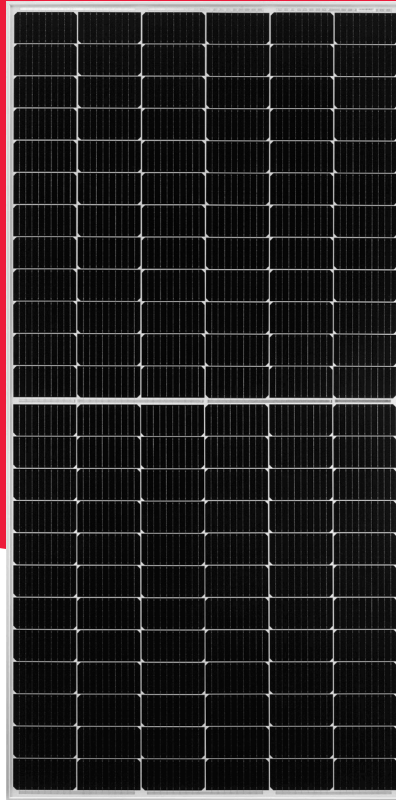


NU-JD Series

NU-JD445

445 W

The Project Solution



Powerful product features



Guaranteed positive power tolerance (0/+5 %)



High module efficiency 20.1 %
PERC monocrystalline silicon photovoltaic modules



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

9BB 9 busbar technology
Improved reliability
Higher efficiency
Reduced series resistance



Half-cut cell
Improved shading performance
Lower internal losses
Reduced hot spot risk



Tested and certified
VDE, IEC/EN61215, IEC/EN61730
CE
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 of solar expertise



Linear power output guarantee



Product guarantee



Local support team in Europe



50 million PV modules installed



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)

| NU-JD445 | | | |
|-----------------------------------|-----------|-------|-------|
| Maximum power | P_{max} | 445 | W_p |
| Open-circuit voltage | V_{oc} | 49.04 | V |
| Short-circuit current | I_{sc} | 11.55 | A |
| Voltage at point of maximum power | V_{mpp} | 41.32 | V |
| Current at point of maximum power | I_{mpp} | 10.77 | A |
| Module efficiency | η_m | 20.1 | % |

STC = Standard Test Conditions: irradiance 1,000 W/m², 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} (power measurement tolerance ±3 %).

Reduction of efficiency from an irradiance change of 1,000 W/m² to 200 W/m² ($T_{module} = 25$ °C) is less than 3 %.

Electrical data (NMOT)

| NU-JD445 | | | |
|-----------------------------------|-----------|--------|-------|
| Maximum power | P_{max} | 333.96 | W_p |
| Open-circuit voltage | V_{oc} | 46.49 | V |
| Short-circuit current | I_{sc} | 9.37 | A |
| Voltage at point of maximum power | V_{mpp} | 38.52 | V |
| Current at point of maximum power | I_{mpp} | 8.67 | A |

NMOT = Nominal Module Operating Temperature: 45 °C, irradiance 800 W/m², air temperature of 20 °C, wind speed of 1 m/s.

Mechanical data

| | |
|--------|----------|
| Length | 2,108 mm |
| Width | 1,048 mm |
| Depth | 35 mm |
| Weight | 25.0 kg |

Temperature coefficient

| | |
|-----------|-------------|
| P_{max} | -0.347 %/°C |
| V_{oc} | -0.263 %/°C |
| I_{sc} | 0.057 %/°C |

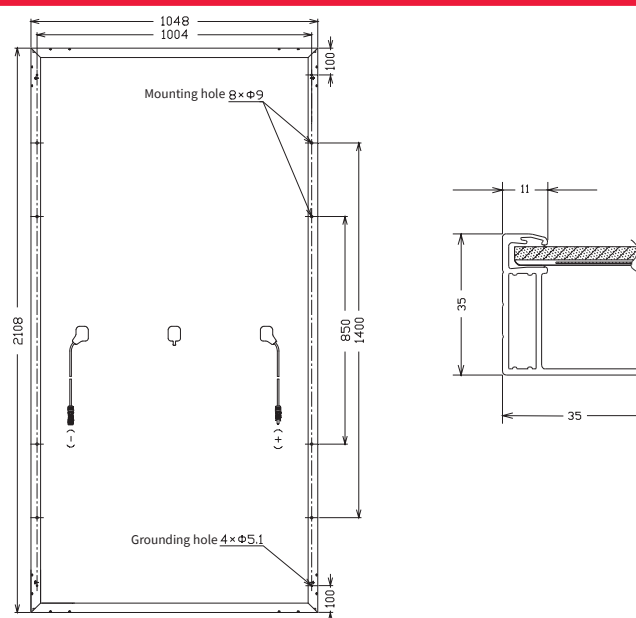
Limit values

| | |
|--|--------------|
| Maximum system voltage | 1,500 V DC |
| Over-current protection | 20 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 | 31 pcs |
| Pallet size (L x W x H) | 2,14 m x 1,13 m x 1,24 m |
| Pallet weight | Approx. 815 kg |

Dimensions (mm)



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

General data

| | |
|----------------|---|
| Cells | Half-cut cell mono, 166 mm x 83 mm, 9BB, 2 strings of 72 cells in series |
| Front glass | Anti-reflective high transmissive low iron tempered glass, 3.2 mm |
| Frame | Anodized aluminium alloy, silver |
| Backsheet | White |
| Cable | ∅ 4.0 mm ² , length 1,670 mm [or on request (+) 365 mm, (-) 50 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. This module should not be directly connected to a load.