

Spirit Series

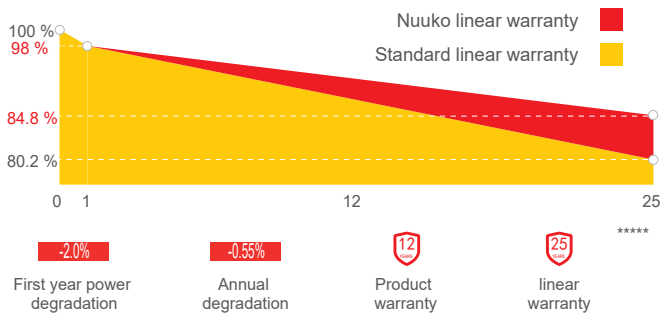
LIVE UP TO GOOD SUNSHINE

NKM-120 (182mm Cell)

440-460 Watt

MONOFACIAL MODULE

Industry-leading Warranty based on nominal power



Features



High module conversion efficiency

Module efficiency up to 21.3% achieved through advanced cell technology and manufacturing process



Extended wind and snow load tests

Module certified to withstand extreme wind (3800 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

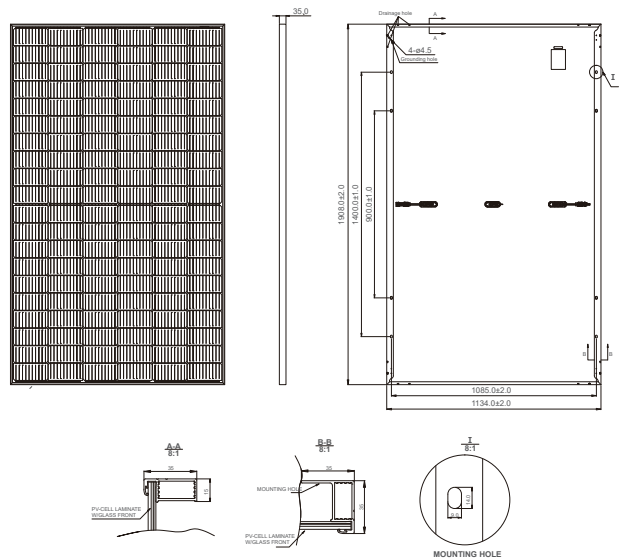


Withstanding harsh environment

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 | 120 (6*20) |
| Weight | 24.3kg (53.6lbs.) |
| Module Dimensions | 1908*1134*35mm (75.12*44.65*1.38inches) |
| Cable Length | Portrait 300mm/Landscape 1200mm/Customized |
| Cable Cross Section Size | TUV: 4mm ² (0.006inches ²)/UL: 12AWG |
| Front Glass | 3.2mm (0.13inches) AR Coating Tempered Glass |
| No. of Bypass Diodes | 3/6 |
| Packing Configuration (1) | 31pcs/carton, 744pcs/40hq |
| Frame | Anodized Aluminium Alloy |
| Junction Box | IP68 |



ELECTRICAL SPECIFICATIONS

| Module Type | NKM440-120M10 | | NKM445-120M10 | | NKM450-120M10 | | NKM455-120M10 | | NKM460-120M10 | |
|-------------------------------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|
| | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT |
| Testing Condition | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT |
| Rated output (Pmp/Wp) | 440 | 328 | 445 | 332 | 450 | 336 | 455 | 339 | 460 | 343 |
| Maximum Power Voltage(Vmpp/V) | 34.4 | 32.1 | 34.5 | 32.2 | 34.7 | 32.4 | 34.9 | 32.6 | 35.0 | 32.7 |
| Maximum Power Current(Imp/A) | 12.80 | 10.23 | 12.90 | 10.30 | 12.97 | 10.36 | 13.04 | 10.42 | 13.15 | 10.49 |
| Open Circuit Voltage(Voc/V) | 41.0 | 38.6 | 41.2 | 38.7 | 41.3 | 38.9 | 41.5 | 39.1 | 41.7 | 39.2 |
| Short Circuit Current(Isc/A) | 13.69 | 11.04 | 13.78 | 11.11 | 13.86 | 11.17 | 13.94 | 11.24 | 14.02 | 11.30 |
| Module efficiency(%) | 20.3% | | 20.6% | | 20.8% | | 21.0% | | 21.3% | |
| 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 Temperature 20°C, Air Mass AM1.5, Wind Speed 1m/s

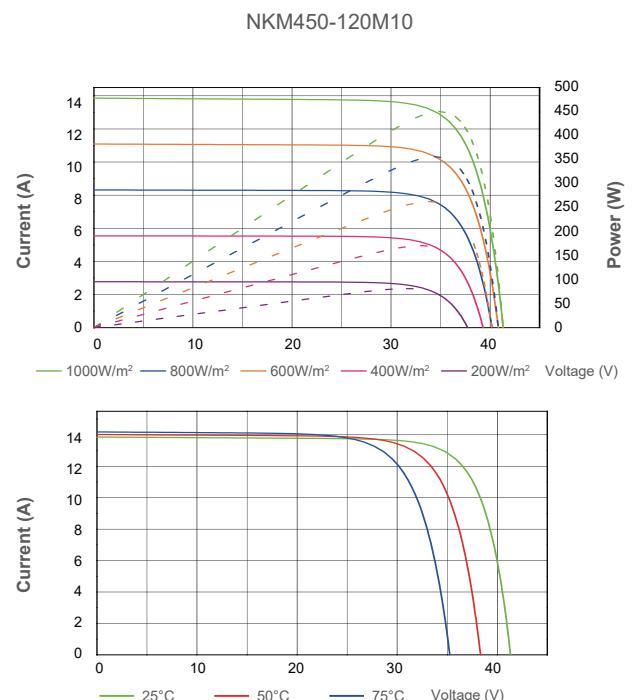
MAXIMUM RATINGS

| | |
|------------------------|--|
| 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 |
| Connector | T01/LJQ-3-CSY/MC4/MC4-EVO2 |

TEMPERATURE CHARACTERISTICS

| | |
|--------------------------------|-----------|
| NMOT Temperature | 43°C±2°C |
| Temperature Coefficient (Pmax) | -0.35%/°C |
| Temperature Coefficient (Voc) | -0.26%/°C |
| Temperature Coefficient (Isc) | 0.048%/°C |

CURVE & TEMPERATURE DEPENDENC



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