

HIGH TECHNOLOGY
SOLAR MODULES

BIFACIAL

**HALF-CELL BIFACIAL
PV MODULE**

AS-MQ7-144-BHC

530W - 550W

EUPD RESEARCH

TOP BRAND PV
MODULES

TURKEY
2022

HIGH EFFICIENCY BIFACIAL 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

ELECTRICAL CHARACTERISTICS AT STC

Module Type	AS-MQ7-BHC-530W	AS-MQ7-BHC-535W	AS-MQ7-BHC-540W	AS-MQ7-BHC-545W	AS-MQ7-BHC-550W
Maximum Power (Pmax)	530W	535W	540W	545W	550W
Open Circuit Voltage (Voc)	49.2V	49.4V	49.6V	49.8V	50.0V
Short Circuit Current (Isc)	13.78A	13.82A	13.86A	13.90A	13.94A
Voltage at Maximum Power (Vmp)	41.0V	41.2V	41.4V	41.6V	41.8V
Current at Maximum Power (Imp)	12.93A	12.99A	13.05A	13.11A	13.16A
Module Efficiency (%)	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	Class C				
Maximum Series Fuse Rating	30A				

STC: Irradiance 1000W/m², Cell temperature 25° C, AM1.5; Tolerance of Pmax: ±3%; Measurement Tolerance: ±3%

ELECTRICAL CHARACTERISTICS AT NOCT

Module Type	AS-MQ7-BHC-530W	AS-MQ7-BHC-535W	AS-MQ7-BHC-540W	AS-MQ7-BHC-545W	AS-MQ7-BHC-550W
Maximum Power (Pmax)	395W	399W	403W	407W	411W
Open Circuit Voltage (Voc)	45.3V	45.5V	45.7V	45.9V	46.1V
Short Circuit Current (Isc)	11.16A	11.19A	11.22A	11.25A	11.28A
Voltage at Maximum Power (Vmp)	37.3V	37.5V	37.7V	37.9V	38.1V
Current at Maximum Power (Imp)	10.59A	10.64A	10.69A	10.74A	10.79A

NOCT: Irradiance 800W/m², Ambient temperature 20° C, Wind Speed 1 m/s

ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE POWER GAIN (EXAMPLE: AS-MQ7-BHC-540W)

Power Gain	Pmax	Voc	Isc	Vmp	Imp
10%	594W	49.6V	15.24V	41.4V	14.35A
15%	621W	49.6V	15.93A	41.4V	15.00A
20%	648W	49.6V	16.62V	41.4V	15.66V
25%	675W	49.6V	17.31A	41.4V	16.31A
30%	702W	49.6V	17.99A	41.4V	16.96A

MECHANICAL CHARACTERISTICS

Cell type	Monocrystalline bifacial
Number of cells	144 (6x24)
Module dimensions	2279x1134x35mm
Weight	29kg
Front cover	3.2mm tempered glass with AR coating
Back Cover	Transparent backsheet
Frame	Anodized aluminum alloy
Junction box	IP68, 3 diodes
Cable	4mm ² , Length: Portrait: 300mm; Landscape: 1300mm
Connector	MC4 compatible

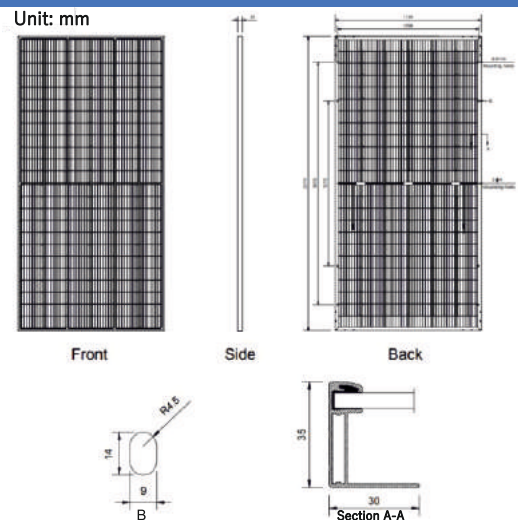
TEMPERATURE CHARACTERISTICS

Nominal Operating Cell Temperature (NOCT)	42° 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



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

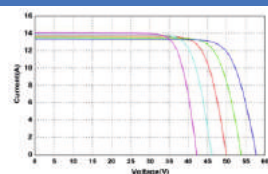
WARRANTY

12 YEARS
PRODUCT WARRANTY

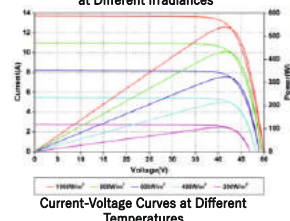
30 YEARS
POWER WARRANTY



IV CURVES



Current-Voltage and Power-Voltage Curves at Different Irradiances



Current-Voltage Curves at Different Temperatures