

HIGH TECHNOLOGY  
SOLAR MODULES

MBB

HALF-CELL MONO  
PV MODULE

AS-MQ7-144 HC

525W - 550W



HIGH EFFICIENCY MONOCRYSTALLINE SOLAR MODULES WITH HALF CELL TECHNOLOGY

**0+5** Positive power tolerance (0+5W) guaranteed



High performance under low light.  
Works at cloudy, rainy days



The monolithic per cell structure technology (low resistance characteristics) is adopted ( the maximum conversion efficiency of modules is up to 21.28%)



EXTREME WEATHER RATING. High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (3800 Pa)



Reduced resistance between cells Less micro cracks, higher output power



SUPER STRONG FRAME. The overflow tank is waterproof with double layers. Aluminum frame enhances the mechanical load strength by 10%



IEC61215 | IEC61730 | IEC61701 | IEC62716 | IEC62804 PID Free  
ISO 9001 | ISO 14001 | ISO 45001 | OHSAS 18001 | CE

# AS - MQ7 - 144 HC 525-550 W

## MBB HALF-CELL MONOCRYSTALLINE PV SOLAR MODULE

### ELECTRICAL CHARACTERISTICS AT STC

Maximum Power (Pmax)	525W	530W	535W	540W	545W	550W
Open Circuit Voltage (Voc)	49.0V	49.2V	49.4V	49.6V	49.8V	50.0V
Short Circuit Current (Isc)	13.74A	13.78A	13.82A	13.86A	13.90A	13.94A
Voltage at Maximum Power (Vmp)	40.8V	41.0V	41.2V	41.4V	41.6V	41.8V
Current at Maximum Power (Imp)	12.88A	12.93A	12.99A	13.05A	13.11A	13.16A
Module Efficiency (%)	20.31	20.51	20.70	20.89	21.09	21.28

Operating Temperature

-40° C to +85° C

Maximum System Voltage

1000V DC/1500V DC

Fire Resistance Rating

Type 1(in accordance with UL1703)/Class C(IEC61730)

Maximum Series Fuse Rating

25A

STC: Irradiance 1000W/m<sup>2</sup>, Cell temperature 25° C, AM1.5; Tolerance of Pmax: ±3%; Measurement Tolerance: ±3%

### ELECTRICAL CHARACTERISTICS AT NOCT

Maximum Power (Pmax)	391W	395W	399W	403W	407W	411W
Open Circuit Voltage (Voc)	45.1V	45.3V	45.5V	45.7V	45.9V	46.1V
Short Circuit Current (Isc)	11.13A	11.16A	11.19A	11.22A	11.25A	11.28A
Voltage at Maximum Power (Vmp)	37.1V	37.3V	37.5V	37.7V	37.9V	38.1V
Current at Maximum Power (Imp)	10.54A	10.59A	10.64A	10.69A	10.74A	10.79A

NOCT: Irradiance 800W/m<sup>2</sup>, Ambient temperature 20° C, Wind Speed 1 m/s

### MECHANICAL CHARACTERISTICS

Cell type	Monocrystalline PERC 182*91mm
Number of cells	144 (6x24)
Module dimensions	2279x1134x35mm (89.72x44.65x1.38inches)
Weight	29kg (63.9lbs)
Front cover	3.2mm (0.13inches) tempered glass with AR coating
Frame	Anodized aluminum alloy
Junction box	IP68, 3 diodes
Cable	4mm <sup>2</sup> (0.006inches <sup>2</sup> ), Portrait: 300mm (11.81inches); Landscape: 1300mm (51.18inches)
Connector	MC4 or MC4 compatible

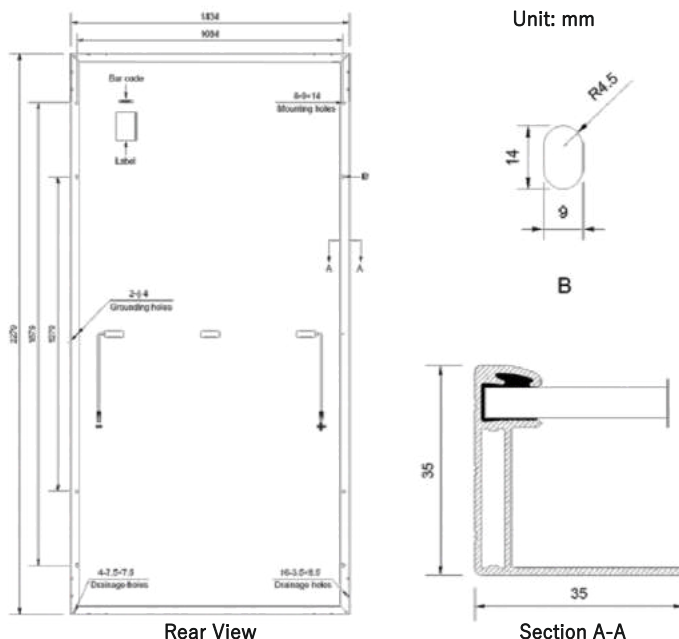
### TEMPERATURE CHARACTERISTICS

Nominal Operating Cell Temperature (NOCT)	43° C±2° C
Temperature Coefficients of Pmax	-0.36%/° C
Temperature Coefficients of Voc	-0.28%/° C
Temperature Coefficients of Isc	0.05%/° C

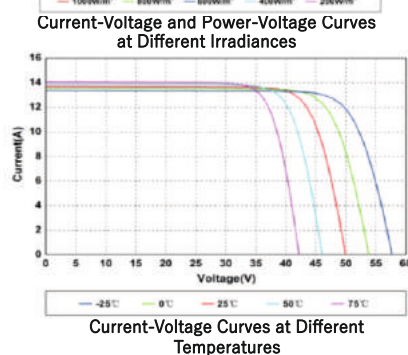
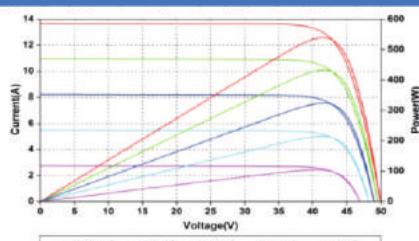
### PACKAGING

Standard packaging	31 pcs/pallet
Module quantity per 20' container	155pcs
Module quantity per 40' container	620pcs (HQ)

### ENGINEERING DRAWINGS



### IV CURVES



**WARRANTY**

12 YEARS  
PRODUCT WARRANTY

30 YEARS  
POWER WARRANTY



Specifications in this datasheet are subject to change without prior notice.