

# Spirit Series

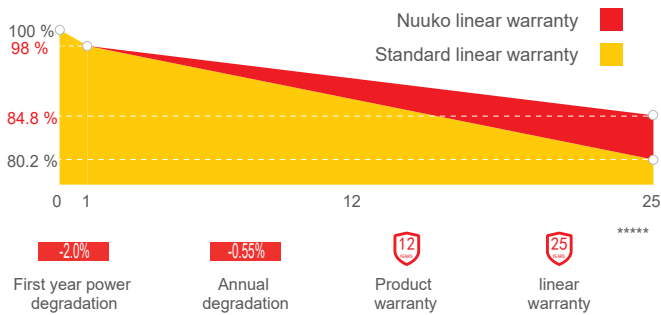
LIVE UP TO GOOD SUNSHINE

NKM-108 (182mm Cell)

## 400-425 Watt

MONOFACIAL MODULE

Industry-leading Warranty based on nominal power



## Features



### High module conversion efficiency

Module efficiency up to 21.8% achieved through advanced cell technology and manufacturing process



### Extended wind and snow load tests

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



### Excellent weak light performance

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



### Lower operating temperature

Lower operating temperature and temperature coefficient increases the power output



### Nuuko current sorting process

Up to 2 % power loss caused by current mismatch could be diminished by current sorting technique to maximize system power output

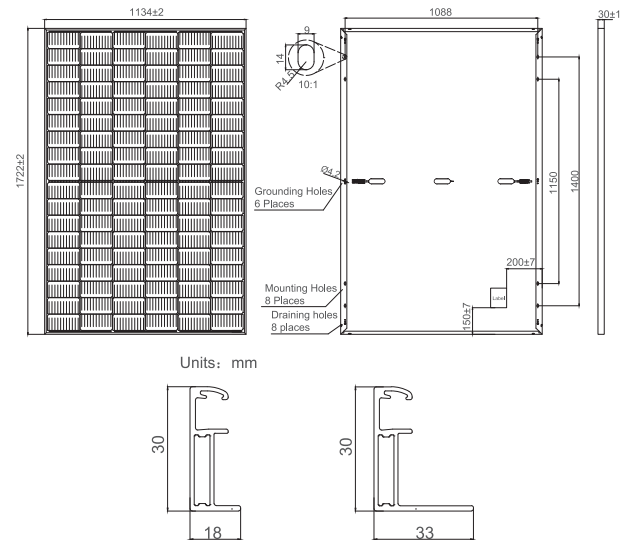


### Withstanding harsh environment

Reliable quality leads to a better sustainability even in harsh environment like desert, farm and coastline

## MECHANICAL SPECIFICATIONS

|                           |  |
|---------------------------|--|
| Cell Type                 | Monocrystalline                            |
| Cell Dimensions           | 182*182mm                                  |
| Cell Arrangement          | 108 (6*18)                                 |
| Weight                    | 21.5kg                                     |
| Module Dimensions         | 1722*1134*30mm                             |
| Cable Length              | Portrait 300mm/Landscape 1200mm/Customized |
| Cable Cross Section Size  | TUV: 4mm <sup>2</sup> /UL: 12AWG           |
| Front Glass               | 3.2mm AR Coating Tempered Glass            |
| No. of Bypass Diodes      | 3/6  |
| Packing Configuration (1) | 36pcs/Pallet, 936pcs/40HQ                  |
| Frame                     | Anodized Aluminium Alloy                   |
| Junction Box              | IP68                                       |



## ELECTRICAL SPECIFICATIONS

| Module Type                   | NKM400-108M10 |       | NKM405-108M10 |       | NKM410-108M10 |       | NKM415-108M10 |       | NKM420-108M10 |       | NKM425-108M10 |       |
|-------------------------------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|
|                               | STC           | NMOT  | STC           | NMOT  | STC           | NMOT  | STC           | NMOT  | STC           | NMOT  | STC           | NMOT  |
| Rated output (Pmp/Wp)         | 400           | 302   | 405           | 306   | 410           | 310   | 415           | 314   | 420           | 318   | 425           | 322   |
| Maximum Power Voltage(Vmpp/V) | 31.0          | 29.3  | 31.2          | 29.5  | 31.4          | 29.7  | 31.6          | 29.9  | 31.8          | 30.1  | 32.0          | 30.3  |
| Maximum Power Current(Imp/A)  | 12.90         | 10.32 | 12.98         | 10.38 | 13.06         | 10.43 | 13.14         | 10.50 | 13.22         | 10.56 | 13.30         | 10.62 |
| Open Circuit Voltage(Voc/V)   | 37.1          | 34.9  | 37.2          | 35.1  | 37.3          | 35.2  | 37.5          | 35.4  | 37.6          | 35.6  | 37.7          | 35.7  |
| Short Circuit Current(Isc/A)  | 13.79         | 11.03 | 13.87         | 11.10 | 13.95         | 11.16 | 14.02         | 11.22 | 14.10         | 11.28 | 14.17         | 11.34 |
| Module efficiency(%)          | 20.5%         |       | 20.7%         |       | 21.0%         |       | 21.3%         |       | 21.5%         |       | 21.8%         |       |
| Power Tolerance (W)           | 0~+5          |       | 0~+5          |       | 0~+5          |       | 0~+5          |       | 0~+5          |       | 0~+5          |       |

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5 NMOT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Air Mass AM1.5, Wind Speed 1m/s

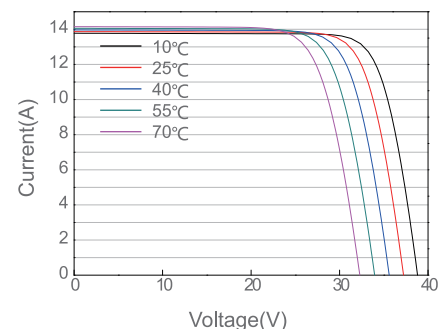
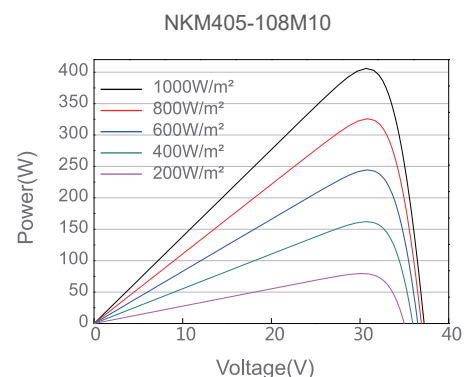
## MAXIMUM RATINGS

|                        |  |
|------------------------|--|
| Maximum System Voltage | 1000V/1500V DC (IEC)                       |
| Operating Temperature  | -40°C ~ +85°C                              |
| Maximum Series Fuse    | 25A  |
| Static Loading         | Snow Loading: 5400Pa/ Wind Loading: 2400Pa |
| Conductivity at Ground | ≤0.1Ω                                      |
| Safety Class           | II   |
| Resistance             | ≥100MΩ                                     |

## TEMPERATURE CHARACTERISTICS

|                                |           |
|--------------------------------|-----------|
| NMOT Temperature               | 43°C±2°C  |
| Temperature Coefficient (Pmax) | -0.36%/°C |
| Temperature Coefficient (Voc)  | -0.26%/°C |
| Temperature Coefficient (Isc)  | 0.043%/°C |

## CURVE & TEMPERATURE DEPENDENCE



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