



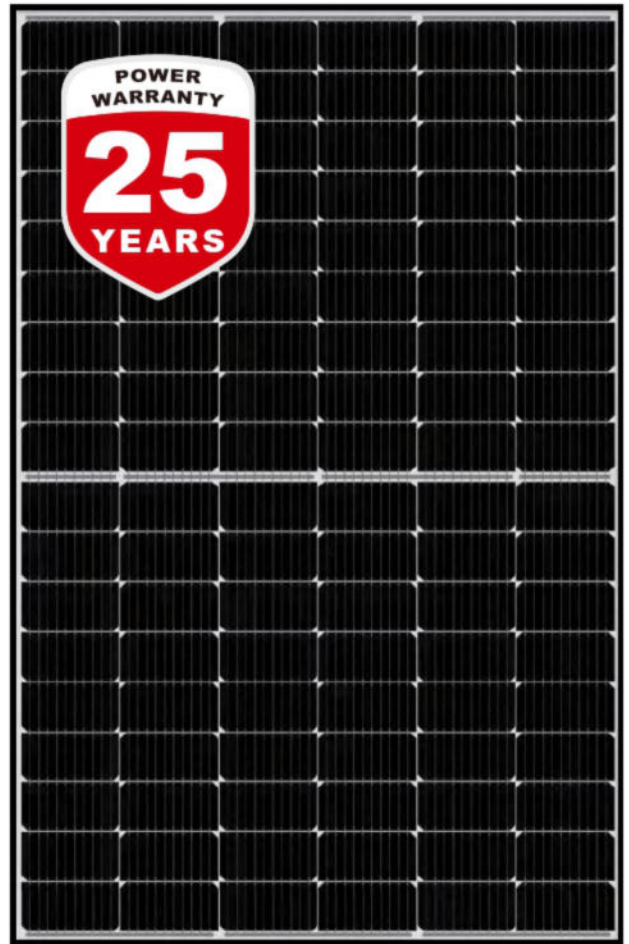
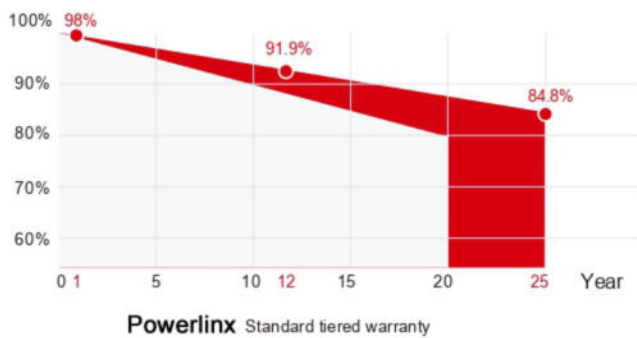
## M10 HI-EFFTWIN MONO

pwxxx-1 08M10  
**390-415W**

- Black frame
- Silver frame
- Full black
- Bifacial

12Yr quality guarantee | 25Yr power warranty

**m** Powerlinx (Additional value from 25-year warranty)  
 Industry Standard



### WARRANTY & GUARANTEE

Linear output power guarantee  
 12 years: 91.9% power output  
 25 years: 84.8% power output



### WITHSTAND STRONG

Snow load 5400Pa  
 Wind load 2400Pa



### R&D AND PRODUCTION

Advanced production line.  
 The leading solar cell cutting process and multi busbar design with SUNPRO Technology.



### HIGH EFFICIENCY

Efficiency can reach 21.23%. Excellent low light performance. Higher power output under the conditions of haze, overcast, etc.



### POWER TOLERANCE

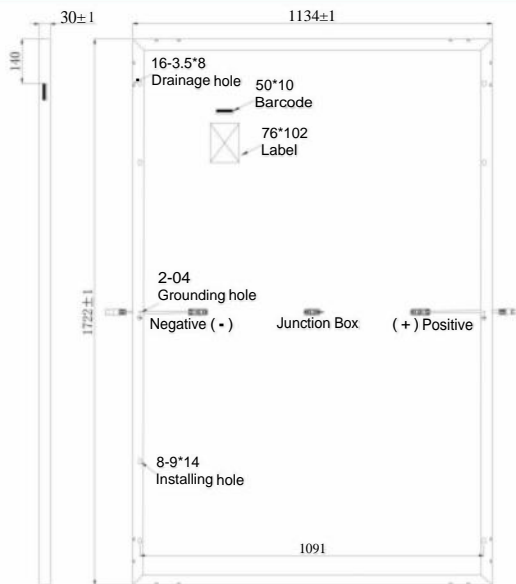
Power positive tolerance: 0~+3%

## Electrical parameters at standard test conditions (STC:AM=1.5, 1000W/m<sup>2</sup> .Cells Temperature25°C)

### Typical type

	390W	395W	400W	405W	410W	415W
Max power(Pmax)	390	395	400	405	410	415
Max power voltage(Vmp)	30.41	30.62	30.83	31.04	31.25	31.47
Max power current(Imp)	12.83	12.90	12.98	13.05	13.12	13.19
Open circuit voltage(Voc)	36.53	36.73	36.93	37.13	37.33	37.53
Short circuit current(Isc)	13.62	13.69	13.76	13.83	13.90	13.97
Module Efficiency(%)	19.95	20.20	20.46	20.72	20.97	21.23
Max system voltage	DC 1500V(TUV,UL) / 1000V(CUL)					
Maximum Series Fuse Rating	25A					

### DIMENSIONS AND STRUCTURE

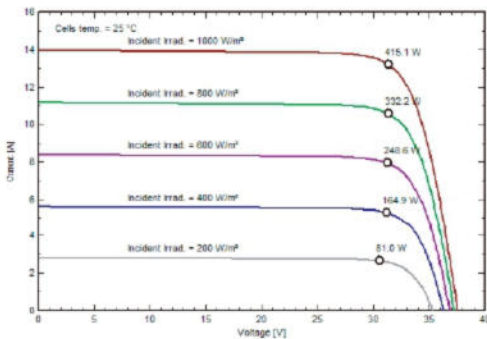


Side

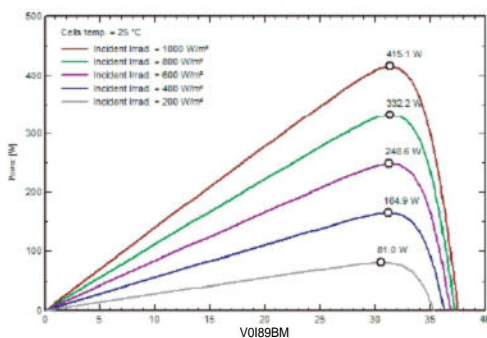
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### I-V CHARACTERISTICS AT DIFFERENT IRRADIATION

PV module: SUNPRO, SP415-108M10



PV module: SUNPRO, SP415-108MU\*



### Electrical parameters at NMOT test conditions

(Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, AM 1.5, Wind Speed 1 m/s)

Typical type	390W	395W	400W	405W	410W	415W
Max power(Pmax)	290	294	298	301	305	309
Max power voltage(Vmp)	28.00	28.30	28.40	28.60	28.80	29.00
Max power current(Imp)	10.34	10.40	10.46	10.52	10.58	10.65
Open circuit voltage(Voc)	34.00	34.30	34.50	34.60	34.80	35.00
Short circuit current(Isc)	10.98	11.04	11.09	11.15	11.20	11.26

### Mechanical Data

Dimensions	1722x1134x30mm
Weight	21.5 kg
Glass	3.2mm ultra clear embossed tempered coated glass
Output cables	4mm <sup>2</sup> , symmetrical lengths 1100mm
Connectors	MC4 compatible IP68
Cell type	Mono-Crystalline PERC, 182x91mm
Number of cells	108 cells ( Half-Cell )

### Temperature Characteristics

Temp. Coeff. of Isc(TK Isc)	0.048%/°C
Temp. Coeff. of Voc(TK Voc)	-0.27%/°C
Temp. Coeff. of Pmax(TK Pmax)	-0.34%/°C
Operating temperature	-40~+85°C
Normal operating cell temperature	44±2°C

### Packing Configuration

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

### Tests, Certifications and Warranties

Standard tests	IEC 61215, IEC 61730, IEC 61701, IEC 62716, PPP 58042
System certs	ISO 9001, ISO14001, ISO45001
Certifications	TUV, CE, UL, CEC, INMETRO, WEEE
Extreme wind and snow loads testing	Withstand extreme wind(2400 Pascal) and snow loads(5400 Pascal)
Power tolerance	0~+3%
Junction box	IP 68
Warranties	12 years product warranty and 25 years 84.8% of power