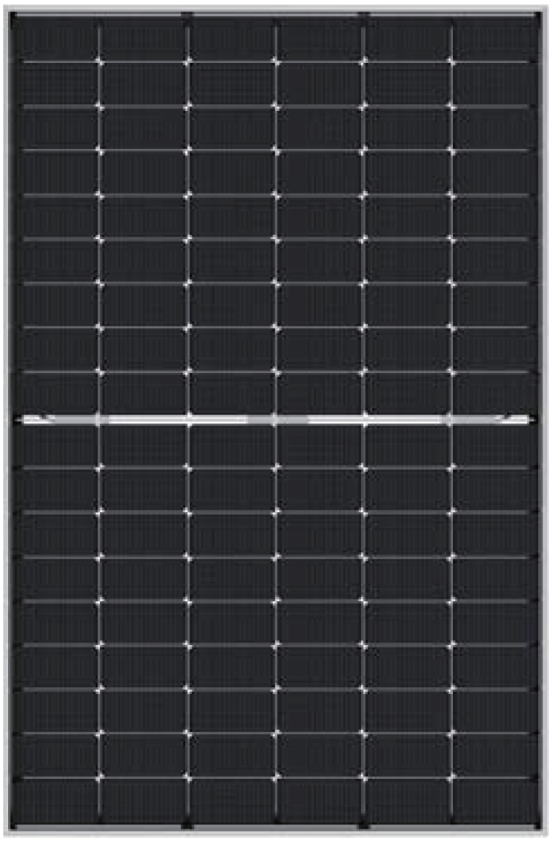
LIVE UP TO GOOD SUNSHINE

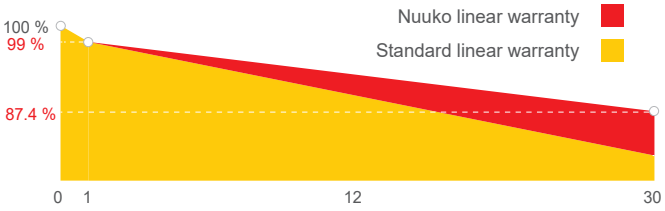
# NKM-108 N-type (182mm Cell)

# 430-450 Watt

BIFACIAL MODULE



### Industry-leading Warranty based on nominal power




* 0.4% Annual Degradation over 30 Years
* 12 Year Product Warranty
* 30 Year Linear Power Warranty

## Features

### SMBB Technology

Better light trapping and current collection to improve module power output and reliability.

### Hot 2.0 Technology

The N-type module with Hot 2.0 technology has betterreliability and lower LID/LETID.

### Excellent weak light performance

More power output in weak light condition, such as cloudy, morning and sunset

### Extended wind and snow load tests

Module certified to withstand extreme wind (2400 Pascal) and snow loads (5400 Pascal) *

### PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.

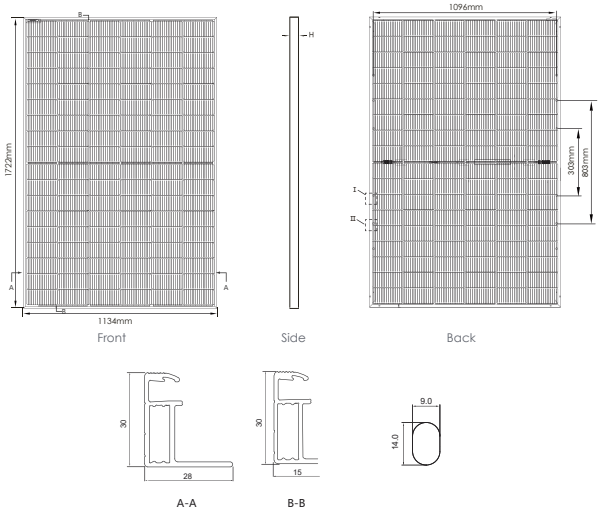
### Lower LCOE

Higher bifaciality, higher power output and lower BOS cost

# NKM-108N

## MECHANICAL SPECIFICATIONS

| | |
|---|---|
| Cell Type | N type Mono-crystalline |
| Cell Arrangement | 108 (6*18) |
| Weight | 24.5KG |
| Module Dimensions | 1722*1134*30mm |
| Cable Length | 4.0mm², ±300mm or Customized length |
| Front Glass | 2.0mm, Anti-Reflection Coating |
| Back Glass | 2.0mm, Heat Strengthened Glass |
| No. of Bypass Diodes | 3/6 |
| Packing Configuration | 36pcs/pallet, 936pcs/40HQ |
| Frame | Anodized Aluminium Alloy |
| Junction Box | IP68 |




## ELECTRICAL SPECIFICATIONS

| Module Type | NKM430N-108BDM10 | | NKM435N-108BDM10 | | NKM440N-108BDM10 | | NKM445N-108BDM10 | | NKM450N-108BDM10 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Testing Condition | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT |
| Rated output (Pmp/Wp) | 430 | 326 | 435 | 330 | 440 | 334 | 445 | 339 | 450 | 343 |
| Maximum Power Voltage(Vmpp/V) | 32.3 | 30.3 | 32.5 | 30.5 | 32.7 | 30.7 | 32.9 | 30.9 | 33.1 | 31.1 |
| Maximum Power Current(Impp/A) | 13.31 | 10.74 | 13.38 | 10.82 | 13.46 | 10.89 | 13.53 | 10.96 | 13.60 | 11.03 |
| Open Circuit Voltage(Voc/V) | 38.3 | 36.6 | 38.4 | 36.8 | 38.6 | 37.0 | 38.8 | 37.2 | 39.0 | 37.4 |
| Short Circuit Current(Isc/A) | 14.12 | 11.38 | 14.18 | 11.43 | 14.25 | 11.48 | 14.32 | 11.53 | 14.39 | 11.58 |
| Module efficiency(%) | 22.0% | | 22.3% | | 22.5% | | 22.8% | | 23.0% | |
| Power Tolerance (W) | 0~+5 | | 0~+5 | | 0~+5 | | 0~+5 | | 0~+5 | |

STC: Irradiance 1000W/m2, Cell Temperature 25°C, Air Mass AM1.5 NMOT: Irradiance at 800W/m2, Ambient Temperatue 20°C, Air Mass AM1.5, Wind Speed 1m/s

### Electrical Characteristics with Different Rearside Power Gain (Reference to 440 W Front)

| | | | | | |
|---|---|---|---|---|---|
| Pmax/W | 462 | 484 | 506 | 528 | 550 |
| Vmpp/V | 32.7 | 32.7 | 32.7 | 32.7 | 32.7 |
| Impp/A | 14.13 | 14.80 | 15.48 | 16.15 | 16.83 |
| Voc/V | 38.6 | 38.6 | 38.6 | 38.6 | 38.6 |
| Isc/A | 14.96 | 15.68 | 16.39 | 17.10 | 17.81 |
| Pmax gain | 5% | 10% | 15% | 20% | 25% |

## MAXIMUM RATINGS

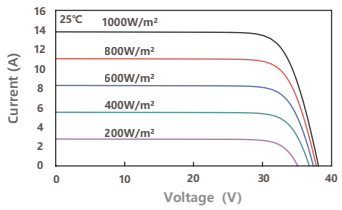
| | |
|---|---|
| Maximum System Voltage | 1500V DC（IEC） |
| Operating Temperature | -40°C ~ +85°C |
| Maximun Series Fuse | 30A |
| Static Loading | Snow Loading: 5400Pa/ Wind Loading: 2400Pa |
| Protection Class | II |
| Fire Type | Class C (IEC) |
| Bifacial | 80±5% |

## TEMPERATURE CHARACTERISTICS

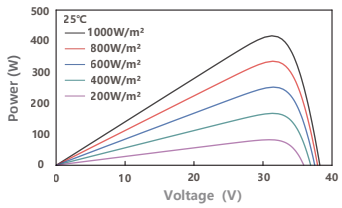
| | |
|---|---|
| NMOT Temperature | 45℃±2℃ |
| Temprature Coefficient (Pmax) | -0.29%/℃ |
| Temprature Coefficient (Voc) | -0.25%/℃ |
| Temprature Coefficient (Isc) | 0.045%/℃ |

## CURVE & TEMPERATURE DEPENDENCE

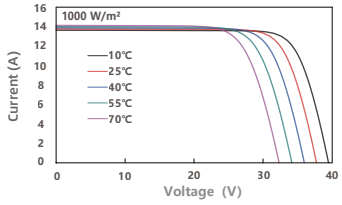
NKM440N-108BDM10




I-V Characteristics
At Different Irradiations




P-V Characteristics
At Different Irradiations




I-V Characteristics
At Different Temperatures

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