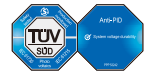




M10 HIEFF TWIN MONO BLACK by SUNPRO

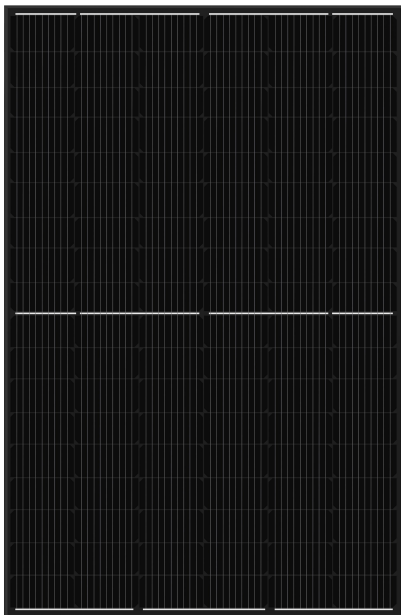
SP(390-410)W-108M10
HIGH EFFICIENCY



ISO 14001

ISO 9001

ISO 45001



POWER TOLERANCE

0~+3%



WITHSTAND STRONG SNOW LOAD 5400 Pa/ WIND LOAD 2400 Pa



NEW TECHNOLOGY: HIEFF UP TO 20,97%

Higher yield per surface area,
lower BOS costs, higher power classes,
and an efficiency rate of up to 20.97%.

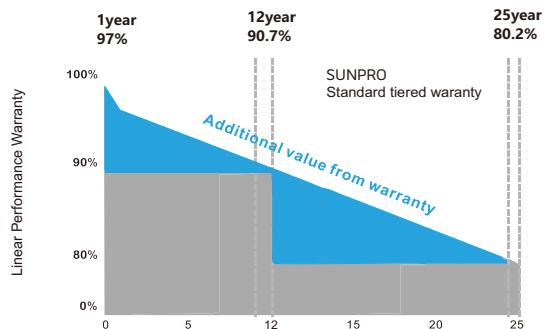


PRODUCT WITH HIEFF BY SUNPRO TECHNOLOGY

SUNPRO DUO combines cutting edge cell
separation and innovative 10-busbar design
with SUNPRO Technology.

Reliability & Certification

Product Guarantee: **15-year**
Linear Performance Warranty
12-year:90.7% power output
25-year:80.2% power output



Product Specification

Electrical parameters at standard test conditions
(STC:AM=1.5, 1000W/m², Cells Temperature 25°C)

Typical type	390W	395W	400W	405W	410W
Max power(Pmax)	390	395	400	405	410
Open circuit voltage (Voc)	36.53	36.73	36.93	37.13	37.33
Short circuit current (Isc)	13.62	13.69	13.76	13.83	13.90
Max power voltage(Vmp)	30.41	30.62	30.83	31.04	31.25
Max power current(Imp)	12.83	12.90	12.98	13.05	13.12
Module Efficiency(%)	19.95	20.20	20.46	20.72	20.97
Max system voltage	DC 1500V(TUV) / DC 1000V(TUV)				
Maximum Series Fuse Rating	25A				

Electrical parameters at NMOT test conditions

(NMOT:Irradiance 800W/m², Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s)

Item					
Max power(Pmax)	287	291	295	298	302
Open circuit voltage (Voc)	34.09	34.29	34.49	34.69	34.89
Short circuit current (Isc)	10.60	10.65	10.70	10.75	10.80
Max power voltage(Vmp)	28.38	28.58	28.78	28.98	29.18
Max power current(Imp)	10.11	10.18	10.25	10.28	10.35

Mechanical Data

Item	Specification
Dimensions	1724x1134x30mm
Weight	21.5kgs
Front glass	3.2mm, High Transmission, AR Coated Tempered Glass 4mm ²
Output cables	symmetrical lengths 1100mm
Connectors	MC4 compatible IP68
Cell type	Mono-Crystalline PERC Half-Cell 10BB 91mm x182mm
Number of cells	108 cells

Temperature Characteristics

Item	Specification
Temp.Coeff.of Isc(TK Isc)	0.05%/°C
Temp.Coeff.of Voc(TK Voc)	-0.29%/°C
Temp.Coeff.of Pmax(TK Pmax)	-0.35%/°C
Operating temperature	-40~+85°C
Normal operating cell temperature	44±2°C

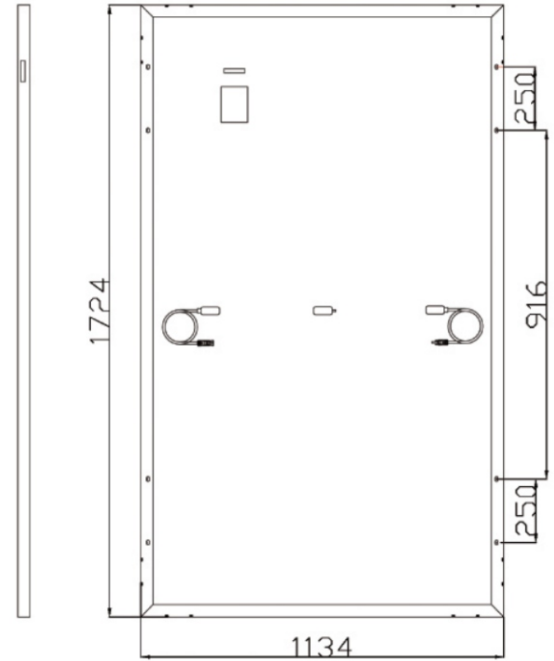
Packing Configuration

Item	Specification
Container	40'HQ
Pieces per pallet	72
Pallets per container	13
Pieces per container	936

Test, Certifications and Warranties

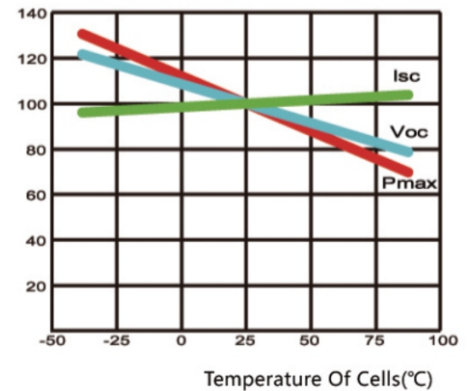
Item	Specification
Standard tests	IEC 61215, IEC 61730, IEC 61701, IEC 62716, PPP 58042B
System certs	ISO 9001, ISO14001, ISO45001
Certifications	TUV, AMMONIA AND SALT MIST CORROSION, ANTI-PID, CE, WEEE, INMERTRO
Extreme wind and snow loads testing	Withstand extreme wind(2400 Pascal) and snow loads(5400 Pascal)
Power tolerance	0~+3%
Junction box	IP68
Warranties	15 years product warranty and 25 years 80% of power

Dimensions and Structure



I-V Curve

I-V characteristics at different temperature



I-V characteristics at different tempera

