

HiPerforma™ Pluto Wdm-235 Pluto Wdm-230

SUNTECH

Solar powering a green future™

235 Watt

POLYCRYSTALLINE SOLAR MODULE

Features



High module conversion efficiency

Up to 14.4%, 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 load 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%



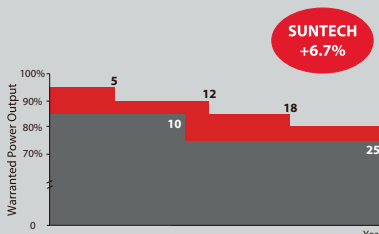
Certifications and standards:
IEC 61215, IEC 61730, conformity to CE



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)

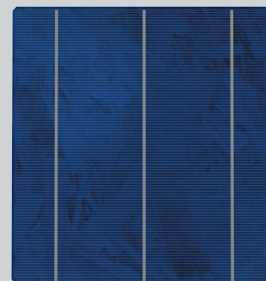
Industry-leading Warranty based on Pnom



- 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

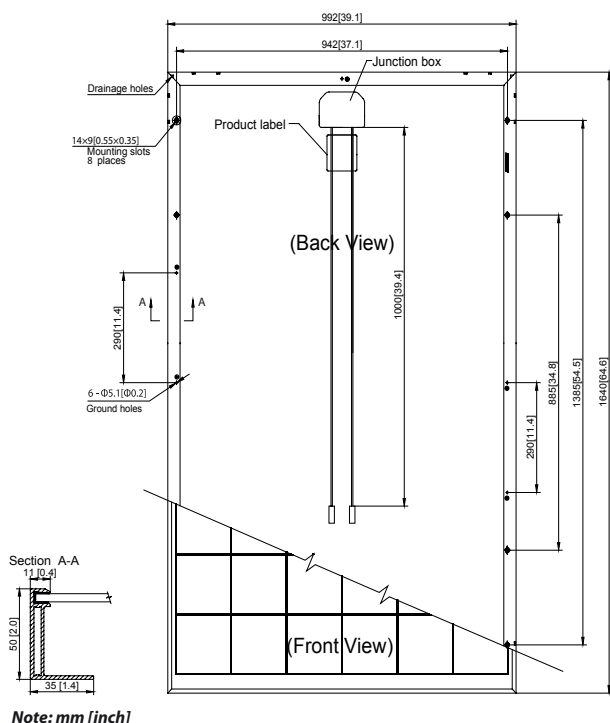
Pluto cells have a sleek appearance with fine fingers reducing surface shading and boosting sunlight absorption. Pluto's selective emitter technology improves spectral light response, increasing efficiency.



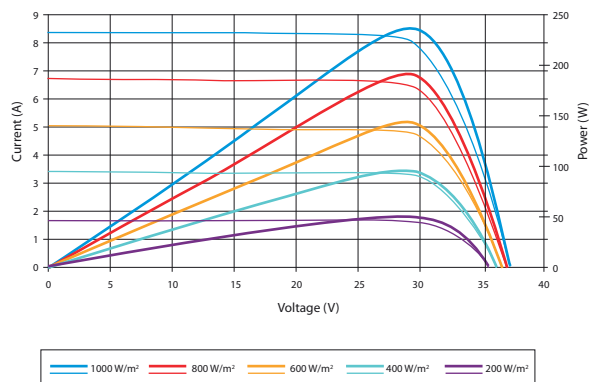
Most Modern IP67 Rated Junction Box

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

HiPerforma™ Pluto Wdm-235 Pluto Wdm-230



Current-Voltage & Power-Voltage Curve (235 W)



Excellent performance under weak light conditions: at an irradiance intensity of 200 W/m² (AM 1.5, 25 °C), 96% or higher of the STC efficiency (1000 W/m²) is achieved

Temperature Characteristics

Nominal Operating Cell Temperature (NOCT)	45±2°C
Temperature Coefficient of Pmax	-0.40%/°C
Temperature Coefficient of Voc	-0.31%/°C
Temperature Coefficient of Isc	0.051%/°C

Electrical Characteristics

STC	PLUTO235-Wdm	PLUTO230-Wdm
Optimum Operating Voltage (Vmp)	29.4 V	29.2 V
Optimum Operating Current (Imp)	8.00 A	7.88 A
Open Circuit Voltage (Voc)	36.4 V	36.2 V
Short Circuit Current (Isc)	8.42 A	8.27 A
Maximum Power at STC (Pmax)	235 W	230 W
Module Efficiency	14.4 %	14.1 %
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/m², module temperature 25°C, AM=1.5
Best in Class AAA solar simulator (IEC 60904-9) used, power measurement uncertainty is within +/- 3%

NOCT	PLUTO235-Wdm	PLUTO230-Wdm
Maximum Power at NOCT (Pmax)	172 W	169 W
Optimum Operating Voltage (Vmp)	26.7 V	26.6 V
Optimum Operating Current (Imp)	6.44 A	6.35 A
Open Circuit Voltage (Voc)	33.7 V	33.5 V
Short Circuit Current (Isc)	6.80 A	6.69 A

NOCT: Irradiance 800 W/m², 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	60 (6 × 10)
Dimensions	1640 × 992 × 50mm (64.6 × 39.1 × 2.0 inches)
Weight	19.1 kgs (42.1 lbs.)
Front Glass	3.2 mm (0.13 inches) tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP67 rated
Output Cables	TUV (2Pfg1169:2007), UL 4703, UL 44
Connectors	4.0 mm ² (0.006 inches ²), symmetrical lengths (-) 1000 mm (39.4 inches) and (+) 1000 mm (39.4 inches)
	RADOX® SOLAR integrated twist locking connectors

Packing Configuration

Container	20' GP	40' HC
Pieces per pallet	21	21
Pallets per container	6	28
Pieces per container	126	588

Dealer information

Specifications are subject to change without further notification.