



Benchmark II SPP385-415NH7

385-415W MWT Module

Mono Half-cut 72 Cells

Australian Version

Manufactured in China

20.2%

Module efficiency up to 20.2%

MWT Solar Cell

- New cell structure and different manufacturing process.
- No bus-bar on the front. 3% less shadow and better use of sunlight.
- Effectively avoid the micro crack caused by the pressure between cell edge and ribbon.
- Compatible with other cell types including PERC, HIT, Black Silicon etc.

Insured by PICC and LLOYD'S

PICC **LLOYD'S**

Comprehensive Qualifications & Certifications

- ★ IEC 61215, IEC 61730.
- ★ CQC&CGC Top Runner Advanced Technology Certification (4A class)
- ★ ISO 9001: 2015 Quality Management System
- ★ ISO 14001: 2015 Environment Management System
- ★ OHSAS 18001: 2007 Occupation Health Safety Management System
- ★ TUV NORD and UK NQA Quality System Certification



Benchmark MWT PV Module



Higher Efficiency

The highest efficiency of the series is up to 20.2%.



Higher Yield

Higher power generation on the same installation.



Lower Degradation

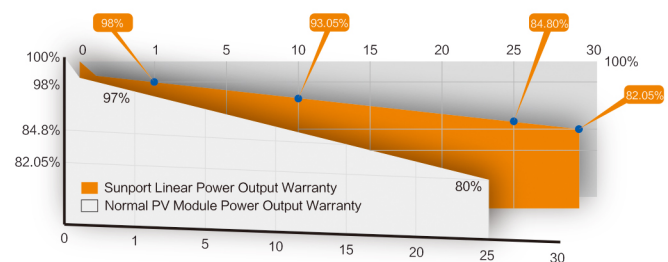
At least 98 % of the initial effective output at the 1st year and 82.05% at the 30th year.



Heat-Resistant

Remain peak performance in hot days thanks to the improved temperature coefficient as low as $-0.36\%/^{\circ}\text{C}$.

30 Years Performance Warranty



Electrical Characteristics at Standard Test Conditions(STC)

Spec/Model	Unit	SPP385NH7	SPP390NH7	SPP395NH7	SPP400NH7	SPP405NH7	SPP410NH7	SPP415NH7
Max-Power(Pm)	W	385	390	395	400	405	410	415
Power Tolerance	%	0~+3%						
Max-Power Voltage(Vm)	V	38.6	38.8	39.0	39.2	39.4	39.6	39.8
Max-Power Current(Im)	A	9.97	10.05	10.13	10.20	10.28	10.35	10.43
Open-Circuit Voltage(Voc)	V	47.2	47.4	47.6	47.8	48.0	48.2	48.4
Short-Circuit Current(Isc)	A	10.42	10.48	10.54	10.6	10.66	10.72	10.78
Module Efficiency(η m)	%	18.8	19.0	19.3	19.5	19.7	20.0	20.2

STC:AM=1.5, Irradiation1000W/m², Module Temperature25℃

Electrical Characteristics at Nominal Module Operating Temperature (NMOT)

Spec/Model	Unit	SPP385NH7	SPP390NH7	SPP395NH7	SPP400NH7	SPP405NH7	SPP410NH7	SPP415NH7
Max-Power(Pm)	W	288	292	296	300	304	308	312
Max-Power Voltage(Vm)	V	35.1	35.3	35.5	35.7	35.9	36.1	36.3
Max-Power Current(Im)	A	8.21	8.27	8.34	8.40	8.47	8.53	8.60
Open-Circuit Voltage(Voc)	V	43.0	43.2	43.4	43.6	43.8	44.0	44.2
Short-Circuit Current(Isc)	A	8.56	8.62	8.69	8.75	8.81	8.87	8.94

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

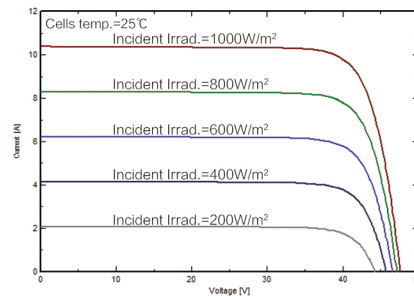
Dimension(L × W × H)	2020mmx1016mmx40mm
Weight	23.5kg
Glass Type	High Transmittance Anti-reflective Coated Tempered Glass /3.2mm
Solar Cell	144(24x6)/ Mono Half-cut/ 6 inches
Encapsulant	EVA
Frame	Anodized Aluminum Alloy / Silver
Junction Box	IP67 & IP68
Cable	300mm / 4mm ²
Connector	TL-CABLE01 TL-CABLE01S QC4.10

Operating Conditions

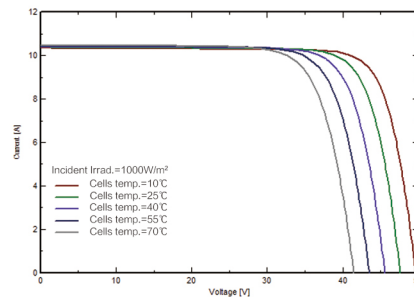
Max System Voltage	DC1000V(TUV)
Max Fuse Rated Current	15A
Operating Temperature Range	-40℃ ~ +85℃
Mechanical Load	5400Pa/2400Pa
Max Allowable Hail Load	φ 25mm hail, from 1m of distance at 23 m/s
Application Class	Class A

I-V Curve

I-V Curve at different irradiation (SPP400NH7)



I-V Curve at different temperature (SPP400NH7)



Module Size

