

# Star Series

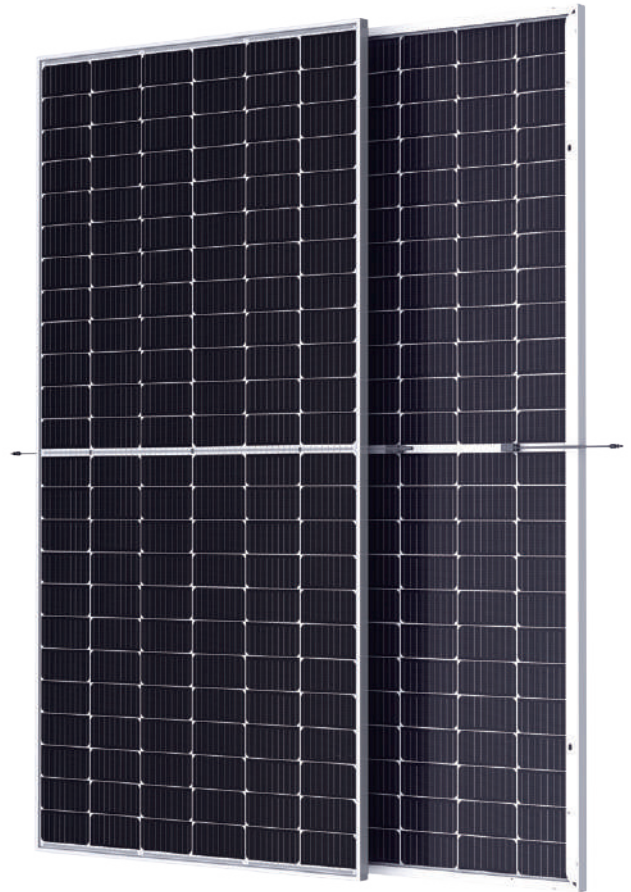
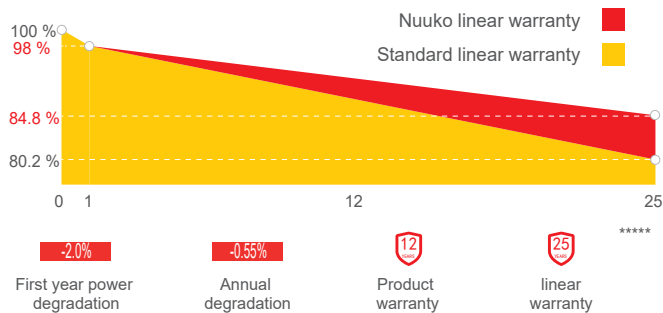
LIVE UP TO GOOD SUNSHINE

NKM-144 (166mm Cell)

## 430-450 Watt

BIFACIAL MODULE

Industry-leading Warranty based on nominal power



## Features



### High module conversion efficiency

Module efficiency up to 20.6% 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

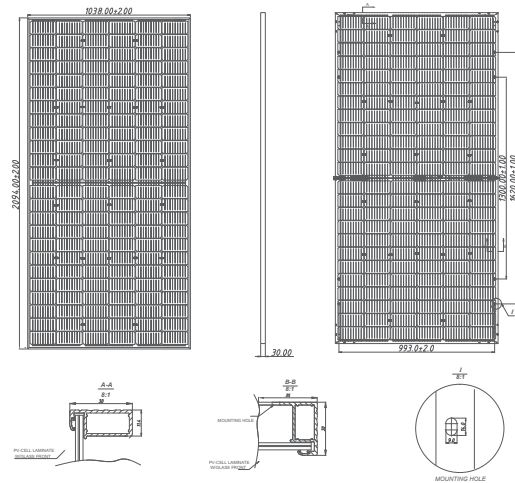


### Withstanding harsh environment

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

## MECHANICAL SPECIFICATIONS

Cell Type	Monocrystalline
Cell Dimensions	166*166mm
Cell Arrangement	144 (6*24)
Weight	28kg (61.73lbs)
Module Dimensions	2094*1038*30mm (82.44*40.87*1.18inches)
Cable Length	Portrait 300mm/Landscape 1200mm/Customized
Cable Cross Section Size	TUV: 4mm <sup>2</sup> (0.006inches <sup>2</sup> )/UL: 12AWG
Front Glass	2.0mm (0.08 inches) AR Coating Semi-tempered Glass
Back Glass	2.0mm (0.08 inches) Glazed Semi-tempered Glass
No. of Bypass Diodes	3/6
Packing Configuration (1)	35pcs/carton, 770pcs/40hq
Frame	Anodized Aluminium Alloy
Junction Box	IP68



## ELECTRICAL SPECIFICATIONS

Module Type	NKM430M-144		NKM435M-144		NKM440M-144		NKM445M-144		NKM450M-144	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Rated output (Pmp/Wp)	430	319	435	323	440	327	445	330	450	334
Maximum Power Voltage(Vmpp/V)	41.2	38.5	41.4	38.7	41.6	38.9	41.8	39.1	42.0	39.3
Maximum Power Current(Imp/A)	10.44	8.30	10.51	8.36	10.58	8.41	10.65	8.47	10.72	8.52
Open Circuit Voltage(Voc/V)	49.6	46.4	49.8	46.6	50.0	46.8	50.2	46.9	50.4	47.1
Short Circuit Current(Isc/A)	11.09	8.94	11.16	9.00	11.22	9.04	11.29	9.10	11.36	9.16
Module efficiency(%)	19.8%		20.0%		20.2%		20.5%		20.7%	
Power Tolerance (W)	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

### Electrical characteristics with different rear side power gain (refer to 440W front)

	462	484	506	528	550
Pmax/W					
Vmpp/V	41.6	41.6	41.6	41.6	41.6
Imp/A	11.11	11.64	12.17	12.70	13.23
Voc/V	50.0	50.0	50.0	50.2	50.2
Isc/A	11.78	12.34	12.90	13.46	14.03
Pmax gain	5%	10%	15%	20%	25%

## MAXIMUM RATINGS

Maximum System Voltage	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
Backside Output Ratio*	70% ± 5%

\*Under STC: Backside Output Ratio = Pmax(rear)/Pmax(front)

## 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 DEPENDENC

