

# HiPerforma™ Pluto Vdm-295 Pluto Vdm-290

# SUNTECH

Solar powering a green future™

## 295 Watt

### POLYCRYSTALLINE SOLAR MODULE

#### Features



#### High module conversion efficiency

Up to 15.2%, through superior cell technology and leading manufacturing capability



#### Positive tolerance

Guaranteed positive tolerance 0/+5% ensures power output reliability



#### Optimized power output

Due to very low temperature coefficient and advanced cell technology, HiPerforma™ modules produce 2-5% extra power



#### Extended wind and snow load tests

Entire module certified to withstand extreme wind (3800 Pascal) and snow loads (5400 Pascal) \*



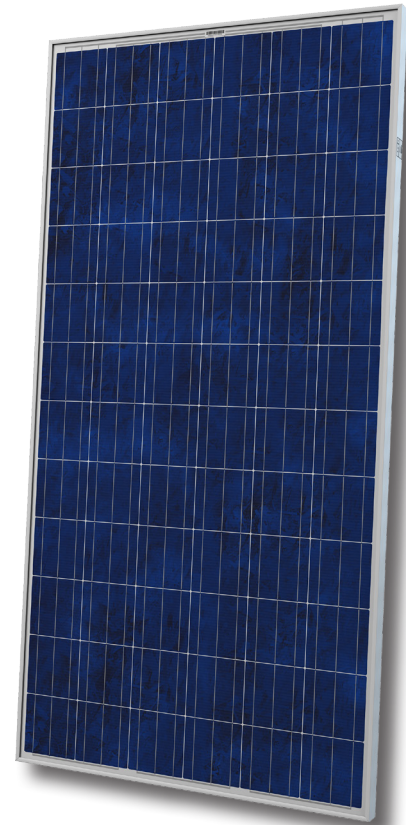
#### Excellent weak light performance

Excellent performance under low light environments (mornings, evenings, and cloudy days)



#### Suntech current sorting process

All Suntech modules sorted and packaged by amperage, maximizing system output by reducing mismatch losses by up to 2%



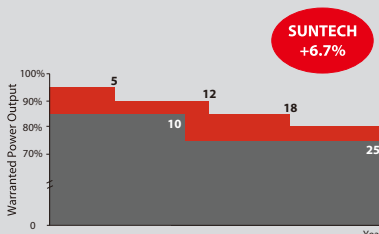
Certifications and standards:  
IEC 61215, IEC 61730, conformity to CE



#### Trust Suntech to Deliver Reliable Performance Over Time

- World's No.1 manufacturer of crystalline silicon photovoltaic modules
- Unrivaled manufacturing capacity and world-class technology
- Rigorous quality control meeting the highest international standards: ISO 9001: 2008, ISO 14001: 2004 and ISO 17025:2005
- Tested for harsh environment (salt mist and ammonia corrosion testing: IEC 61701, DIN 50916: 1985 T2)

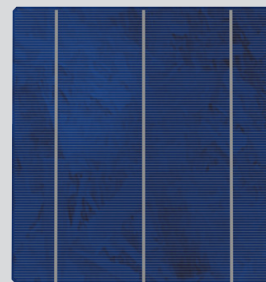
#### Industry-leading Warranty based on Pnom



- Based on nominal power (Pnom)
- 25-year transferrable power output warranty: 5 years/95%, 12 years/90%, 18 years/85%, 25 years/80% \*\*
- Warrants 6.7% more power than the market standard over 25 years
- 10-year material and workmanship warranty

\* Please refer to Suntech Standard Module Installation Manual for details

\*\* Please refer to Suntech Product Warranty for details



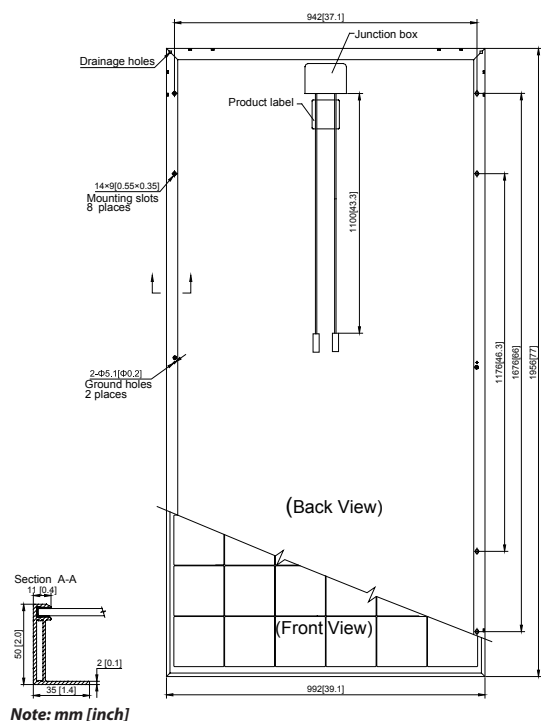
#### Advanced Patented Pluto Technology

Pluto cells have a sleek appearance with fine fingers reducing surface shading and boosting sunlight absorption. Pluto's selective emitter technology improves spectral light response, increasing efficiency.

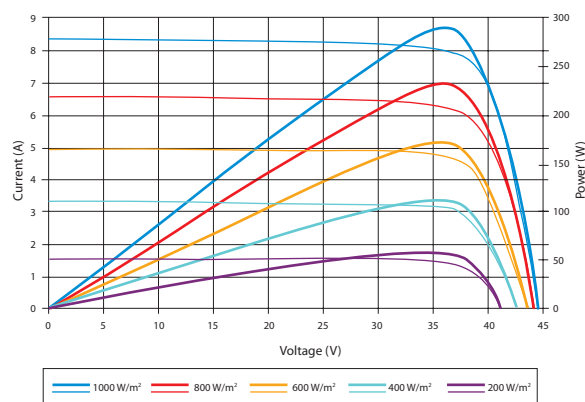


#### Most Modern IP67 Rated Junction Box

Supports any orientation installation. High performance low resistance connectors ensure maximum module power output for highest energy production.



Current-Voltage & Power-Voltage Curve (290 W)



Excellent performance under weak light conditions: at an irradiance intensity of 200 W/m<sup>2</sup> (AM 1.5, 25 °C), 96% or higher of the STC efficiency (1000 W/m<sup>2</sup>) is achieved

## Temperature Characteristics

Nominal Operating Cell Temperature (NOCT)	45±2°C
Temperature Coefficient of Pmax	-0.400%/°C
Temperature Coefficient of Voc	-0.314%/°C
Temperature Coefficient of Isc	0.051%/°C

## Dealer information

Specifications are subject to change without further notification.

## Electrical Characteristics

STC	PLUTO295-Vdm	PLUTO290-Vdm
Optimum Operating Voltage (Vmp)	36.5 V	36.3 V
Optimum Operating Current (Imp)	8.09 A	7.99 A
Open Circuit Voltage (Voc)	45.3 V	45.1 V
Short Circuit Current (Isc)	8.57 A	8.52 A
Maximum Power at STC (Pmax)	295 W	290 W
Module Efficiency	15.2 %	14.9 %
Operating Module Temperature	-40°C to +85°C	
Maximum System Voltage	1000 V DC (IEC) / 600 V DC (UL)	
Maximum Series Fuse Rating	20 A	
Power Tolerance	0 / +5%	

STC: Irradiance 1000 W/m<sup>2</sup>, module temperature 25°C, AM=1.5

Best in Class AAA solar simulator (IEC 60904-9) used, power measurement uncertainty is within +/- 3%

NOCT	PLUTO295-Vdm	PLUTO290-Vdm
Maximum Power at NOCT (Pmax)	217 W	213 W
Optimum Operating Voltage (Vmp)	33.2 V	33.1 V
Optimum Operating Current (Imp)	6.53 A	6.44 A
Open Circuit Voltage (Voc)	41.6 V	41.4 V
Short Circuit Current (Isc)	6.93 A	6.89 A

NOCT: Irradiance 800 W/m<sup>2</sup>, ambient temperature 20 °C, AM=1.5, wind speed 1 m/s

Best in Class AAA solar simulator (IEC 60904-9) used, power measurement uncertainty is within +/- 3%

## Mechanical Characteristics

Solar Cell	Polycrystalline 156 × 156 mm (6 inches)
No. of Cells	72 (6 × 12)
Dimensions	1956 × 992 × 50 mm (77.0 × 39.1 × 2.0 inches)
Weight	27.0 kgs (59.5 lbs.)
Front Glass	4.0 mm (0.16 inches) tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP67 rated
	TUV (2Pfg1169:2007), UL 4703, UL 44
Output Cables	4.0 mm <sup>2</sup> (0.006 inches <sup>2</sup> ), symmetrical lengths (-) 1100 mm (43.3 inches) and (+) 1100 mm (43.3 inches)
Connectors	RADOX® SOLAR integrated twist locking connectors

## Packing Configuration

Container	20' GP	40' GP	40' HC
Pieces per pallet	21	21	21
Pallets per container	5	12	24
Pieces per container	105	252	504