







Full-Black Series

D 6 III · 390-410W
MWT Mono PERC Half-Cut All Black Module

21.0%

Module efficiency up to 21.0%

Features

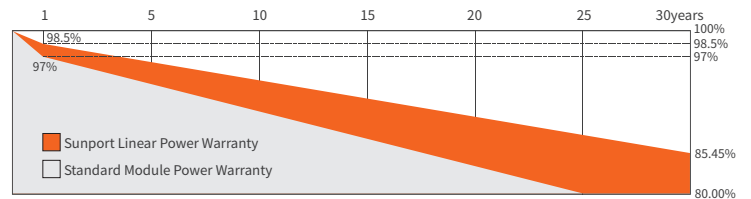
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Full Black
 All black design for more elegant applications
- 
Innovative Layout
 Innovative back contact module layout with asymmetric design for higher efficiency power
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High ROI
 Single-glass modules with global 30-year performance warranty bring higher return on investment
- 
High Efficiency
 Busbar-free design increases cell conversion efficiency, more power output can be achieved at low irradiance conditions
- 
High Reliability
 Conductive back sheet's 2D encapsulation avoids welding stress and micro crack, resulting lower degradation under multiple harsh testing conditions
- 
Lead Free
 Eco-friendly PV design achieves lead-free MWT module without soldering materials

Reinsurance Coverage for 30 Years

15 year
Quality Warranty

30 year
Performance Warranty

Insured by PAIC and LLOYD'S
PING AN LLOYD'S



※1st year degradation less than 1.5%, 30 years linear power output 85.45% guaranteed.

Comprehensive Qualifications & Certifications

- ★ ISO 9001: 2015 Quality Management System
- ★ ISO 45001: 2018 Occupation Health Safety Management System
- ★ ISO 14001: 2015 Environment Management System
- ★ CQC Top Runner Advanced Technology Certification (4A class)
- ★ TUV NORD Certification



Electrical Characteristics at Standard Test Conditions(STC)

Spec/Model	Unit	SPP390QHFH	SPP395QHFH	SPP400QHFH	SPP405QHFH	SPP410QHFH
Max-Power(Pm)	W	390	395	400	405	410
Power Tolerance	W			0~+5		
Max-Power Voltage(Vm)	V	36.7	36.9	37.1	37.3	37.6
Max-Power Current(Im)	A	10.63	10.73	10.79	10.86	10.90
Open-Circuit Voltage(Voc)	V	44.5	44.7	44.9	45.1	45.8
Short-Circuit Current(Isc)	A	11.14	11.21	11.28	11.35	11.41
Module Efficiency(ηm)	%	19.9	20.2	20.5	20.7	21.0

STC: AM=1.5, Irradiation 1000W/m², Module Temperature 25°C

Electrical Characteristics at Nominal Module Operating Temperature (NMOT)

Spec/Model	Unit	SPP390QHFH	SPP395QHFH	SPP400QHFH	SPP405QHFH	SPP410QHFH
Max-Power(Pm)	W	292	296	300	304	306
Max-Power Voltage(Vm)	V	34.4	34.6	34.8	35.0	35.4
Max-Power Current(Im)	A	8.49	8.56	8.63	8.69	8.64
Open-Circuit Voltage(Voc)	V	41.6	41.8	42.0	42.2	42.7
Short-Circuit Current(Isc)	A	9.00	9.06	9.12	9.18	9.25

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

Temperature Coefficient

Nominal Module Operating Temperature	43±2°C
Temperature coefficient of Pmax	-0.36%/°C
Temperature coefficient of Voc	-0.28%/°C
Temperature coefficient of Isc	0.06%/°C

Mechanical Characteristics

Dimension(L×W×H)	1889mmx1035mmx30mm
Weight	21 kg
Glass type	High transmittance anti-reflective coated tempered glass /3.2mm
Cell	132(22x6) / Mono / Half-cell
Encapsulant	EVA
Frame	Anodized Aluminum Black
Junction box(protection degree)	IP68
Cable	4mm ² ,350mm(+)/150mm(-) or Customized · Length
Connector	MC4 Compatible

Operating Conditions

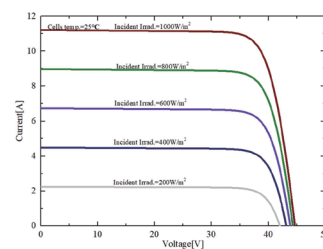
Max. system voltage	DC1500V(TUV)
Max. series fuse rating	20A
Operating temperature range	-40°C~+85°C
Mechanical load	5400Pa/2400Pa
Max. hailstone impact(diameter/velocity)	Φ25mm hail, from 1 m of distance at 23 m/s
Application Class	Class A

Package

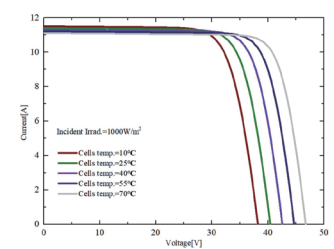
Transportation	Container Size	Quantity(pcs)	Quantity(per pallet)
Container	40' HQ	864	36

I-V Curve

I-V Curves of SPP395QHFH at different irradiance



I-V Curves of SPP395QHFH at different cell temperature



Module Size

