

# Hyundai Solar Module



Hyundai Solar Module Multi-crystalline Type, Mono-crystalline Type  
Multi-crystalline Type, Mono-crystalline Type Hyundai Solar Module



## ► Multi-crystalline Type

**HIS-M182SF | HIS-M184SF | HIS-M188SF**  
**HIS-M191SF | HIS-M194SF | HIS-M197SF**  
**HIS-M200SF | HIS-M203SF | HIS-M206SF**

## ► Mono-crystalline Type

**HIS-S194SF | HIS-S197SF | HIS-S200SF**  
**HIS-S203SF | HIS-S206SF | HIS-S209SF**  
**HIS-S212SF | HIS-S215SF | HIS-S218SF**

## Mechanical Characteristics

Dimensions	983 mm(W) × 1476 mm(L) × 35 mm(H)
Weight	Approx. 17.0 kg
Solar cells	54 cells in series (6×9 matrix)
Output cables	4 mm <sup>2</sup> cables with polarized weatherproof connectors, TÜV certified, Length 1.0 m

Junction box	IP65, weatherproof, TÜV certified
Bypass diodes	3 bypass diodes to prevent power decrease by partial shade
Construction	Front : high transmission low-iron tempered glass, 3.2 mm Encapsulant : EVA Back Sheet : weatherproof film
Frame	Clear anodized aluminum

### High Quality

- IEC 61215(Ed.2) and IEC 61730 by TÜV Rheinland
- Output power tolerance ±3%
- ISO 9001:2000 and ISO 14001:2004 Certified

### Limited Warranty

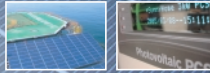
- 3 years for product defect
- 10 years for 90% of warranted min. power
- 25 years for 80% of warranted min. power

### Fast and Inexpensive Mounting

- Delivered ready for connection
- Pre-confectioned cables
- TÜV passed and weatherproof connectors
- Integrated bypass diodes

## Important Notice on Warranty

The warranties apply only the PV modules with Hyundai Heavy Industries Co., Ltd.'s logo (shown below) and product serial number on it.



## Electrical Characteristics

### ► Multi-crystalline Type

		HIS-M□□□SF								
		182	184	188	191	194	197	200	203	206
Nominal output (Pmax)	W	182	184	188	191	194	197	200	203	206
Warranted minimum power	W	176.5	178.5	182.4	185.3	188.2	191.1	194.0	196.9	199.8
Voltage at Pmax (Vpm)	V	25.9	26.0	26.2	26.3	26.4	26.6	26.7	26.9	27.1
Current at Pmax (Ipm)	A	7.06	7.11	7.20	7.27	7.34	7.42	7.47	7.54	7.61
Open circuit voltage (Voc)	V	32.7	32.8	33.0	33.0	33.1	33.3	33.6	33.7	33.8
Short circuit current (Isc)	A	7.80	7.81	7.87	7.96	8.04	8.12	8.19	8.27	8.34
Output tolerance	%	±3	±3	±3	±3	±3	±3	±3	±3	±3
Maximum system voltage	Vdc	1000	1000	1000	1000	1000	1000	1000	1000	1000
No. of cells & connections	pcs	54 in series								
Cell type	-	6" Multi-crystalline silicon								
Cell efficiency	%	13.9	14.0	14.3	14.5	14.8	15.0	15.2	15.4	15.6
Module efficiency	%	12.6	12.7	13.0	13.2	13.4	13.6	13.8	14.0	14.2
Temperature coefficient of Pmax	%/K	-0.43	-0.43	-0.43	-0.43	-0.43	-0.43	-0.43	-0.43	-0.43
Temperature coefficient of Voc	%/K	-0.32	-0.32	-0.32	-0.32	-0.32	-0.32	-0.32	-0.32	-0.32
Temperature coefficient of Isc	%/K	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056

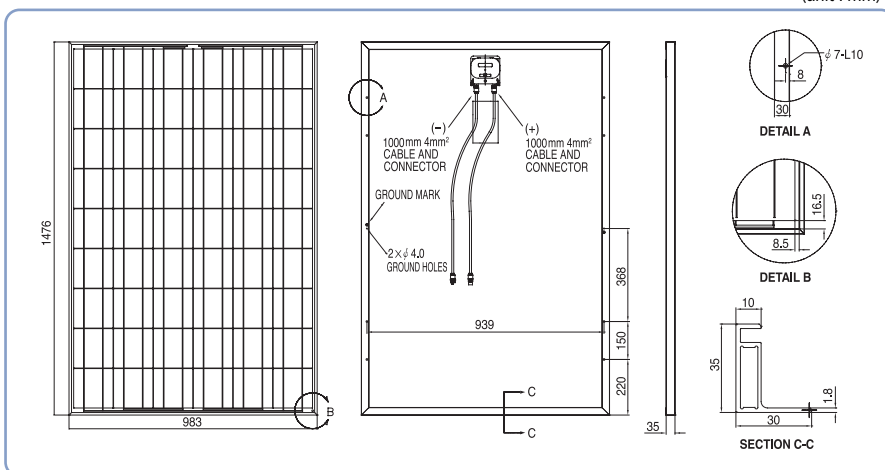
※ All data at STC(Standard Test Conditions). Above data may be changed without prior notice.

### ► Mono-crystalline Type

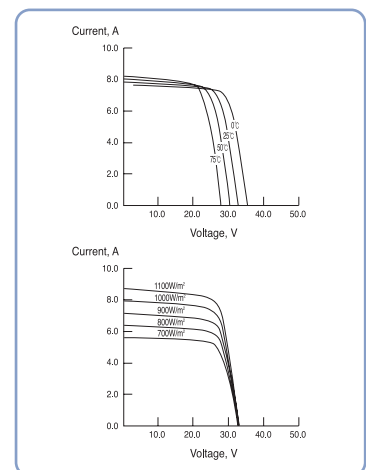
		HIS-S□□□SF								
		194	197	200	203	206	209	212	215	218
Nominal output (Pmax)	W	194	197	200	203	206	209	212	215	218
Warranted minimum power	W	188.2	191.1	194.0	196.9	199.8	202.7	205.6	208.6	211.5
Voltage at Pmax (Vpm)	V	25.6	25.9	26.3	26.5	26.8	26.9	27.0	27.1	27.2
Current at Pmax (Ipm)	A	7.6	7.6	7.6	7.7	7.7	7.8	7.9	7.9	8.0
Open circuit voltage (Voc)	V	33.2	33.3	33.4	33.4	33.5	33.5	33.5	33.6	33.7
Short circuit current (Isc)	A	8.2	8.2	8.3	8.3	8.4	8.5	8.6	8.7	8.8
Output tolerance	%	±3	±3	±3	±3	±3	±3	±3	±3	±3
Maximum system voltage	Vdc	1000	1000	1000	1000	1000	1000	1000	1000	1000
No. of cells & connections	pcs	54 in series								
Cell type	-	6" Mono-crystalline silicon								
Cell efficiency	%	15.25	15.50	15.75	16.00	16.25	16.50	16.75	17.00	17.25
Module efficiency	%	13.37	13.58	13.78	13.99	14.20	14.40	14.61	14.82	15.03
Temperature coefficient of Pmax	%/K	-0.44	-0.44	-0.44	-0.44	-0.44	-0.44	-0.44	-0.44	-0.44
Temperature coefficient of Voc	%/K	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34
Temperature coefficient of Isc	%/K	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052

※ All data at STC(Standard Test Conditions). Above data may be changed without prior notice.

## Module Diagram



## I-V Curves



## Installation Safety Guide

- Only qualified personnel should install or perform maintenance.
- Be aware of dangerous high DC voltage.
- Do not damage or scratch the rear surface of the module.
- Do not handle or install modules when they are wet.

