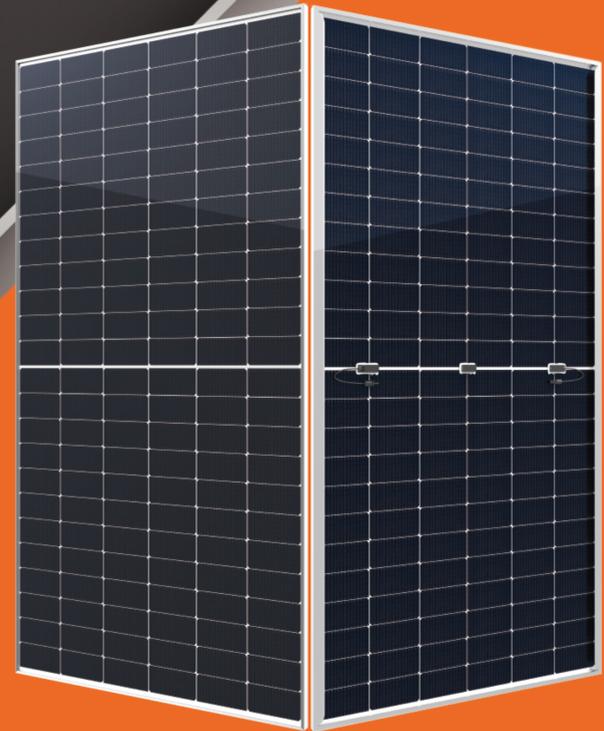


[N-Type]

182 Mono-Bifacial Module
GPM10TG-590(144)

570W-590W



Maximum output power	Maximum efficiency	Power tolerance
590W	22.84%	0~+3%

▶ Key Features



SMBB Technology

Better light trapping and current collection to improve module power output and reliability.



Hot 2.0 Technology

The N-type module with Hot 2.0 technology has better reliability and lower LID/LETID.



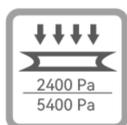
PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



Duplex power generation

The power gain on both sides increases with the light received on the back, up to 25%.



Enhanced Mechanical Load

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).

▶ Quality System

IEC 61215-1:2021, IEC 61730-1:2023
IEC61701 / IEC62716 / IEC62804
ISO9001:2015:Quality Management System
ISO14001:2015:Environment Management System
ISO45001:2018:Occupational Health and Safety Management Systems

▶ Product Certifications

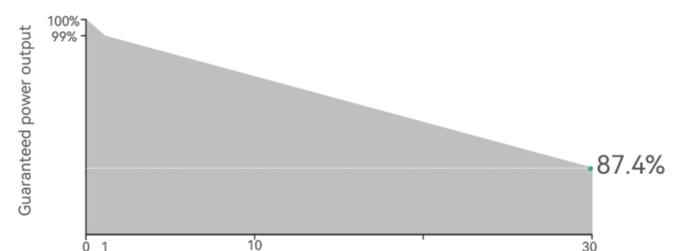


▶ Linear performance warranty

12Year Product Warranty

30Year Linear Warranty

0.4%Annual Degradation Over **30** Years



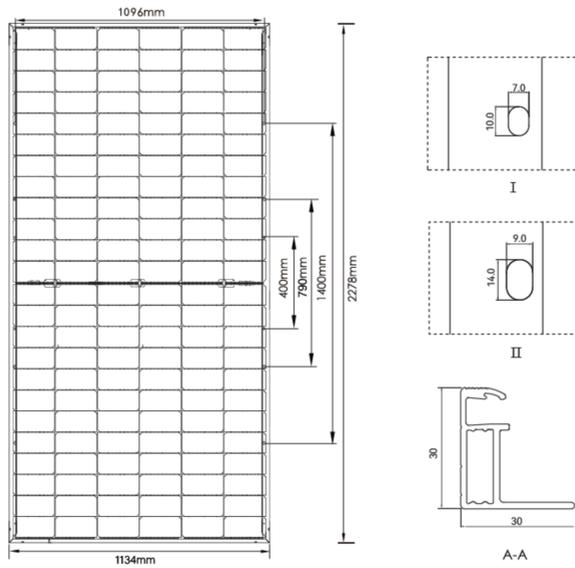
ZHEJIANG G&P SUN ENERGY TECHNOLOGY CO.,LTD.

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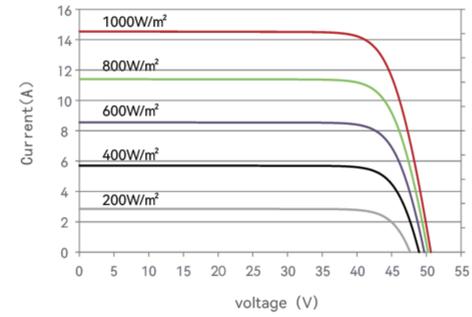
+86 18867598311 / info@eurosolargp.com / www.gpsolarpv.com



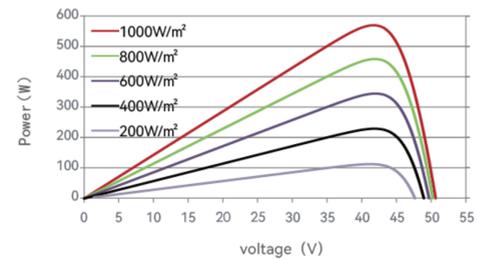
Engineering Drawings



Electical Performance(580W)



I-V curve



P-V curve

Electrical Parameters (STC*)

Maximum Power(W)	570	575	580	585	590
Maximum Power Voltage(V)	41.54	41.67	41.80	41.93	42.06
Maximum Power Current(A)	13.72	13.80	13.88	13.95	14.03
Open Circuit Voltage(V)	50.04	50.17	50.30	50.43	50.56
Short Circuit Current(A)	14.39	14.47	14.55	14.62	14.70
Module Efficiency(%)	22.07	22.26	22.45	22.65	22.84

Power tolerance 0~+3%

*Irradiance 1000W/m², Module Temperature 25°C, Air Mass 1.5

Mechanical Parameters

Cell Type	182×91mm N-Type
Number of Cells	144cells (2x72)
Dimensions	2278×1134×30mm
Weight	30KG
Front Glass	2.0mm, Anti-Reflection Coating
Back Glass	2.0mm, Heat Strengthened Glass
Frame	Silver, anodized aluminium alloy
J-Box	IP68 Rated, MC4 Compatible
Output cable	4 mm ² ,300 mm standard

Electrical Parameters (NOCT*)

Maximum Power(W)	424.7	428.4	432.1	435.8	439.6
Maximum Power Voltage(V)	38.44	38.56	38.68	38.80	38.93
Maximum Power Current(A)	11.05	11.11	11.17	11.23	11.29
Open Circuit Voltage(V)	46.90	47.02	47.15	47.27	47.39
Short Circuit Current(A)	11.59	11.65	11.71	11.77	11.83

* Irradiance 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s

Temperature Coefficient

Nominal Operating Cell Temperature (NOCT)	45±2°C
Temperature Coefficient of Isc	0.045%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Pmax	-0.29%/°C

Backside Power Gain (For 580W)

Backside Power Gain(%)	10%	15%	20%	25%	30%
Maximum Power(Pmax/W)	638.0	667.0	696.0	725.0	754.0
Open Circuit Voltage(Voc/V)	52.00	52.00	52.10	52.10	52.10
Short Circuit Current(Isc/A)	15.81	16.53	17.24	17.96	18.68
Maximum Power Voltage(Vmp/V)	42.69	42.69	42.70	42.70	42.70
Maximum Power Current(Imp/A)	14.94	15.62	16.30	16.98	17.66

Application Parameters

Operational Temperature(°C)	-40°C~+85°C
Maximum System Voltage	1500V DC
Max Series Fuse Rating	25A
Wind/ Snow Load	2400Pa/5400Pa
Packaging Configuration	36PCS/PLT,720PCS/40HQ

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Version number: GP-PV-24-A10

All data contained in this datasheet is subject to change without notice.

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