
Lower internal losses

Bifacial module
Additional rear side power gain

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

65 YEARS 65 years of solar expertise

30 YEARS Linear power output guarantee

15* YEARS Product guarantee
not on roof

Local support team in Europe

50 MIL 50 million PV modules installed

25* YEARS Product guarantee
on roof

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)

		NBJG435B	NBJG440B	NBJG445B	NBJG450B	NBJG455B	
Maximum power	P_{max}	435	440	445	450	455	W_p
Open-circuit voltage	V_{oc}	34.98	35.20	35.39	35.59	35.78	V
Short-circuit current	I_{sc}	15.84	15.92	16.01	16.10	16.19	A
Voltage at point of maximum power	V_{mpp}	29.22	29.40	29.55	29.73	29.90	V
Current at point of maximum power	I_{mpp}	14.89	14.97	15.06	15.14	15.22	A
Module efficiency	η_m	21.77	22.02	22.27	22.52	22.77	%
Bifaciality coefficient	φ	φ Pmax = 80 (±10)		φ Voc = 99 (±10)	φ Isc = 80 (±10)		%

STC = Standard Test Conditions: irradiance 1,000 W/m², AM 1.5, cell temperature 25 °C.
Rated electrical characteristics are within ±5 % of I_{SC}, ±3 % of V_{OC} and 0 to +3 % of P_{max}.

Electrical data (BNPI, BSI, Low Light)

		NBJG435B	NBJG440B	NBJG445B	NBJG450B	NBJG455B	
Maximum power BNPI	P_{max}	481	486	492	497	503	W_p
Open-circuit voltage BNPI	V_{oc}	35.10	35.32	35.51	35.72	35.91	V
Short-circuit current BNPI	I_{sc}	17.53	17.61	17.71	17.81	17.91	A
Short-circuit current BSI	I_{sc}	19.64	19.74	19.85	19.96	20.08	A
Maximum power low light	P_{max}	85.71	86.70	87.60	88.70	89.60	W_p

BNPI: Bifacial Nameplate Irradiance: 1,000 W/m² (front) and 135 W/m² (rear). BSI: Bifacial Stress Irradiance: 1,000 W/m² (front) and 300 W/m² (rear).
Low light conditions: irradiance 200 W/m², cell temperature of 25 °C
Rated electrical characteristics are within ±10 % of the indicated values of I_{SC}, V_{OC} and 0 to +5 % of P_{max}.

Mechanical data

Length	1,762 mm
Width	1,134 mm
Depth	30 mm
Weight	25.0 kg

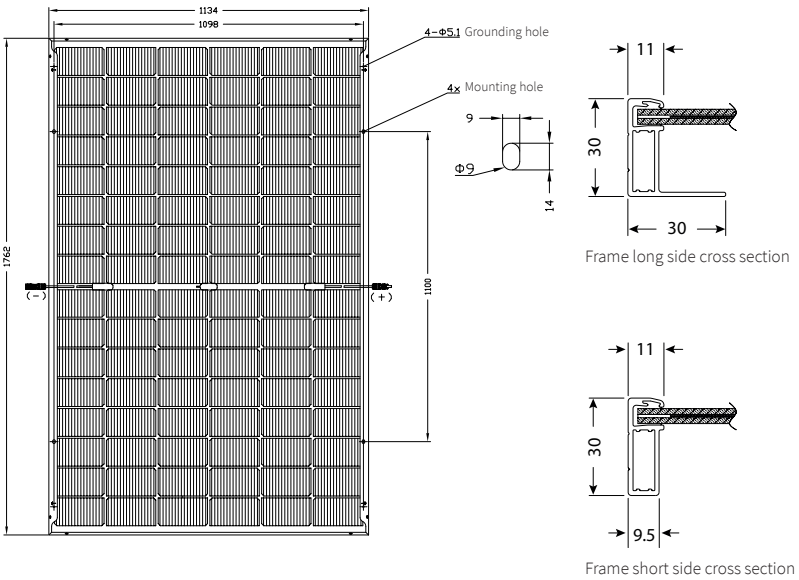
Temperature coefficient

P_{max}	-0.290 %/°C
V_{oc}	-0.240 %/°C
I_{sc}	0.047 %/°C

Limit values

Maximum system voltage	1,000 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

Dimensions (mm)



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

Packaging data

Modules per pallet	36 pcs
Pallet size (L × W × H)	1.79 m x 1.13 m x 1.25 m
Pallet weight	Approx. 930 kg

General data

Cells	Half-cut cell mono, 182 mm x 105 mm, MBB, 2 strings of 48 cells in series
Front glass	Anti-reflective high transmissive low iron semi-tempered glass, 2 mm
Rear glass	Semi-tempered glass, 2 mm
Frame	Anodized aluminium alloy, black
Cable	ø 4.0 mm², length 1,270 mm
Connection box	IP68 rating, 3 bypass diodes
Connector	MC4 (Multi Contact, Stäubli), IP68

SHARP Electronics GmbH
Energy Solutions
Nagelsweg 33 – 35
20097 Hamburg, Germany
T: +49 40 2376 2436
E: SolarInfo.Europe@sharp.eu

SHARP
Be Original.

www.sharp.eu/solar | @SHARPSolarEMEA

NBJG435B-455BEN0824