

Hanwha Solar is a brand of Hanwha Q CELLS - the world's largest solar cell producer and a manufacturer with an unmatched passion for research. Hanwha Q CELLS is backed by the strength and resources of Korea's Hanwha Group a 'FORTUNE® Global 500 Company' with a diversified business portfolio, founded in 1952.





# SUPERIOR YIELD



#### **HIGH POWER**

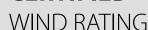
**OUTPUT** 

thanks to advanced four-busbar technology.

#### LONG TERM DURABILITY



## CERTIFIED



withstands 4000 Pa wind loads.



## OUTSTANDING

#### **PERFORMANCE**

in real world conditions such as in low light and high temperatures.



## **CERTIFIED**

RESISTANCE

against PID effects.



## ANTI REFLECTIVE

**GLASS** 

with hydrophobic surface encourages sunlight absorption & self-cleaning.



#### **CERTIFIED**



in harsh environments (salt mist, ammonia corrosion).



#### **HSL 60S POLY**

Electrical Characteristics at Standard Test Conditions (STC)				
Module type HSL 60 Poly: HSL60P6-PC-1-xxx (xxx = power class)				
Power Class	260 W	265 W	270 W	
Maximum Power (P <sub>max</sub> )	260 W	265 W	270 W	
Open Circuit Voltage (Voc)	38.1 V	38.3 V	38.5 V	
Short Circuit Current (I <sub>sc</sub> )	8.98 A	9.12 A	9.22 A	
Voltage at Maximum Power (V <sub>mpp</sub> )	30.9 V	31.1 V	31.2 V	
Current at Maximum Power (I <sub>mpp</sub> )	8.42 A	8.53 A	8.66 A	
Module Efficiency (%)	15.6 %	15.9 %	16.2 %	

STC: Irradiance at 1000 W/m2 – Air mass 1.5 – Cell temperature at 25 $\pm$ 2° C. Measurement tolerance Pmax:  $\pm$ 3%.Positive power sorting of module power class: 0 to + 5 W. Efficiency at 200 W/m2 in relation to 1000 W/m2 is at least 97% of STC efficiency.

Electrical Characteristics at NOCT			
NOCT = Nominal Operating Cell Temperature			
Power Class	260 W	265 W	270 W
Maximum Power (P <sub>max</sub> )	191 W	196 W	199 W
Open Circuit Voltage (V <sub>oc</sub> )	35.7 V	35.9 V	36.1 V
Short Circuit Current (Isc)	7.26 A	7.37 A	7.45 A
Voltage at Maximum Power ( $V_{mpp}$ )	28.4 V	28.6 V	28.7 V
Current at Maximum Power (I <sub>mpp</sub> )	6.73 A	6.84 A	6.92 A
Module Efficiency (%)	14.3 %	14.7 %	14.9 %

NOCT: Irradiance at 800 W/m2 – Ambient temperature of 20° C – Wind speed at 1 m/s. Measurement tolerance Pmax:  $\pm$  3%.

Temperature Characteristics		Maximum Ratings		
Normal Operating Cell	45°C+/-3°C	Maximum System Voltage	1000 V (IEC)	
Temperature (NOCT)	45 C+/-5 C	Series Fuse Rating	15 A	
Temperature Coefficients of Pmax	- 0.41 % / °C		Series fuse rating multiplied	
Temperature Coefficients of Voc	-0.31 %/°C	Maximum Reverse Current		
Temperature Coefficients of Isc	+0.055%/°C		by 1.35	

Mechanical Characteristics	
Dimensions	1670mm ×1000mm ×32 mm
Weight	18.5±0.5kg
Frame	Aluminum-alloy
Front	3.2mm tempered glass with anti reflective coating
Encapsulant	EVA
Back Cover	Composite sheet
Cell Technology	4 busbar Polycrystalline
Cell Size	156 mm × 156 mm (6 in ×6 in)
Number of Cells (Pieces)	60 (6 × 10)
Junction Box	Protection class IP 67
Output Cables	Solar cable: 4 mm²; length: 1000 mm
Connector	H4

System Design		Packaging and Storage	
Operating Temperature	– 40 °C to 85 °C	Storage Temperature	– 40 °C to 85 °C
Hail Safety Impact Velocity	25 mm at 23 m/s	Packaging Configuration	32 pieces per pallet
Fire Safety Classification (IEC 61730)	Class C	Loading Capacity	832 pieces
Static Load Wind / Snow	4000/5400Pa	(40 ft. HQ Container)	

#### **STAYING POWER**

- Withstands 5400 Pa (550 kg/m2) snow and 4000 Pa (210 km/h) wind loads\*
- PID-resistance verified by TÜV Rheinland\*
- 12-year product warranty, 25-year linear performance warranty\*\*\*

\* See the Hanwha Solar Installation Guide

\*\* Test conditions: module negatively charged with

1000 V at 25° C for 168 hours with al-foil coverage

\*\*\* See warranty tarms

#### **PROVEN QUALITY**

Hanwha Solar products comply with international standards; certificates include:

- IEC 61215 (Design approval)
- IEC 61730 (Safety approval)
- IEC 61701 (Salt-mist resistance)
- IEC 62716 (Ammonia resistance)
- EN 13501 (Fire classification)
- Conformity to CE
- MCS, SII approved
- ISO 9001 quality standards and ISO 1400 environmental standards
- OHSAS 18001 occupational health and safety standards

Please contact Hanwha Solar for a full list of certifications

#### **Various Irradiance Levels**

