

Black Series

TPC Pro-54HC(BK)

Product Range

430-450W

N-Type Mono-Crystalline
Full Black

450W

Maximum Power Output

0~+5W

Positive Power Tolerance

23.04%

Maximum Efficiency



182mm , 54-CELL HALF-CUT SERIES

ELECTRICAL PERFORMANCE

Module Type: TPC Pro-54HC(BK)	430M / 435M / 440M / 445M / 450M
Maximum Power(Wp)	430W 435W 440W 445W 450W
Open Circuit Voltage(Voc)	39.30V 39.45V 39.60V 39.75V 39.90V
Short Circuit Current(Isc)	13.80A 13.89A 13.98A 14.07A 14.16A
Maximum Power Voltage(Vm)	32.75V 32.90V 33.05V 33.20V 33.35V
Maximum Power Current(Imp)	13.14A 13.23A 13.32A 13.41A 13.50A
Module Efficiency	22.02% 22.28% 22.53% 22.79% 23.04%
Maximum Series Fuse	25A
Watts Positive Tolerance	0~+5W
Number Of Diode	3
Standard Test Conditions	1000W/M ² ,25°C,AM1.5
Maximum System Voltage	1500V/DC
Temperature-Coefficient Isc	+0.043%/°C
Temperature-Coefficient Voc	-0.24%/°C
Temperature-Coefficient Pmpp	-0.30%/°C
Operating Temperature	-40°C...+85°C
Normal Operating Cell Temperature	45±2°C
Load Capacity For The Cover Of The Module (Glass)	5400Pa(IEC61215)(snow)
Load Capacity For The Front & Back Of The Module	2400Pa(IEC61215)(wind)

ELECTRICAL PERFORMANCE (NOCT)

Module Type: TPC Pro-54HC(BK)	430M / 435M / 440M / 445M / 450M
Maximum Power(Wp)	327W 331W 335W 339W 343W
Open Circuit Voltage(Voc)	37.30V 37.45V 37.60V 37.75V 37.90V
Short Circuit Current(Isc)	11.04A 11.11A 11.18A 11.25A 11.32A
Maximum Power Voltage(Vm)	31.10V 31.25V 31.40V 31.55V 31.70V
Maximum Power Current(Imp)	10.52A 10.60A 10.67A 10.75A 10.82A

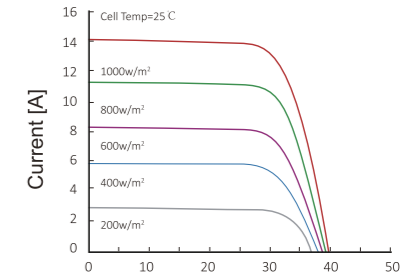
MECHANICAL CHARACTERISTICS

Front Cover (Material / Thickness)	low-iron tempered glass / 3.2mm
Backsheet (Color)	TPT in black
Cell (Quantity / Material / Dimensions)	108(6x9x2) / monocrystalline silicon
Frame (Material / Color)	aluminum hollow-chamber frame on each side anodized aluminum alloy / black
Junction Box (Protection Degree)	≥IP68
Cables & Plug Connectors	4mm ² , 300mm in length,length can be customized
Module Dimensions (L / W / H)	1722x1134x30mm
Module Weight	20.5 kg
Application Class	Class A
Electrical Protection Class	Class II
Fire Safety Class	Class C

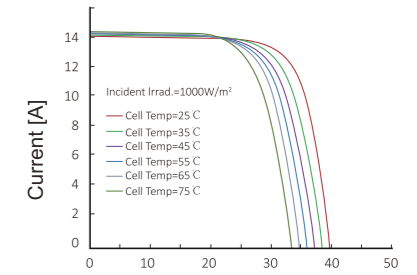
PACKING

Container Size	Units/Pallet (PCS)	Weight/Pallet (KG)	Pallet Measurement (mm)	Units/Container (PCS)
40HQ	36	770	1750x1120x1260	936

CURRENT-VOLTAGE CURVES:

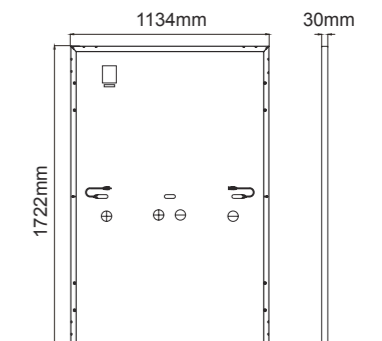
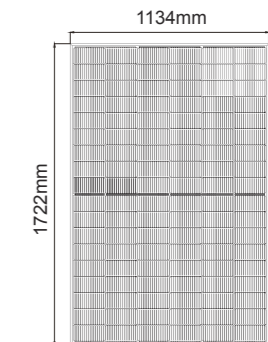


Module characteristics at constant module temperatures of 25°C and variable levels of irradiance



Module characteristics at variable module temperatures and constant module irradiance of 1.000 W/m²

MODULE DIAGRAM:



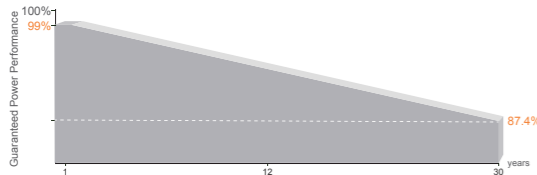
Linear Performance Warranty

15 Year Product Warranty

30 Year Linear Power Warranty

<1% First year Power Degradation

<0.4% Year 2-30 Power Degradation



Certifications

Quality Management System and Product Certification.

IEC61215(2021), IEC61730(2023), IEC61701

IEC61215-2 (bifaciality): 2021

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018: Occupational health and safety management systems



MBB Half-Cut Solar Cell

182x91mm, 108 cells.

Higher Module Conversion Efficiency

Higher module output up to 450W with module efficiency up to 23.04%.

Low-Light Performance

Advanced glass and surface texturing allow for excellent performance in low-light environments.

Light-Weight Design

Light-weight design using transparent backsheet for easy installation and low BOS cost.

Higher Power Output

Module power increases 5-25% generally, bringing significantly lower LCOE and higher IRR.

