

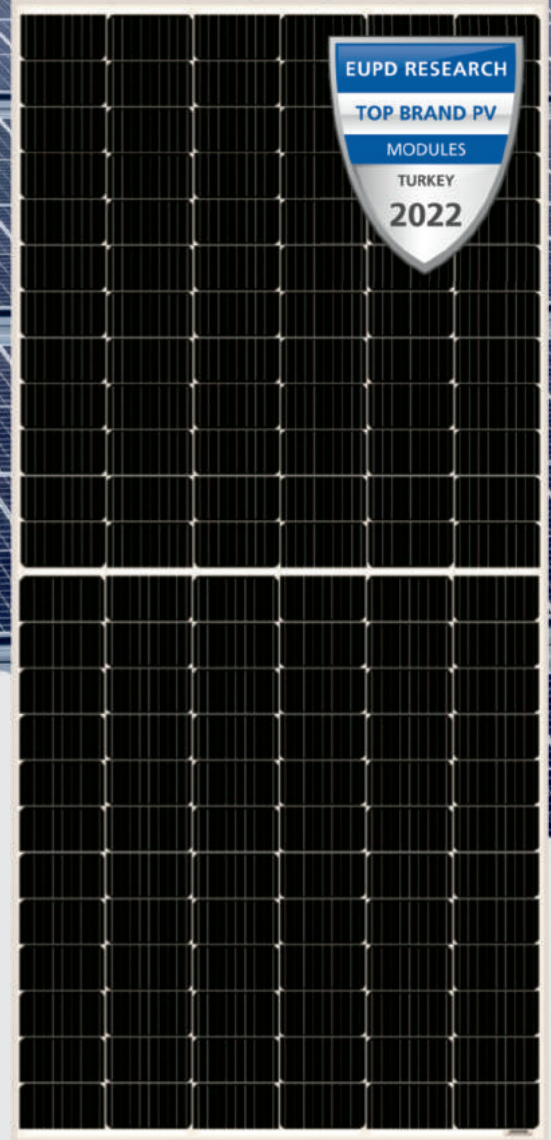
HIGH TECHNOLOGY
SOLAR MODULES

MBB

HALF-CELL MONO PV MODULE

AS - MQ7-144 HC

540W - 560W



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 perc cell structure technology (low resistance characteristics) is adopted (the maximum conversion efficiency of modules is up to 21.66%)



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%

AS - MQ7 - 144 HC 540 - 560 W

MBB HALF-CELL MONOCRYSTALLINE PV SOLAR MODULE

ELECTRICAL CHARACTERISTICS AT STC

Maximum Power (Pmax)	540W	545W	550W	555W	560W
Open Circuit Voltage (Voc)	49.6V	49.8V	50.0V	50.2V	50.4V
Short Circuit Current (Isc)	13.86A	13.90A	13.94A	13.98A	14.03A
Voltage at Maximum Power (Vmp)	41.4V	41.6V	41.8V	42.0V	42.2V
Current at Maximum Power (Imp)	13.05A	13.11A	13.16A	13.22A	13.28A
Module Efficiency (%)	20.89	21.09	21.28	21.47	21.66

Power Output Tolerance

0~+5

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

*Irradiance 1000W/m² , Cell Temperature 25° C, Air Mass 1.5

ELECTRICAL CHARACTERISTICS AT NOCT

Maximum Power (Pmax)	403W	407W	411W	420W	423.8W
Open Circuit Voltage (Voc)	45.7V	45.9V	46.1V	46.3V	46.5V
Short Circuit Current (Isc)	11.22A	11.25A	11.28A	11.31A	11.36A
Voltage at Maximum Power (Vmp)	37.7V	37.9V	38.1V	38.3V	38.5V
Current at Maximum Power (Imp)	10.69A	10.74A	10.79A	10.85A	10.91A

NOCT: Irradiance 800W/m², 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 ² (0.006inches ²), Portrait: 300mm (11.81inches); Landscape: 1300mm (51.18inches)
Connector	MC4 or MC4 compatible

TEMPERATURE CHARACTERISTICS

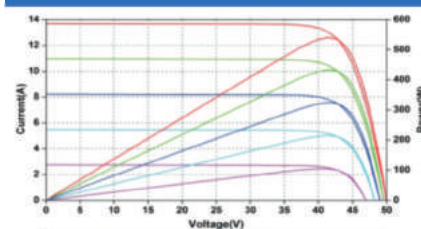
Nominal Operating Cell Temperature (NOCT)	43° C±2° C
Temperature Coefficients of P _{max}	-0.36%/° C
Temperature Coefficients of V _{oc}	-0.28%/° C
Temperature Coefficients of I _{sc}	0.05%/° C

PACKAGING

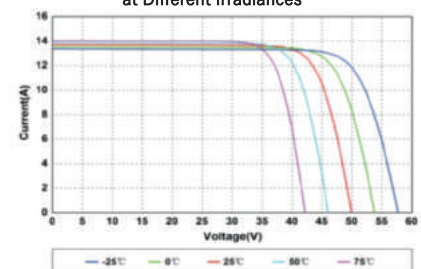
Standard packaging	32 pcs/pallet
Module quantity per 20' container	155pcs
Module quantity per 40' container	640pcs (HQ)

ENGINEERING DRAWINGS

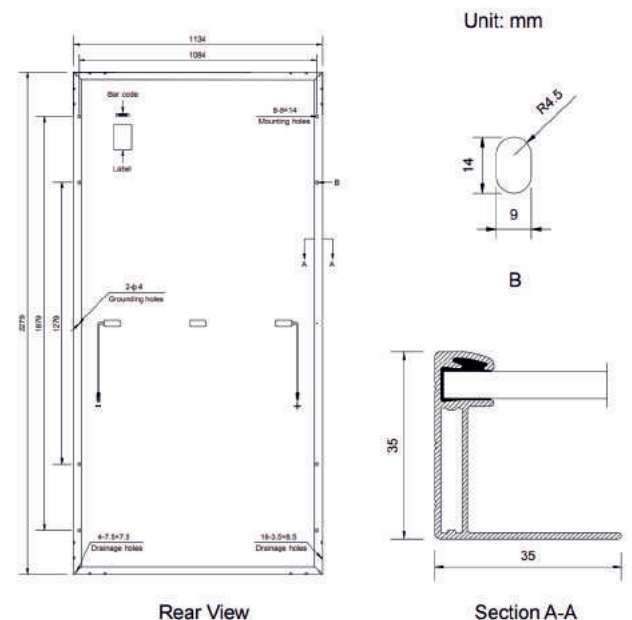
IV CURVES



Current-Voltage and Power-Voltage Curves at Different Irradiances



Current-Voltage Curves at Different Temperatures



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

WARRANTY

12 YEARS
PRODUCT WARRANTY

30 YEARS
POWER WARRANTY

