APEX SOLAR

108cells Monocrystalline Black Module



HRAP-108H 400-420M10

21.48%
Maximum Module Efficiency

420W
Maximum Power Output

Power Shorting Tolerance:0-3W

1724×1134×30mm
Module Dimensions

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

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

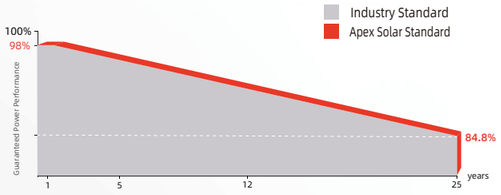
Highly reliable due to stringent quality control
Three times strict EL testing beyond certification requirements

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

Industry Leading Linear Power Warranty
12-year Warranty for Materials and Processing . 25-year Warranty for Extra Linear Power Output



12 YEARS Process Warranty
25 YEARS Power Warranty

High Efficiency Half-cells Solar Panel HRAP-108H 400-420M10

ELECTRICAL PARAMETERS AT STC

Rated Maximum Power(Pmax) [W]	400	405	410	415	420
Maximum Power Voltage(Vmp) [V]	30.75	31.00	31.25	31.49	31.73
Maximum Power Current(Imp) [A]	13.01	13.07	13.12	13.18	13.24
Open Circuit Voltage(Voc) [V]	36.75	37.00	37.25	37.50	37.75
Short Circuit Current(lsc) [A]	13.76	13.83	13.88	13.94	14.01
Module Efficiency [%]	20.46	20.72	20.97	21.23	21.48

STC: lrradiance 1000 W/m2 module temperature 25℃ AM=1.5

ELECTRICAL PARAMETERS AT NMOT

Rated Maximum Power(Pmax)[W]	299	302.7	306.5	310.2	313.9
Maximum Power Voltage(Vmp) [V]	28.56	28.80	29.03	29.25	29.47
Maximum Power Current(Imp) [A]	10.47	10.52	10.56	10.60	10.65
Open Circuit Voltage(Voc) [V]	34.55	34.79	35.08	35.26	35.49
Short Circuit Current(lsc) [A]	11.13	11.18	11.22	11.27	11.32

NMOT: lrradiance 800 W/m2 ambient temperature 20℃ wind speed: 1m/s

MECHANICAL SPECIFICATION

Cell Type	Monocrystalline
Cell Dimensions	182×182mm
Cell Arrangement	108(6×18)
Weight	21.5kg(±3%)
Module Dimensions	1724×1134×30mm
Cable	4.0 mm²positive/negative:300mm(11.8inches),length Can be customized
Front Glass	3.2 mm high transmittance,AR coating tempered glass
Frame	Anodized aluminium alloy
Junction Box	Protection class IP68
Type of Connector	PV-XT101.1（Suzhou Xtong Photovoltage Technology Co.，Ltd）
Mechanical Load	Front side 5400Pa/Rear side 2400Pa

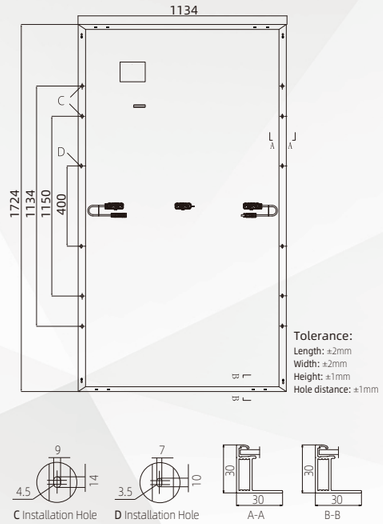
OPERATING CONDITIONS

Maximum System Voltage (V)	1000/1500VDC (IEC)
Pmax Temperature Coefficient	-0.34%/℃
Voc Temperature Coefficient	-0.28%/℃
ISC Temperature Coefficient	+0.05%/℃
Nominal Operating Cell Temperature	45±2℃
Operating Temperature	- 40℃-+85℃
Maximum Series Fuse	25A

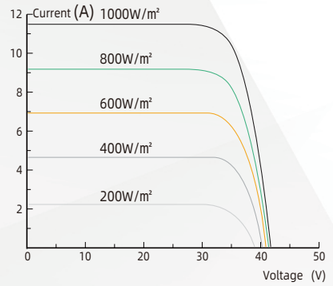
PACKING CONFIGURATION

Quantity/Pallet	36pcs/pallet
Quantity/Container	962pcs/40HQ

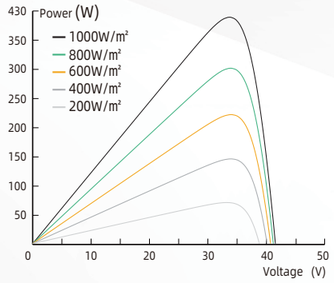
Module Dimension(mm)



Current-Voltage Curve (420W)



Power-Voltage Curve (420W)



APEX SOLAR

GLOBAL OPERATION CENTER : ROOM 1102, BUILDING 2, DIGITAL CREATIVE INDUSTRY PARK, XISHAN DISTRICT, WUXI CITY, JIANGSU PROVINCE, CHINA.
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