

Spirit Series

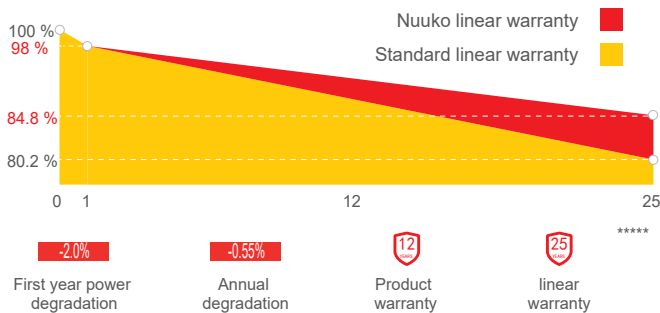
LIVE UP TO GOOD SUNSHINE

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 (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

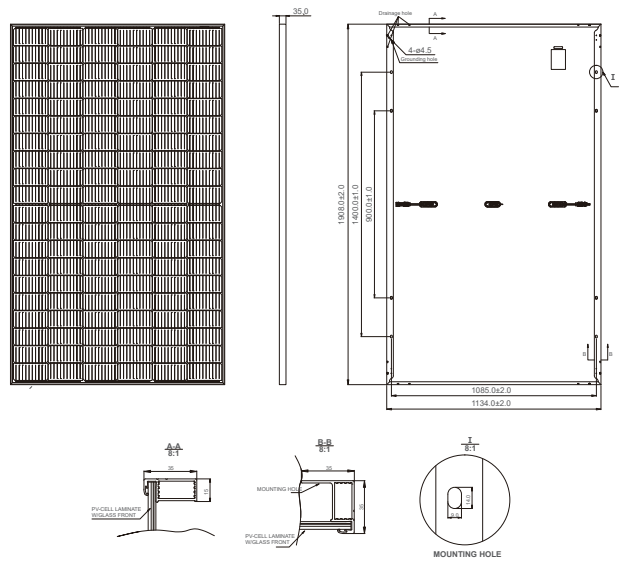


Withstanding harsh environment

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	120 (6*20)
Weight	22.8kg
Module Dimensions	1908*1134*35mm
Cable Length	Portrait 300mm/Landscape 1200mm/Customized
Cable Cross Section Size	TUV: 4mm ² /UL: 12AWG
Front Glass	3.2mm AR Coating Tempered Glass
No. of Bypass Diodes	3/6
Packing Configuration (1)	31pcs/Pallet, 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

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



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CURVE & TEMPERATURE DEPENDENC

NKM450-120M10

