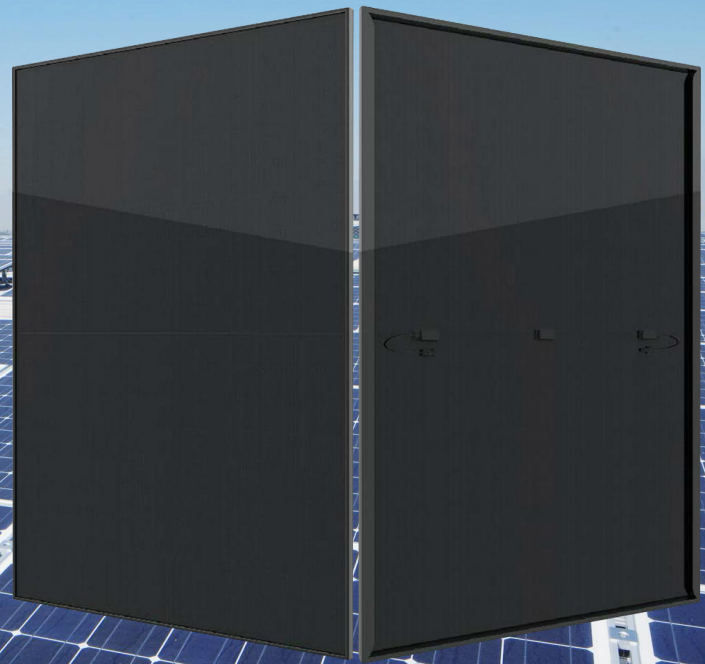


N-Type

182 Mono-Bifacial Module
GPT54M-445HC

420W-445W

| | | |
|----------------------|--------------------|-----------------|
| Maximum output power | Maximum efficiency | Power tolerance |
| 445W | 22.79% | 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

IEC61215(2016), IEC61730(2016)
ISO9001:2015:Quality Management System
ISO14001:2015:Environment Management System
ISO45001:2018:Occupational Health and Safety Management Systems

▶ Product Certifications

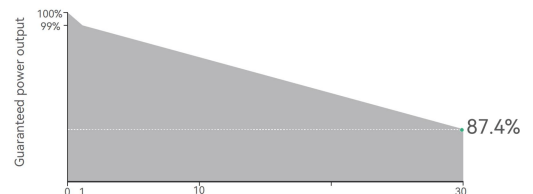


▶ Linear performance warranty

12 Year Product Warranty

30 Year Linear Warranty

0.4% Annual Degradation Over **30** Years



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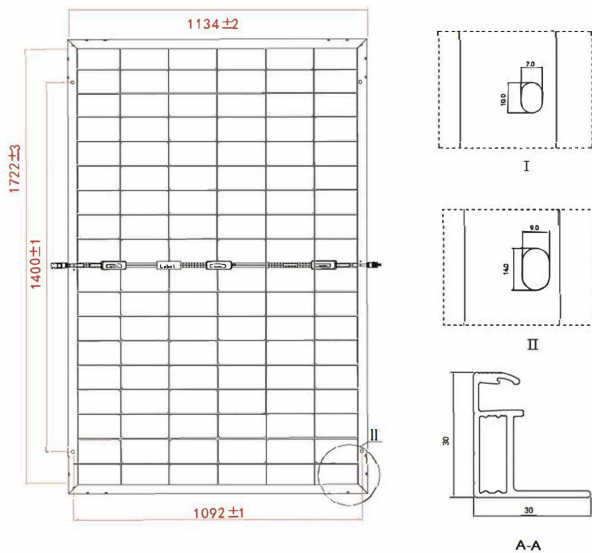
Add: No..55 Shangxiang Road, Huaqiao Corporation Head Quarter Centre, Kunshan City, Suzhou City

Tell: 0512-36684019

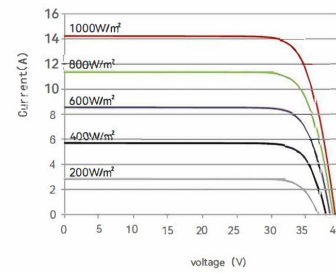
Web: <https://pretapower.com>

Mail: info@pretapower.com

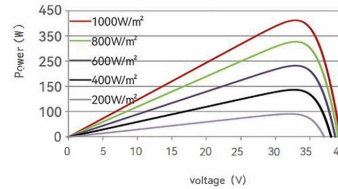
Engineering Drawings



Electical Performance (580W)



I-V curve



P-V curve

Electrical Parameters (STC*)

| | | | | | | |
|--------------------------|-------|-------|-------|-------|-------|-------|
| Maximum Power(W) | 420 | 425 | 430 | 435 | 440 | 445 |
| Maximum Power Voltage(V) | 31.37 | 31.49 | 31.61 | 31.73 | 31.85 | 31.97 |
| Maximum Power Current(A) | 13.39 | 13.50 | 13.60 | 13.71 | 13.81 | 13.92 |
| Open Circuit Voltage(V) | 37.43 | 37.55 | 37.67 | 37.79 | 37.91 | 38.03 |
| Short Circuit Current(A) | 14.12 | 14.23 | 14.34 | 14.45 | 14.56 | 14.67 |
| Module Efficiency(%) | 21.51 | 21.76 | 22.02 | 22.28 | 22.53 | 22.79 |

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 | 108cells (2×54) |
| Dimensions | 1722×1134×30mm |
| Weight | 23.5KG |
| 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 |
| Cable | 4 mm ² , 300 mm standard |

Electrical Parameters (NOCT*)

| | | | | | | |
|--------------------------|-------|-------|-------|-------|-------|-------|
| Maximum Power(W) | 312.9 | 316.6 | 320.4 | 324.1 | 327.8 | 331.5 |
| Maximum Power Voltage(V) | 29.03 | 29.14 | 29.25 | 29.37 | 29.48 | 29.59 |
| Maximum Power Current(A) | 10.78 | 10.86 | 10.95 | 11.04 | 11.12 | 11.21 |
| Open Circuit Voltage(V) | 35.08 | 35.19 | 35.31 | 35.42 | 35.53 | 35.64 |
| Short Circuit Current(A) | 11.37 | 11.46 | 11.54 | 11.63 | 11.72 | 11.81 |

*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 430W)

| | | | | | |
|------------------------------|-------|-------|-------|-------|-------|
| Backside Power Gain(%) | 10% | 15% | 20% | 25% | 30% |
| Maximum Power(Pmax/W) | 473.0 | 494.5 | 516.0 | 537.5 | 559.0 |
| Open Circuit Voltage(Voc/V) | 38.62 | 38.62 | 38.72 | 38.72 | 38.72 |
| Short Circuit Current(Isc/A) | 15.17 | 15.86 | 16.55 | 17.24 | 17.93 |
| Maximum Power Voltage(Vmp/V) | 32.69 | 32.69 | 32.79 | 32.79 | 32.79 |
| Maximum Power Current(Imp/A) | 14.47 | 15.13 | 15.74 | 16.39 | 17.05 |

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, 936PCS/40HQ |

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