

Benchmark II SPP380-420MH7

380-420W MWT Module

Mono Half-cut 72 Cells

20.46%

Module efficiency up to 20.46%

Benchmark MWT PV Module

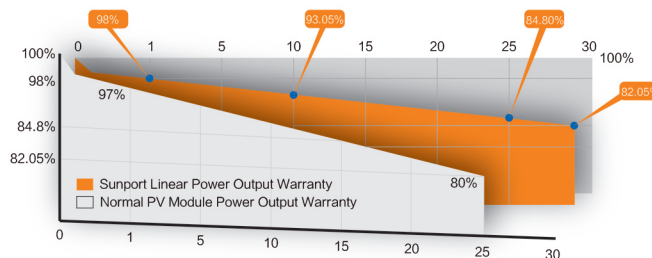
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| <p> Higher Efficiency
The highest efficiency of the series is up to 20.46%.</p> <p> Higher Yield
Higher power generation on the same installation.</p> <p> Anti-PID
Certified for Anti-PID under 85°C/85%RH, for 288hrs.</p> | <p> Lower Degradation
At least 98% of the initial effective output at the 1st year and 82% at the 30th year.</p> <p> Corrosion-Resistant
Certified for Ammonia Resistance and Salt Mist Corrosion .</p> <p> Heat-Resistant
Remain peak performance in hot days (-0.36%/°C) .</p> |
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Reinsurance Coverage for 30 Years

- The "conductive foil line" and metal foil greatly improved the performance and reliability.
- The PCB packaging technology avoids soldering lines of conventional module, reducing 2-4% of package loss.

12 Years
Quality
Warranty

30 Years
Performance
Warranty



Comprehensive Qualifications & Certifications

- ★ IEC 61215, IEC 61730, IEC 61701, IEC 62716, IEC 60068-2-68.
- ★ ISO 9001: 2015 Quality Management System
- ★ OHSAS 18001: 2007 Occupation Health Safety Management System

- ★ CQC&CGC Top Runner Advanced Technology Certification (4A class)
- ★ ISO 14001: 2015 Environment Management System
- ★ TUV NORD and UK NQA Quality System Certification



Electrical Characteristics at Standard Test Conditions(STC)

Spec/Model	Unit	SPP380NH7H	SPP385NH7H	SPP390NH7H	SPP395NH7H	SPP400NH7H	SPP405NH7H	SPP410NH7H	SPP415NH7H	SPP420NH7H
Max-Power(Pm)	W	380	385	390	395	400	405	410	415	420
Power Tolerance	%	0~+3%								
Max-Power Voltage(Vm)	V	38.86	39.01	39.12	39.27	39.41	39.55	39.69	39.83	39.96
Max-Power Current(I _m)	A	9.78	9.87	9.97	10.06	10.15	10.24	10.33	10.42	10.51
Open-Circuit Voltage(Voc)	V	47.04	47.28	47.52	47.76	48.00	48.24	48.48	48.72	48.84
Short-Circuit Current(Isc)	A	10.31	10.38	10.46	10.53	10.58	10.64	10.66	10.67	10.69
Module Efficiency(η _m)	%	18.52	18.76	19.00	19.25	19.49	19.73	19.98	20.22	20.46
STC:AM=1.5, Irradiation1000W/m², Module Temperature25℃										

Electrical Characteristics at Nominal Module Operating Temperature (NMOT)

Spec/Model	Unit	SPP380NH7H	SPP385NH7H	SPP390NH7H	SPP395NH7H	SPP400NH7H	SPP405NH7H	SPP410NH7H	SPP415NH7H	SPP420NH7H
Max-Power(Pm)	W	278	283	288	293	298	302	307	312	317
Max-Power Voltage(Vm)	V	34.75	35.02	35.29	35.56	35.82	35.95	36.20	36.49	36.73
Max-Power Current(I _m)	A	8.00	8.08	8.16	8.24	8.32	8.40	8.48	8.55	8.63
Open-Circuit Voltage(Voc)	V	42.96	43.20	43.44	43.68	43.92	44.16	44.40	44.64	44.88
Short-Circuit Current(Isc)	A	8.44	8.52	8.58	8.64	8.69	8.74	8.79	8.84	8.86
NMOT: Irradiation800W/m², ambient temperature20℃,Wind Speed1m/s										

Temperature Coefficient

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

Package

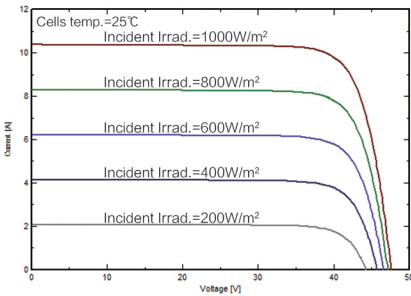
Container Size	Quantity(pcs)	Quantity(pallet)
20' GP	/	/
40' HC	572	22

Mechanical Property

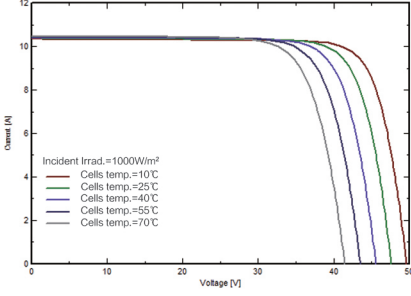
Dimension(L × W × H)	2020mmx1016mmx40mm
Weight	23.5kg
Glass Type	High Transmittance Anti-reflective Coated Tempered Glass /3.2mm
Solar Cell	144(24x6)/ Mono Half-cut/ 6 inches
Encapsulant	EVA
Frame	Anodized Aluminum Alloy / Silver
Junction Box	IP67 & IP68
Cable	1200mm / 4mm²
Connector	MC4 Compatible

I-V Curve

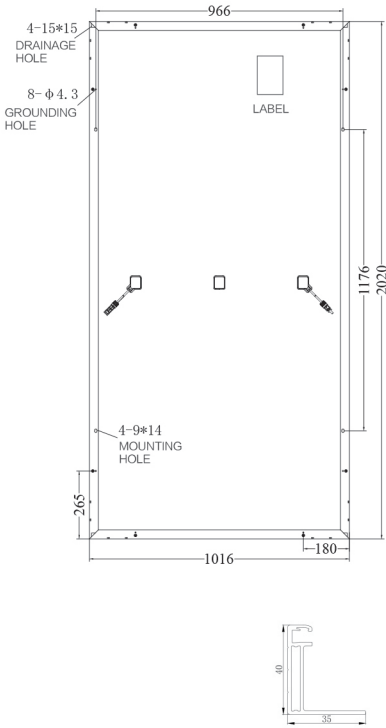
I-V Curve at different irradiation (SPP400NH7H)



I-V Curve at different temperature (SPP400NH7H)



Module Size



Operating Conditions

Max System Voltage	DC1500V(TUV)
Max Fuse Rated Current	15A
Operating Temperature Range	-40℃ ~ +85℃
Mechanical Load	5400Pa/2400Pa
Max Allowable Hail Load	φ 25mm hail, from 1m of distance at 23 m/s
Application Class	Class A

