

AS-7M144-BT

530W~550W

MONOCRYSTALLINE MODULE

ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- More power gain up to 30% by utilizing the ambient light reflected from surrounding surfaces.
- Lower annual power degradation and higher energy yield during the module's lifetime.
- Superior performance under high temperature and low light conditions.
- High load-bearing capacity which can withstand wind loads up to 2400Pa and snow loads up to 5400Pa.
- Excellent reliability and durability against extreme environmental conditions (high resistance to salt mist, ammonia, sand, acid and alkali, etc.).
- Potential induced degradation (PID) free.

CERTIFICATIONS

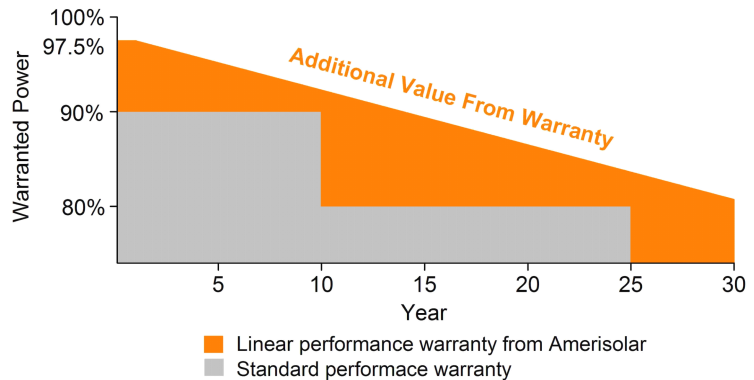
- IEC 61215, IEC 61730, CE
- ISO9001:2015: Quality management system
- ISO14001:2015: Environmental management system
- ISO 45001:2018: Occupational health and safety management system



SPECIAL WARRANTY

- 20 years product warranty
- 30 years linear power output warranty

Passionately
committed to
delivering innovative
energy solution



ELECTRICAL CHARACTERISTICS AT STC*

Module Type	AS-7M144-BT-530W	AS-7M144-BT-535W	AS-7M144-BT-540W	AS-7M144-BT-545W	AS-7M144-BT-550W
Maximum Power (P_{max})	530W	535W	540W	545W	550W
Open Circuit Voltage (V_{oc})	49.2V	49.4V	49.6V	49.8V	50.0V
Short Circuit Current (I_{sc})	13.78A	13.82A	13.86A	13.90A	13.94A
Voltage at Maximum Power (V_{mp})	41.0V	41.2V	41.4V	41.6V	41.8V
Current at Maximum Power (I_{mp})	12.93A	12.99A	13.05A	13.11A	13.16A
Module Efficiency (%)	20.50	20.69	20.89	21.08	21.27
Operating Temperature	-40°C to +85°C				
Maximum System Voltage	1500V DC				
Fire Resistance Rating	Class C				
Maximum Series Fuse Rating	30A				

*STC: Irradiance 1000W/m², Cell temperature 25°C, AM1.5; Tolerance of P_{max}: ±3%; Measurement Tolerance: ±3%

ELECTRICAL CHARACTERISTICS AT NOCT**

Module Type	AS-7M144-BT-530W	AS-7M144-BT-535W	AS-7M144-BT-540W	AS-7M144-BT-545W	AS-7M144-BT-550W
Maximum Power (P_{max})	395W	399W	403W	407W	411W
Open Circuit Voltage (V_{oc})	45.3V	45.5V	45.7V	45.9V	46.1V
Short Circuit Current (I_{sc})	11.16A	11.19A	11.22A	11.25A	11.28A
Voltage at Maximum Power (V_{mp})	37.3V	37.5V	37.7V	37.9V	38.1V
Current at Maximum Power (I_{mp})	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-7M144-BT-540W)

Power Gain	P_{max}	V_{oc}	I_{sc}	V_{mp}	I_{mp}
10%	594W	49.6V	15.24A	41.4V	14.35A
15%	621W	49.6V	15.93A	41.4V	15.00A
20%	648W	49.6V	16.62A	41.4V	15.66A
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	2280x1134x30mm
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

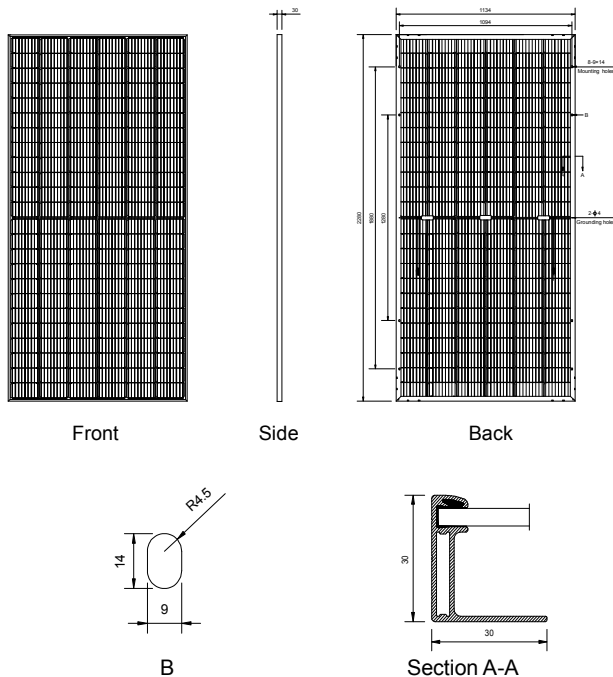
Nominal Operating Cell Temperature (NOCT)	42°C±2°C
Temperature Coefficients of P_{max}	-0.36%/°C
Temperature Coefficients of V_{oc}	-0.28%/°C
Temperature Coefficients of I_{sc}	0.05%/°C

PACKAGING

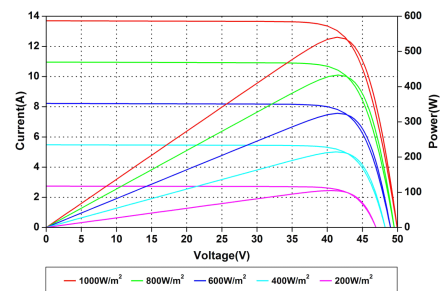
Standard packaging	36pcs/pallet
Module quantity per 20' container	180pcs
Module quantity per 40' container	720pcs(HQ)

ENGINEERING DRAWINGS

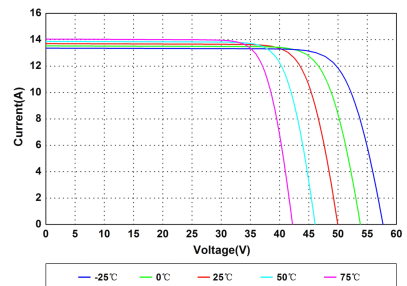
Unit: mm



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.