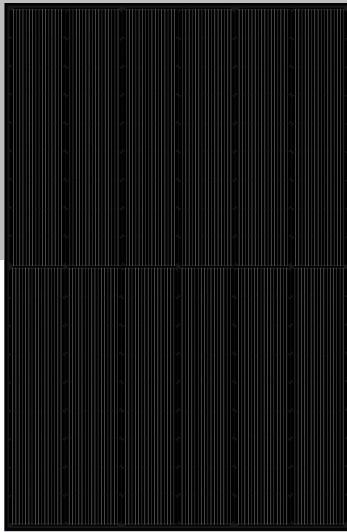


HC-SPR-P6-440 FULL BLACK 420W~440W

MONOCRYSTALLINE MODULE



ADVANCED PERFORMANCE & PROVEN ADVANTAGES


- High module conversion efficiency up to 22.53% by using innovative N-type TOPCon cell technology.
- Extremely low LID (light induced degradation) and low annual power degradation ensure higher energy yield during the module's lifetime.
- Low temperature coefficient and excellent performance under high temperature and low light conditions.
- Robust aluminum frame ensures the modules to withstand wind loads up to 2400Pa and snow loads up to 5400Pa.
- High reliability against extreme environmental conditions (passing salt mist, ammonia and hail tests).
- Potential induced degradation (PID) resistance.

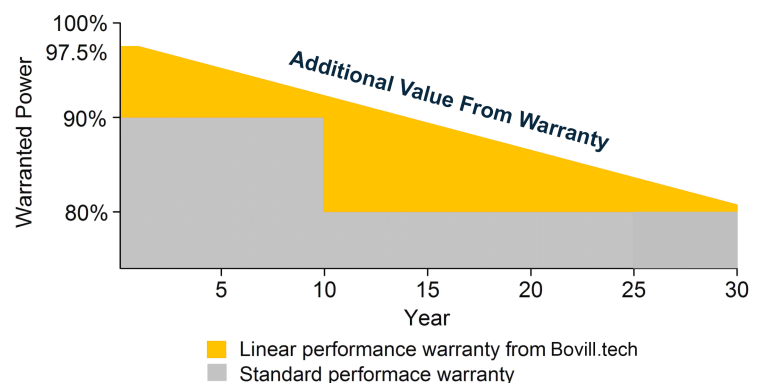
CERTIFICATIONS



- IEC 61215, IEC 61730, CE
- ISO 9001:2015: Quality management system
- ISO 14001:2015: Environmental management system
- ISO 45001:2018: Occupational health and safety management system

SPECIAL WARRANTY

- 40 years product warranty (extendable to lifetime 99 year warranty)
- 40 years linear power output warranty (extendable to lifetime 99 year warranty)
- Designed in the UK 



ELECTRICAL CHARACTERISTICS AT STC

Maximum Power (Pmax)	420W	425W	430W	435W	440W
Open Circuit Voltage (VOC)	38.0V	38.2V	38.4V	38.6V	38.8V
Short Circuit Current (ISC)	13.94A	14.00A	14.06A	14.12A	14.18A
Voltage at Maximum Power (Vmp)	31.8V	32.0V	32.2V	32.4V	32.6V
Current at Maximum Power (Imp)	13.21A	13.29A	13.36A	13.43A	13.50A
Module Efficiency (%)	21.51	21.76	22.02	22.28	22.53
Operating Temperature	-40°C to +85°C				
Maximum System Voltage	1000V DC/1500V DC				
Fire Resistance Rating	Class C				
Maximum Series Fuse Rating	30A				

STC: Irradiance 1000W/m², Cell temperature 25°C, AM1.5; Tolerance of Pmax: ±3%; Measurement Tolerance: ±3%

ELECTRICAL CHARACTERISTICS AT NOCT

Maximum Power (Pmax)	316W	320W	324W	328W	331W
Open Circuit Voltage (VOC)	36.1V	36.3V	36.5V	36.7V	36.9V
Short Circuit Current (ISC)	11.29A	11.34A	11.39A	11.44A	11.49A
Voltage at Maximum Power (Vmp)	29.9V	30.1V	30.3V	30.5V	30.7V
Current at Maximum Power (Imp)	10.57A	10.64A	10.70A	10.75A	10.81A

NOCT: Irradiance 800W/m², Ambient temperature 20°C, Wind Speed 1 m/s

ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE POWER GAIN

Power Gain	P _{max}	V _{OC}	I _{SC}	V _{mp}	I _{mp}
5%	441W	38.0V	14.64A	31.8V	13.87A
15%	483W	38.0V	16.03A	31.8V	15.19A
25%	525W	38.0V	17.43A	31.8V	16.51A

MECHANICAL CHARACTERISTICS

Cell type	Monocrystalline N-type 182*91mm
Number of cells	108 (6x18)
Module dimensions	1722x1134x30mm
Weight	24kg
Front/Back Glass	2mm AR coated tempered glass/2mm tempered glass
Frame	Anodized aluminum alloy
Junction box	IP68, 3 diodes
Cable	4mm ² , Portrait: 300mm; Landscape: 1200mm
Connector	MC4 or MC4 compatible

TEMPERATURE CHARACTERISTICS

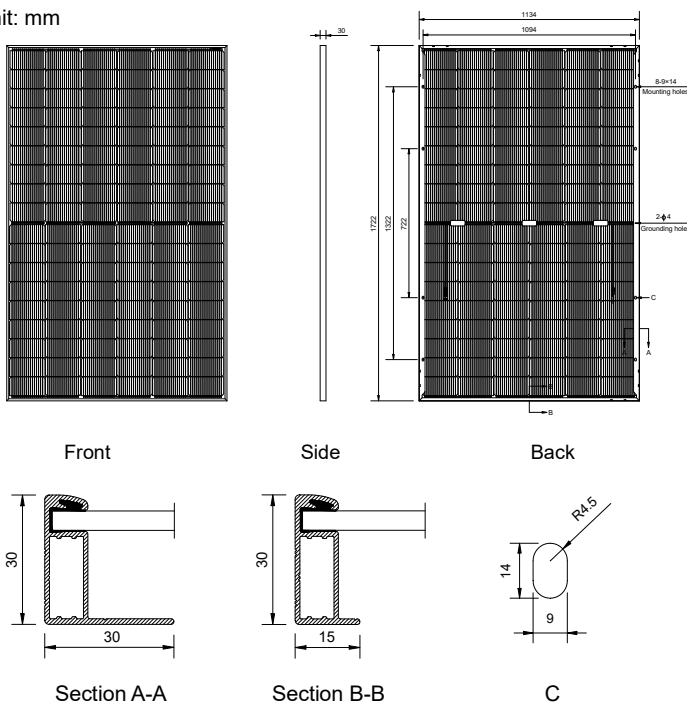
Nominal Operating Cell Temperature (NOCT)	43°C±2°C
Temperature Coefficients of P _{max}	-0.30%/°C
Temperature Coefficients of V _{OC}	-0.25%/°C
Temperature Coefficients of I _{SC}	0.045%/°C

PACKAGING

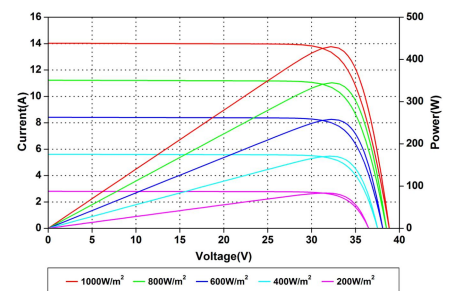
Standard packaging	36pcs/pallet
Module quantity per 20' container	216pcs
Module quantity per 40' container	936pcs(HQ)

ENGINEERING DRAWINGS

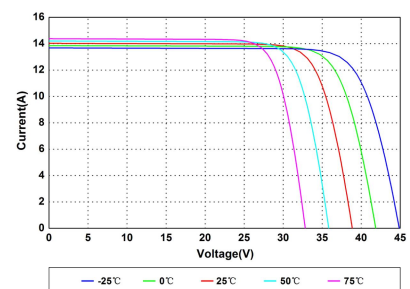
Unit: mm



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.