



HW-7N54HC-MF-BK

425W~445W

MONOCRYSTALLINE MODULE



ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- High module output up to 445W with module efficiency up to 22.79% by using the most advanced , N-Type TOPCon cell technology.
- Aesthetically appealing design with black back sheet and frame.
- Lower annual power degradation and high energy yield during the module's lifetime.
- Superior performance under high temperature and low light conditions.
- High load-bearing capacity which can withstand wind loads up to 2400Pa and snow loads up to 5400Pa.
- Excellent reliability and durability against extreme environmental conditions (high resistance to salt mist, ammonia, sand, acid and alkali, etc).

CERTIFICATIONS

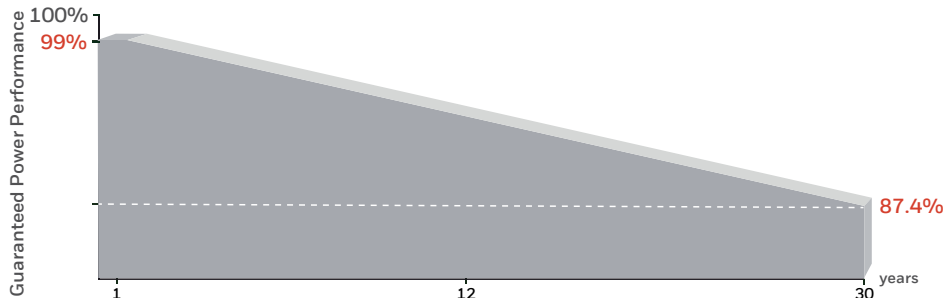
- IEC 61215 (2021), IEC 61730 (2023), IEC 61701
- IEC 61215-2 (bifaciality): 2021
- ISO 9001:2015: Quality Management System
- ISO 14001:2015: Environment Management System
- ISO 45001:2018: Occupational health and safety management system



SPECIAL WARRANTY

- 20 years product warranty
- 30 years linear power output warranty
- < 1 % First year power degradation
- < 0.4 % Year 2-30 power degradation

Passionately
committed to
delivering innovative
energy solutions



ELECTRICAL CHARACTERISTICS AT STC

Maximum Power (P_{max})	425W	430W	435W	440W	445W
Open Circuit Voltage (V_{oc})	38.20V	38.40V	38.60V	38.75V	38.90V
Short Circuit Current (I_{sc})	13.98A	14.09A	14.18A	14.26A	14.33A
Maximum Power Voltage (V_{mp})	32.10V	32.27V	32.42V	32.60V	32.80V
Maximum Power Current (I_{mp})	13.24A	13.33A	13.42A	13.50A	13.57A
Module Efficiency (%)	21.76%	22.02%	22.28%	22.53%	22.79%
Operating Temperature	-40°C to +85°C				
Maximum System Voltage	1500V DC				
Fire Safety Class	Class C				
Maximum Series Fuse	25A				

STC: Irradiance 1000W/m², Cell temperature 25°C, AM1.5; Tolerance of P_{max} : ±3%; Measurement Tolerance: ±3%

ELECTRICAL CHARACTERISTICS AT NOCT

Maximum Power (P_{max})	319.6W	323.4W	327W	330W	333W
Open Circuit Voltage (V_{oc})	36.29V	36.48V	36.60V	36.70V	36.80V
Short Circuit Current (I_{sc})	11.28A	11.37A	11.44A	11.50A	11.56A
Voltage at Maximum Power (V_{mp})	30.21V	30.37V	30.50V	30.61V	30.72V
Current at Maximum Power (I_{mp})	10.58A	10.65A	10.72A	10.78A	10.84A

NOCT: Irradiance 800W/m², Ambient temperature 20°C, Wind Speed 1 m/s

MECHANICAL CHARACTERISTICS

Cell type	Monocrystalline Silicon N-type (182x91mm)
Number of cells	108 (6x9x2)
Module dimensions	1722x1134x30mm
Weight	20.5kg
Front cover	low-iron tempered glass / 3.2mm
Backsheet	Black
Frame	Aluminum hollow-chamber frame, nodized aluminum alloy black
Junction box	IP68, 3 diodes
Cable	4mm ² , 300mm in length, length can be customized
Connector	MC4 compatible

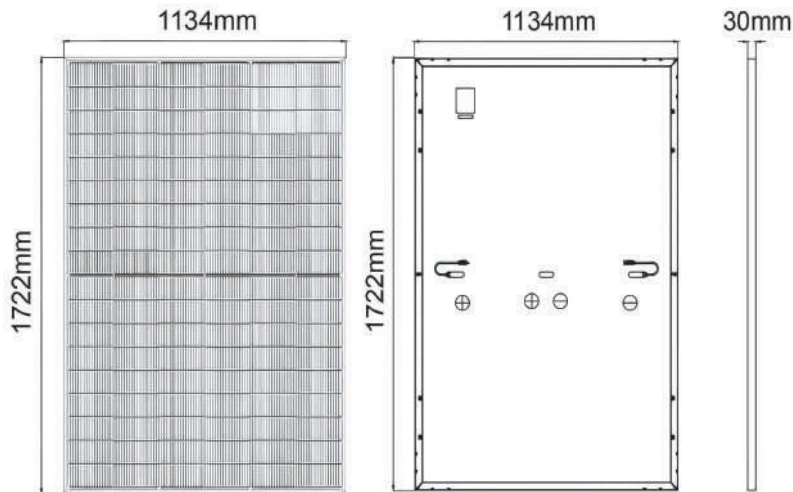
TEMPERATURE CHARACTERISTICS

Nominal Operating Cell Temperature (NOCT)	45°C±2°C
Temperature Coefficients of P_{max}	-0.30%/°C
Temperature Coefficients of VOC	-0.24%/°C
Temperature Coefficients of ISC	0.043%/°C

PACKAGING

Standard packaging	36 pcs/pallet
Module quantity per 20' container	216 pcs
Module quantity per 40' container	936 pcs (HQ)

ENGINEERING DRAWINGS



CURRENT-VOLTAGE CURVES

