

144cells Monocrystalline Bifacial Dual Glass Module

High Efficiency Half-cells Solar Panel HRAP-144HBD 435-455M6



HRAP-144HBD 435-455M6

20.93%
Maximum Module Efficiency

455W
Maximum Power Output

Power Shorting Tolerance:0~+3W

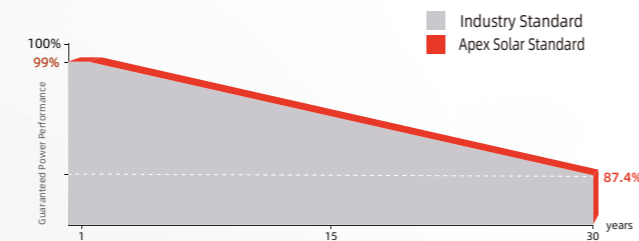
2094×1038×30mm
Module Dimensions

IEC 61215 / IEC 61730
Fire safty class:Class C according to UL790
ISO 9001 :Quality Management System
ISO 14001 :Environment Management



Industry Leading Linear Power Warranty

12-year Warranty for Materials and Processing .30-year Warranty for Extra Linear Power Output



12 YEARS Process Warranty **30 YEARS** Power Warranty

ELECTRICAL PARAMETERS AT STC

Rated Maximum Power(Pmax) [W]	435	440	445	450	455
Maximum Power Voltage(Vmp) [V]	40.97	41.2	41.44	41.67	41.9
Maximum Power Current(Imp) [A]	10.62	10.68	10.74	10.8	10.86
Open Circuit Voltage(Voc) [V]	49.05	49.3	49.55	49.8	50.05
Short Circuit Current(Isc) [A]	11.24	11.3	11.36	11.42	11.48
Module Efficiency [%]	20.01	20.24	20.47	20.7	20.93

STC: Irradiance 1000 W/m² module temperature 25°C AM=1.5

ELECTRICAL PARAMETERS AT NOCT

Rated Maximum Power(Pmax)[W]	331.03	334.76	338.61	342.39	346.19
Maximum Power Voltage(Vmp) [V]	39.07	39.29	39.52	39.74	39.96
Maximum Power Current(Imp) [A]	8.47	8.52	8.57	8.62	8.66
Open Circuit Voltage(Voc) [V]	46.52	46.76	46.99	47.23	47.47
Short Circuit Current(Isc) [A]	9.04	9.09	9.14	9.19	9.24

NOCT: Irradiance 800 W/m² ambient temperature 20°C wind speed: 1m/s

MECHANICAL SPECIFICATION

Cell Type	Monocrystalline
C ell Dimensions	166×166mm
Cell Arrangement	144(6×24)
Weight	27kg(±3%)
Module Dimensions	2094×1038×30mm
Cable	4.0 mm ² positive/negative:300mm(11.8inches),length Can be customized
Front Glass	2.0 mm (0.08 inches), High Transmission, ARCoated Heat Strengthened Glass
Back Glass	2.0 mm (0.08 inches), Heat Strengthened Glass (White Grid Glass)
Frame	Anodized aluminium alloy
junction Box	Protection class IP68
Connector	Mc4 Compatible
Mechanical Load	Front side 5400Pa/Rear side 2400Pa

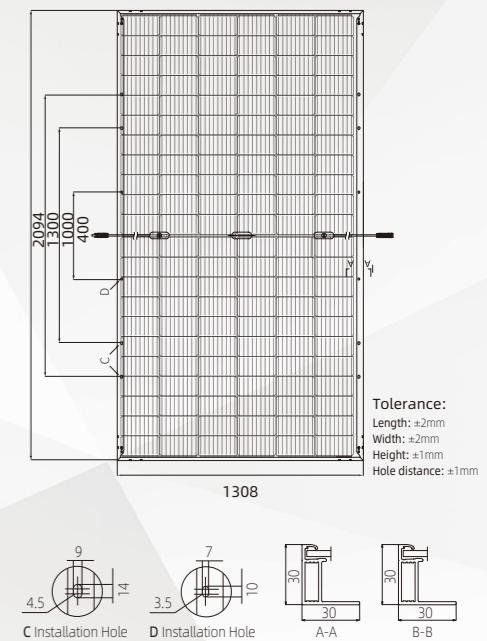
OPERATING CONDITIONS

Maximum System Voltage (V)	1000VDC/1500VDC
Pmax Temperature Coefficient	-0.34%/°C
Voc Temperature Coefficient	-0.28%/°C
ISC Temperature Coefficient	+0.05 %/°C
Nominal Operating Cell Temperature	45±2°C
Operating Temperature	- 40°C-+85°C
Maximum Series Fuse	20A

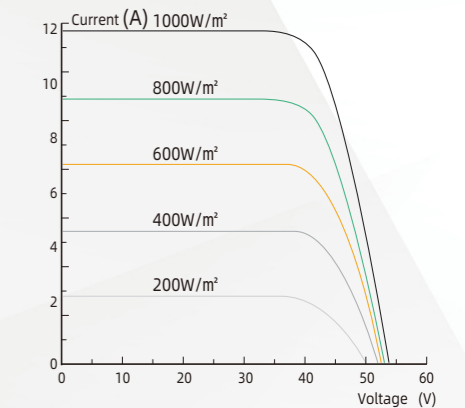
PPACKING CONFIGURATION

Quantity/Pallet	36pcs/pallet
Quantity/Container	825pcs/40HQ

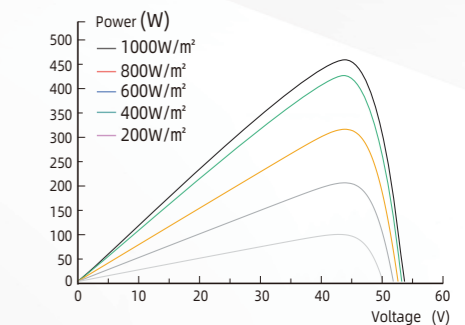
Module Dimension(mm)



Current-Voltage Curve (455W)



Power-Voltage Curve (455W)



- 0-3W**
Guaranteed 0-3W positive tolerance ensures the power output reliability
- High customer value**
Lower cost per kilowatt hour.High quality silicon wafer guarantee, high power module output, excellent cost performance advantage, is an ideal choice for solar power stations
- Highly reliable due to stringent quality control**
Three times strict EL testing beyond certification requirements
- Fusion of MBB and half-cut cells technology**
The new circuit design, minimizes the impact of shadow on the power generation of solar module.Excellent light utilization and current collection capacity, effectively improve product power output and reliability
- Excellent Anti-PID performance**
Ensure that the scale production passes the PID test, and greatly reduce the attenuation caused by PID by optimizing the wafer process
- Outstanding low light performance**
The coated glass with high transmittance and the surface technology of the wafer are used to achieve excellent performance in low light environment