



ESPHSC

Monocrystalline Half-Cut Solar Module

KEY FEATURES

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

Higher Module Conversion Efficiency:
Higher module output up to 450W with module efficiency up to 20.7%.

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.

166

+ WATTS POSITIVE TOLERANCE

12 YEARS PRODUCT WARRANTY

25 YEARS LINEAR POWER WARRANTY

MONOCRYSTALLINE, 72-CELL HALF-CUT SERIES

ELECTRICAL PERFORMANCE

Module type: ESPHSC	425M / 430M / 435M / 440M / 445M / 450M
Maximum Power(Wp)	425W 430W 435W 440W 445W 450W
Open circuit Voltage(Voc)	48.30V 48.5V 48.7V 48.9V 49.10V 49.30V
Short circuit Current(Isc)	11.23A 11.31A 11.39A 11.46A 11.53A 11.60A
Maximum Power Voltage(Vm)	40.5V 40.70V 40.9V 41.10V 41.30V 41.50V
Maximum Power Current(Imp)	10.50A 10.57A 10.64A 10.71A 10.78A 10.85A
Module efficiency	19.55% 19.78% 20.01% 20.24% 20.47% 20.70%
Maximum Series Fuse	20A
Watts positive tolerance	0~+5%
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)
Product Certificate	TUV(IEC 61215,IEC 61730),CE, ROHS,PID Resistant,INMETRO
Company Certificate	ISO9001,ISO14001,ISO18001

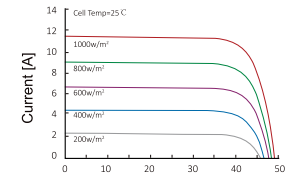
MECHANICAL CHARACTERISTICS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Backsheet (color)	TPT in white
Cell (quantity / material / dimensions)	144(6x24) / monocrystalline silicon
Frame (material / color)	aluminum hollow-chamber frame on each side anodized aluminum alloy / silver
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

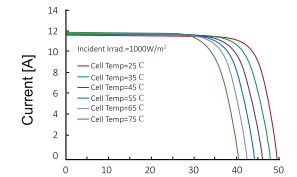
PACKING

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

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:

