



HRAP-132HBD-
N680-N700M12

N-TOPCon Technology

22.53%

Maximum Module Efficiency

700W

Maximum Power Output

Power Shorting Tolerance:0-3W

2384×1303×35mm

Module Dimensions

IEC 61215 / IEC 61730

Fire safty class:Class C according to UL790

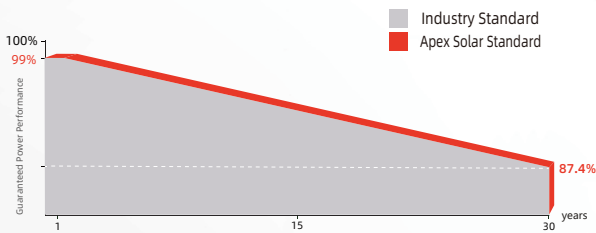
ISO 9001 :Quality Management System

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

HRAP-132HBD-N680-N700M12

ELECTRICAL PARAMETERS AT STC

Rated Maximum Power(Pmax) [W]	680	685	690	695	700
Maximum Power Voltage(Vmp) [V]	38.55	38.74	38.94	39.13	39.33
Maximum Power Current(Impp) [A]	17.64	17.68	17.72	17.76	17.80
Open Circuit Voltage(Voc) [V]	46.50	46.69	46.88	47.07	47.26
Short Circuit Current(Isc) [A]	18.69	18.74	18.79	18.84	18.89
Module Efficiency [%]	21.89	22.05	22.21	22.37	22.53

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

ELECTRICAL PARAMETERS AT NMOT

Rated Maximum Power(Pmax)[W]	513	517	521	525	529
Maximum Power Voltage(Vmp) [V]	36.15	36.36	36.56	36.74	36.94
Maximum Power Current(Impp) [A]	14.19	14.22	14.25	14.29	14.32
Open Circuit Voltage(Voc) [V]	44.37	44.56	44.75	44.94	45.13
Short Circuit Current(Isc) [A]	15.05	15.09	15.13	15.17	15.21

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

BIFACIAL OUTPUT-REAR SIDE POWER GAIN

5%	Maximum Power (Pmax) [W]	714	719	725	730	735
	Module Efficiency STC[%]	22.99	23.15	23.32	23.49	23.66
10%	Maximum Power (Pmax) [W]	748	754	759	765	770
	Module Efficiency STC[%]	24.08	24.26	24.43	24.61	24.79
20%	Maximum Power (Pmax) [W]	816	822	828	834	840
	Module Efficiency STC[%]	26.27	26.46	26.66	26.85	27.04

MECHANICAL SPECIFICATION

Cell Type	N-Type Monocrystalline
Cell Dimensions	210×210mm
Cell Arrangement	132(6×22)
Weight	38kg(±3%)
Module Dimensions	2384×1303×35mm
Cable	4.0 mm² 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

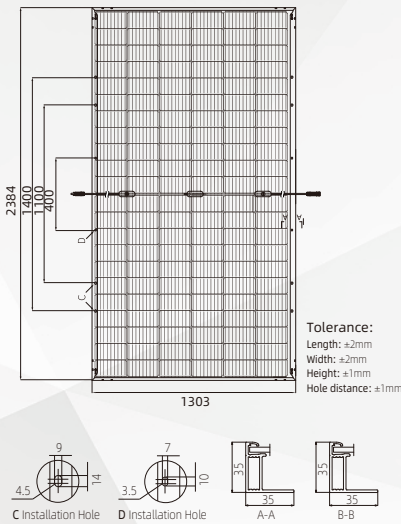
OPERATING CONDITIONS

Maximum System Voltage (V)	1000/1500VDC (IEC)
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	30A

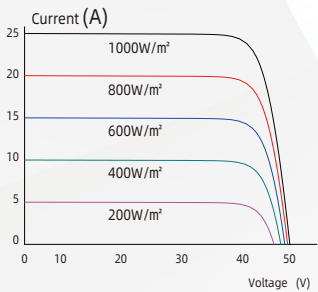
PPACKING CONFIGURATION

Quantity/Pallet	31pcs/pallet
Quantity/Container	558pcs/40HQ

Module Dimension(mm)



Current-Voltage Curve (700W)



Power-Voltage Curve (700W)

