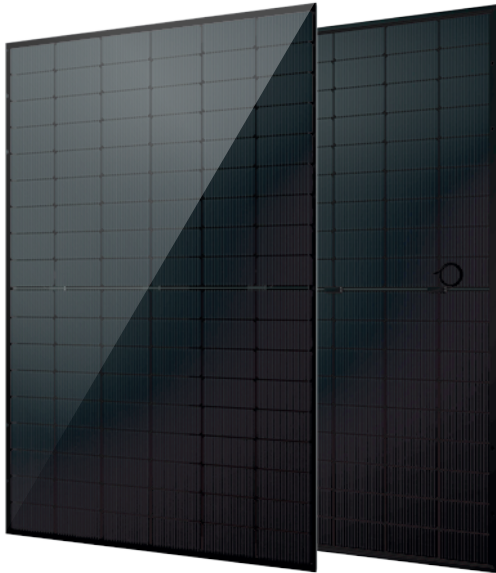




HW-7N54HC-BF-BK

430W~455W

MONOCRYSTALLINE MODULE



ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- High module output up to 455W with module efficiency up to 22.8% by using the most advanced , N-Type TOPCon cell technology.
- Transparent double glass with excellent fire rating, with better temperature coefficient.
- Lower annual power degradation and higher 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 3600Pa.
- Excellent reliability and durability against extreme environmental conditions (high resistance to salt mist, ammonia, sand, acid and alkali, etc).
- More power gain up to 30% by utilizing the ambient light reflected from surrounding surface.

CERTIFICATIONS

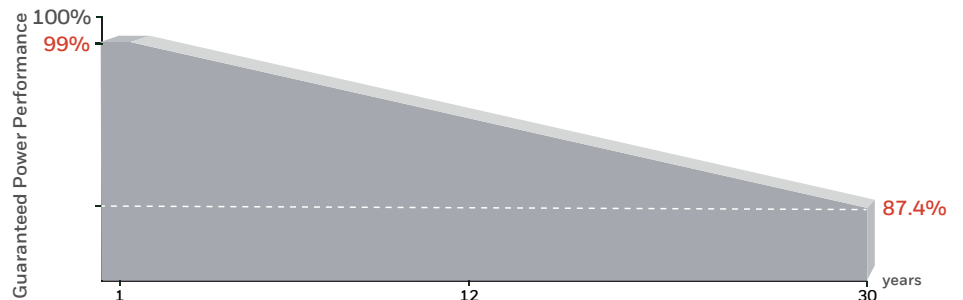
- IEC 61215 (2021), IEC 61730(2023), IEC 61701
- IEC 61215-2 (bifaciality): 2021
- ISO 9001:2015: Quality Management System
- ISO 14001:2015: Environment Management System
- ISO 45001:2018: Occupational health and safety management system



SPECIAL WARRANTY

- 25 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})	430W	435W	440W	445W	450W	455W
Open Circuit Voltage (V _{oc})	38.50V	38.70V	38.90V	39.10V	39.30V	39.50V
Short Circuit Current (I _{sc})	14.14 A	14.23 A	14.31 A	14.40 A	14.48 A	14.56 A
Maximum Power Voltage (V _{mp})	32.12 V	32.29 V	32.47 V	32.65 V	32.82 V	33.00 V
Maximum Power Current(I _{mp})	13.39 A	13.47 A	13.55 A	13.63 A	13.71 A	13.79 A
Module Efficiency (%)	21.50%	21.80%	22.00%	22.30%	22.50%	22.80%
Operating Temperature	-40°C to +85°C					
Maximum System Voltage	1500V DC					
Fire Safety Class	Class A					
Maximum Series Fuse	30A					

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

ELECTRICAL CHARACTERISTICS WITH 10% SOLAR IRRADIATION RATIO

Module Type	430M	435M	440M	445M	450M	455M
Maximum Power (Wp)	464W	470W	475W	481W	486W	491W
Open Circuit Voltage (Voc)	38.50V	38.70V	38.90V	39.10V	39.30V	39.50V
Short Circuit Current (Isc)	15.27A	15.36V	15.46A	15.55A	15.64V	15.73A
Maximum Power Voltage (Vm)	32.11V	32.29V	32.47V	32.65V	32.82V	32.99V
Maximum Power Current (Im)	14.46A	14.55A	14.63A	14.72A	14.81A	14.89A

*Bifacial=P_{max,Rear}/Rated P_{max, Front}

MECHANICAL CHARACTERISTICS

Cell type	Monocrystalline Silicon N-type (182x94mm)
Number of cells	108 (6x18)
Module dimensions	1762x1134x30mm
Weight	22.5kg
Front / Back cover	low-iron tempered glass 2.0 / 2.0 mm
Frame	Aluminum hollow-chamber frame, anodized aluminum alloy black
Junction box	IP68, 3 diodes
Cable	4mm ² , 300mm in length, length can be customized
Connector	MC4 compatible

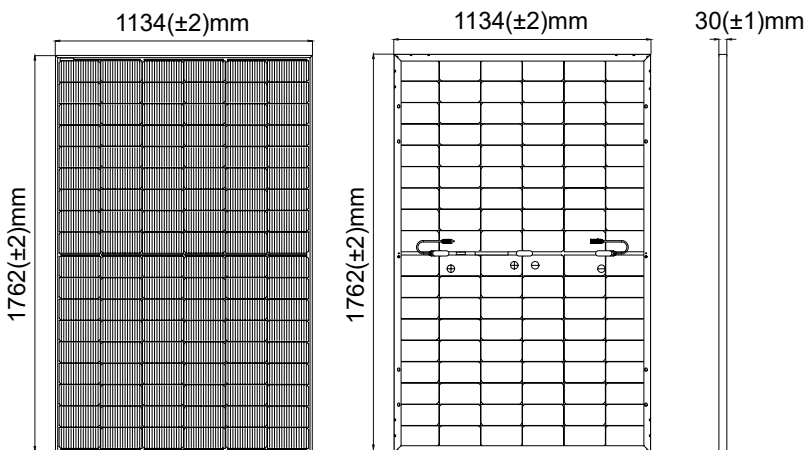
TEMPERATURE CHARACTERISTICS

Nominal Operating Cell Temperature (NOCT)	40°C±85°C
Temperature Coefficients of P _{max}	-0.30%/°C
Temperature Coefficients of VOC	-0.26%/°C
Temperature Coefficients of ISC	0.046%/°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

