



## HRAP-108H 400-420M10

**21.48%**  
Maximum Module Efficiency

**420W**  
Maximum Power Output

Power Shorting Tolerance:0-3W

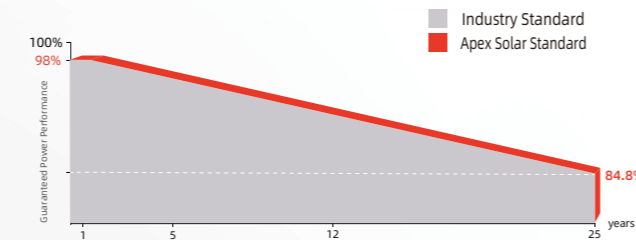
**1724×1134×30mm**  
Module Dimensions

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



### 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(Isc) [A]	13.76	13.83	13.88	13.94	14.01
Module Efficiency [%]	20.46	20.72	20.97	21.23	21.48

STC: Irradiance 1000 W/m<sup>2</sup> module temperature 25°C 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(Isc) [A]	11.13	11.18	11.22	11.27	11.32

NMOT: Irradiance 800 W/m<sup>2</sup> ambient temperature 20°C 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 mm <sup>2</sup> positive/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

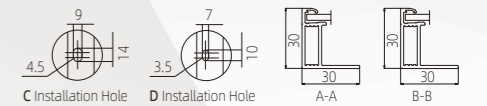
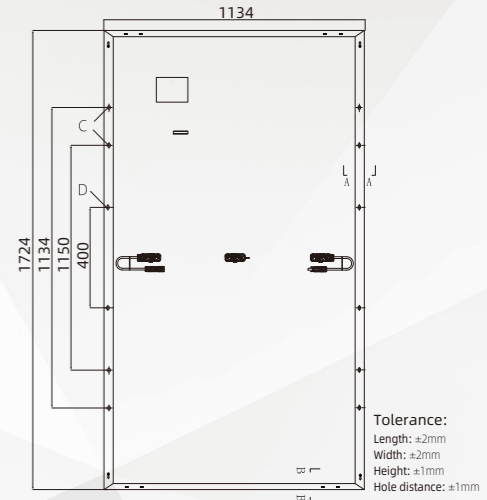
### OPERATING CONDITIONS

Maximum System Voltage (V)	1000/1500VDC (IEC)
Pmax Temperature Coefficient	-0.34%/°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	25A

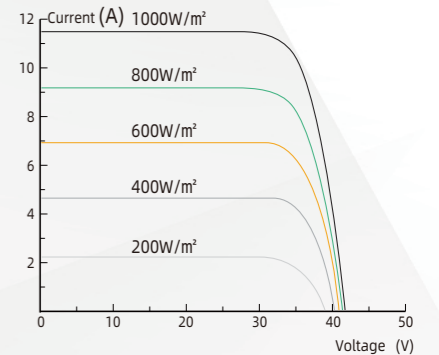
### PACKING CONFIGURATION

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

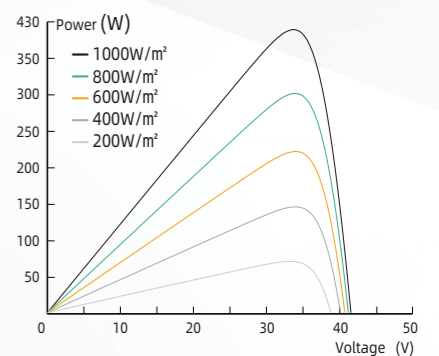
### Module Dimension(mm)



### Current-Voltage Curve (420W)



### Power-Voltage Curve (420W)



**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