

ESPHSC(BK)

Monocrystalline Half-Cut Solar Module-Black

KEY FEATURES



MBB Half-Cut Solar Cell:
144 cells (6X24); 9 busbar solar cell.



Higher Module Conversion Efficiency:
Higher module output up to 445W with module efficiency up to 20.47%.



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



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



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

166



166mm SERIES, 72-CELL HALF-CUT SERIES ALL BLACK

ELECTRICAL PERFORMANCE

Module type: ESPHSC	430M / 435M / 440M / 445M
Maximum Power(Wp)	430W 435W 440W 445W
Open circuit Voltage(Voc)	48.50V 48.70V 48.90V 49.10V
Short circuit Current(Isc)	11.31A 11.39A 11.46A 11.53A
Maximum Power Voltage(Vm)	40.70V 40.90V 41.10V 41.30V
Maximum Power Current(Im)	10.57A 10.64A 10.71A 10.78A
Module efficiency	19.78% 20.01% 20.24% 20.47%
Maximum Series Fuse	20A
Watts positive tolerance	0~+3%
Number of Diode	3
Standard Test Conditions	1000W/M ² , 25°C, AM1.5
Maximum System Voltage	1000/1500V/DC
Temperature-Coefficient Isc	+0.049%/°C
Temperature-Coefficient Voc	-0.271%/°C
Temperature-Coefficient Pmpp	-0.352%/°C
Normal Operating Cell Temperature	-40°C...+85°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: ESPHSC	430M / 435M / 440M / 445M
Maximum Power(Wp)	325W 329W 332.5W 336.5W
Open circuit Voltage(Voc)	45.55V 44.75V 45.95V 46.15V
Short circuit Current(Isc)	8.99A 9.06A 9.11A 9.17A
Maximum Power Voltage(Vm)	38.40V 38.60V 38.80V 39.00V
Maximum Power Current(Im)	8.46A 8.51A 8.57A 8.62A

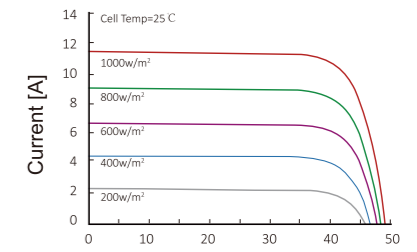
MECHANICAL CHARACTERISTICS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Backsheet (color)	TPT in Black-White
Cell (quantity / material / dimensions)	144(6x24) / 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)	2094x1038x35mm
Module Weight	24kg
Application class	Class A
Electrical protection class	Class II
Fire safety class	Class C

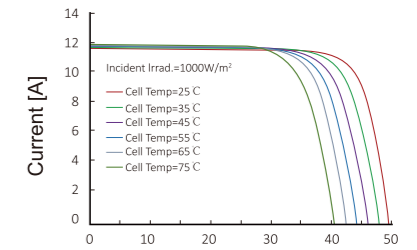
PACKING

Container Size	Units/Pallet (PCS)	Weight/Pallet (KG)	Pallet Measurement (mm)	Units/Container (PCS)
20GP	58(31+27)	1422	2150x1130x2220	290
40HQ	31	735	2150x1130x1170	726
	35	855	2150x1130x1345	

CURRENT-VOLTAGE CURVES:

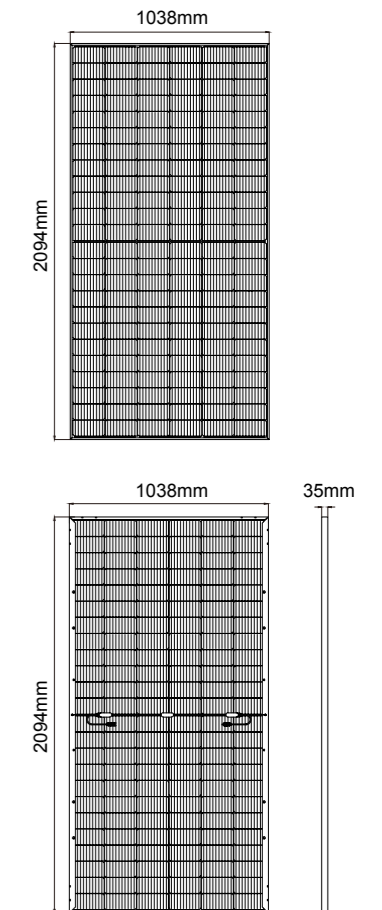


Module characteristics at constant module temperatures of 25°C and variable levels of irradiance



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

MODULE DIAGRAM:



+ WATTS POSITIVE TOLERANCE

12 YEARS PRODUCT WARRANTY

25 YEARS LINEAR POWER WARRANTY

