



N-Type

182 Mono-Bifacial Module

PP-G12RNS

600W-630W

Maximum output power

630W

Maximum efficiency

23.32%

Power tolerance

0~+5%



► 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

ISO 45001: 2018 Occupational Health and Safety Management System

ISO 14001: 2015 Environmental Management System

ISO 9001: 2015 Quality Management System

► Product Certifications

IEC 61215 / IEC 61730 / IEC 61701 / IEC 62716

IEC 62804 / IEC 62782 / IEC60068

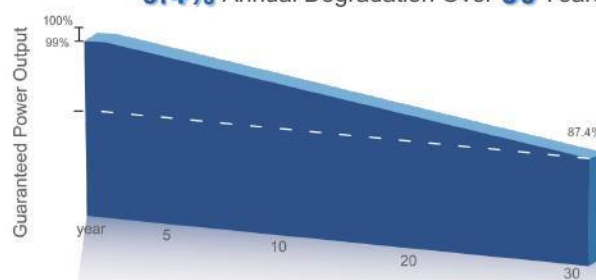


► Linear Performance Warranty

12 Year Product Warranty

30 Year Linear Warranty

0.4% Annual Degradation Over 30 Years



SUZHOU PRETA INTELLIGENCE AND TECHNOLOGY CO.,LTD

Add: Room 501-4, Building 2, Huijin Mansion, Huaqiao Town, Kunshan, Jiangsu, China

Tell: 0512-36684019

Web: www.pretapower.com

Mail: info@pretapower.com



ELECTRICAL DATA (STC)

Peak Power Watts-PMAX (Wp)	600	605	610	615	620	625	630
Power Output Tolerance-PMAX (W)	0~+5						
Maximum Power Voltage-VMPP (V)	40.09V	40.34V	40.59V	40.84V	41.09V	41.37V	41.64V
Maximum Power Current-IMPP(A)	14.97A	15.00A	15.03A	15.06A	15.09A	15.11A	15.13A
Open Circuit Voltage-Voc (V)	48.27V	48.52V	48.78V	49.05V	49.30V	49.45V	49.60V
Short Circuit Current-ISC(A)	15.82A	15.86A	15.90A	15.94A	15.98A	16.02A	16.06A
Module Efficiency (%)	22.21%	22.40%	22.58%	22.77%	22.95%	23.14%	23.32%

STC: Irradiance 1000W/m2, Cell Temperature 25°C, Air Mass AM1.5

TEMPERATURE RATINGS

Temperature Coefficients of Pmax	-0.280%/°C
Temperature Coefficients of Voc	-0.250%/°C
Temperature Coefficients of Isc	0.045%/°C

MAXIMUM RATINGS

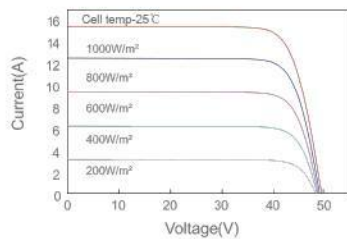
Operational Temperature	-40~+85C
Maximum System Voltage	1500V
Max Series Fuse Rating	25A

(DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection)

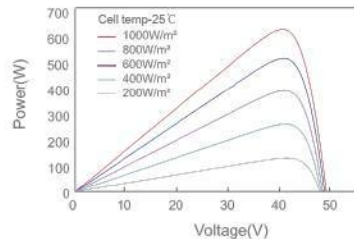
DOUBLE SIDE POWER GENERATION DATA (BACKSIDE GAIN)

5%	Pmax (Wp)	630Wp	635Wp	641Wp	646Wp	651Wp	656Wp	662Wp
	Module Efficiency (%)	23.32%	23.52%	23.71%	23.91%	24.10%	24.29%	24.51%
15%	Pmax (Wp)	690Wp	696Wp	702Wp	707Wp	713Wp	719Wp	725Wp
	Module Efficiency (%)	25.54%	25.76%	25.97%	26.18%	26.40%	26.62%	26.84%
25%	Pmax (Wp)	750Wp	756Wp	763Wp	769Wp	775Wp	781Wp	788Wp
	Module Efficiency (%)	27.77%	28.00%	28.23%	28.46%	28.69%	28.91%	29.17%

CHARACTERISTICS

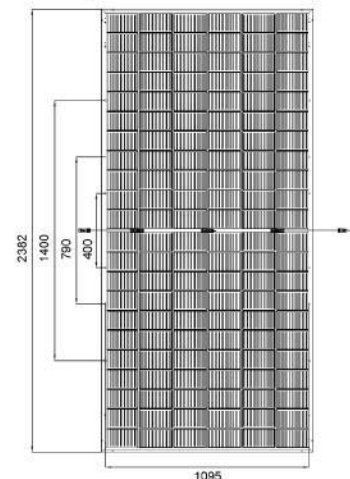
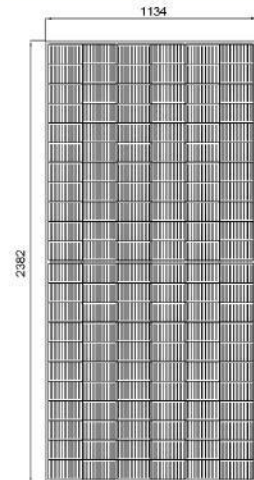


Current-Voltage Curve



Power-Voltage Curve

MECHANICAL DIAGRAMS

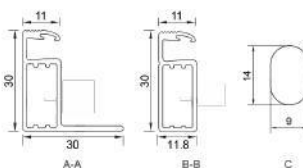


MECHANICAL DATA

Solar Cells	N Type Monocrystalline 182×210mm
Cell Orientation	132 cells (6×22)
Module Dimensions	2382×1134×30mm
Weight	34kg
Glass	2.0mm (0.08 inches), High Transmission, AR Coated Tempered Glass
Back glass	2.0mm mesh glaze plating
Frame	Silver Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	(+):300mm, (-):300mm or Customized Length
Connector	MC4 or MC4 Compatible

PACKAGING CONFIGURATION

Modules per box	36 pieces
Modules per 40' HQ container	720 pieces



© 2026 Suzhou Preta Intelligence and Technology Co., Ltd. All rights reserved. Specifications included in this datasheet are subject to change without notice.

SUZHOU PRETA INTELLIGENCE AND TECHNOLOGY CO.,LTD

Add: Room 501-4, Building 2, Huijin Mansion, Huaqiao Town, Kunshan, Jiangsu, China

Tel: 0512-36684019

Web: www.pretapower.com

Mail: info@pretapower.com

