



Five Key Features

- 1 Guaranteed quality: 12 year product warranty, 25 year linear performance warranty *
- 2 Predictable output: Positive power sorting of 0 to + 5 W
- 3 Innovative solution: Anti-reflective coating for high sunlight absorption
- 4 Robust design: certified to withstand up to 4000 Pa wind load and up to 7000 Pa snow load**
- 5 Anti-PID : Modules are qualified to withstand PID(Potential Induced Degradation)***

* Please refer to Hanwha Solar Product Warranty for details

** Please refer to Hanwha Solar Module Installation Guide

*** PID test conditions : module charged -1000V with Al-foil covered surface, 25 °C, 168h

Quality and Environmental Certificates

- ISO 9001 quality standards and ISO 14001 environmental standards
- OHSAS 18001 occupational health and safety standards
- IEC 61215 & IEC 61730 Application Class A certifications
- Conformity to CE



About Hanwha Solar

Hanwha Solar is a vertically integrated manufacturer of photovoltaic modules designed to meet the needs of the global energy consumer.

- High reliability, guaranteed quality, and excellent cost-efficiency due to vertically integrated production and control of the supply chain
- Optimization of product performance and manufacturing processes through a strong commitment to research and development
- Global presence throughout Europe, North America and Asia, offering regional technical and sales support

Electrical Characteristics

Electrical Characteristics at Standard Test Conditions (STC)

Power Class	290 W	295 W	300 W	305 W	310 W	315 W
Maximum Power (P_{max})	290 W	295 W	300 W	305 W	310 W	315 W
Open Circuit Voltage (V_{oc})	44.5 V	44.8 V	44.9 V	45.1 V	45.2 V	45.3 V
Short Circuit Current (I_{sc})	8.69 A	8.75 A	8.78 A	8.85 A	8.91 A	8.97 A
Voltage at Maximum Power (V_{mpp})	35.4 V	35.8 V	36.1 V	36.3 V	36.6 V	36.9 V
Current at Maximum Power (I_{mpp})	8.20 A	8.26 A	8.32 A	8.42 A	8.48 A	8.55 A
Module Efficiency (%)	15.0 %	15.3 %	15.5 %	15.8 %	16.0 %	16.3 %

P_{max} , V_{oc} , I_{sc} , V_{mpp} and I_{mpp} tested at Standard Testing Conditions (STC) defined as irradiance of 1000W/m² at AM 1.5 solar spectrum and a temperature of 25±2°C. Module power class have positive power sorting: 0 to +5W. Measurement tolerance: +/- 3% (P_{max})

Electrical Characteristics at Normal Operating Cell Temperature (NOCT)

Power Class	290 W	295 W	300 W	305 W	310 W	315 W
Maximum Power (P_{max})	212 W	216 W	220 W	223 W	227 W	233 W
Open Circuit Voltage (V_{oc})	41.5 V	41.7 V	41.8 V	42.0 V	42.2 V	42.3 V
Short Circuit Current (I_{sc})	7.03 A	7.08 A	7.10 A	7.18 A	7.25 A	7.28 A
Voltage at Maximum Power (V_{mpp})	32.1 V	32.5 V	32.7 V	32.9 V	33.2 V	33.9 V
Current at Maximum Power (I_{mpp})	6.61 A	6.65 A	6.73 A	6.78 A	6.84 A	6.88 A
Module Efficiency (%)	13.7 %	14.0 %	14.2 %	14.4 %	14.7 %	15.1 %

P_{max} , V_{oc} , I_{sc} , V_{mpp} and I_{mpp} tested at Normal Operating Cell Temperature (NOCT) defined as irradiance of 800W/m²; 20°C; Wind speed 1m/s. Measurement tolerance: +/- 3% (P_{max})

Temperature Characteristics

Normal Operating Cell Temperature (NOCT)	45°C / - 3°C
Temperature Coefficients of P	- 0.43 % / °C
Temperature Coefficients of V	- 0.31 % / °C
Temperature Coefficients of I	+ 0.05 % / °C

Maximum Ratings

Maximum System Voltage	1000 V (IEC)
Series Fuse Rating	15 A
Maximum Reverse Current	Series fuse rating multiplied by 1.35

Mechanical Characteristics

Dimensions	1956mm × 988mm × 45 mm
Weight	27±0.5kg
Frame	Aluminum-alloy
Front	4mm tempered glass with anti reflective coating
Encapsulant	EVA
Back Cover	Composite sheet
Cell Technology	Polycrystalline
Cell Size	156 mm × 156 mm (6in × 6in)
Number of Cells (Pieces)	72 (6 × 12)
Junction Box	Protection class IP 67; with 3 bypass diodes (or 3 pairs, 2 each)
Output Cables	Solar cable: 4 mm ² ; length: 1200 mm
Connector	Amphenol H4

System Design

Operating Temperature	- 40 °C to 85 °C
Hail Safety Impact Velocity	25 mm at 23 m/s
Fire Safety Classification (IEC 61730)	Class C
Static Load Wind / Snow	4000Pa/7000Pa

Packaging and Storage

Storage Temperature	- 40 °C to 85 °C
Packaging Configuration	22 pieces per pallet
Loading Capacity (40 ft. HQ Container)	484 pieces

Nomenclature:

Full product name:
HSL72P6-PB-1-xxx
xxx represents the power class

Performance at Low Irradiance:

The typical efficiency at 200 W/m² in relation to 1000 W/m², (25°C, AM 1.5) is at least 96 % of STC efficiency.

