



Building a better future ———
Global Leader



• Qualified, IEC 61215
• Safety tested, IEC 61730
• Periodic inspection



Hyundai Solar Module

| SF-Series |

Multi-crystalline Type

HiS-M197SF | HiS-M200SF | HiS-M203SF
HiS-M206SF | HiS-M209SF | HiS-M212SF

Mono-crystalline Type

HiS-S206SF | HiS-S209SF | HiS-S212SF
HiS-S215SF | HiS-S218SF | HiS-S221SF

Mechanical Characteristics

Dimensions	983 mm (38.7") (W) × 1476 mm (58.11") (L) × 35 mm (1.38") (H)
Weight	Approx. 17.0 kg (37.5 lbs)
Solar cells	54 cells in series (6 × 9 matrix)
Output cables	4 mm ² (12AWG) cables with polarized weatherproof connectors, IEC certified (UL listed), Length 1.0 m (39.4")
Junction box	IP65, weatherproof, IEC certified (UL listed)
Bypass diodes	3 bypass diodes to prevent power decrease by partial shade
Construction	Front : High transmission low-iron tempered glass, 3.2 mm (0.126") Encapsulant : EVA Back Sheet : Weatherproof film
Frame	Clear anodized aluminum alloy type 6063

High Quality

- IEC 61215(Ed.2) and IEC 61730 by TÜV Rheinland
- UL listed (UL1703), Class C Fire Rating
- Output power tolerance +3/-0%
- ISO 9001:2000 and ISO 14001:2004 Certified
- Advanced Mechanical Test (5,400 Pa) Passed (IEC) /Mechanical Load Test (40 lbs/ft²) Passed (UL)
- Ammonia Corrosion Resistance Test Passed
- IEC 61701 (Salt Mist Corrosion Test) Passed

Limited Warranty

- 10 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
- IEC (UL) passed and weatherproof connectors
- Integrated bypass diodes



※ Important Notice on Warranty

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

Electrical Characteristics

Multi-crystalline Type

		HiS-M□□□SF					
		197	200	203	206	209	212
Nominal output (P _{mpp})	W	197	200	203	206	209	212
Voltage at P _{mpp} (V _{mpp})	V	26.4	26.4	26.6	26.8	26.9	27.0
Current at P _{mpp} (I _{mpp})	A	7.5	7.6	7.7	7.7	7.8	7.9
Open circuit voltage (V _{oc})	V	33.0	33.1	33.3	33.4	33.5	33.6
Short circuit current (I _{sc})	A	8.1	8.2	8.2	8.2	8.3	8.3
Output tolerance	%	+3/-0					
No. of cells & connections	pcs	54 in series					
Cell type	—	6" Multi-crystalline silicon					
Module efficiency	%	13.6	13.8	14.0	14.2	14.4	14.6
Temperature coefficient of P _{mpp}	%/K	-0.43	-0.43	-0.43	-0.43	-0.43	-0.43
Temperature coefficient of V _{oc}	%/K	-0.32	-0.32	-0.32	-0.32	-0.32	-0.32
Temperature coefficient of I _{sc}	%/K	0.056	0.056	0.056	0.056	0.056	0.056

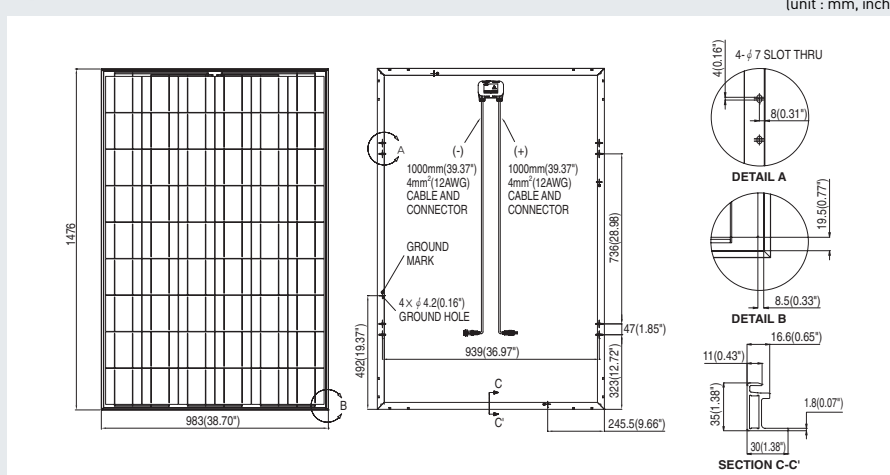
※ All data at STC (Standard Test Conditions). Above data may be changed without prior notice.

Mono-crystalline Type

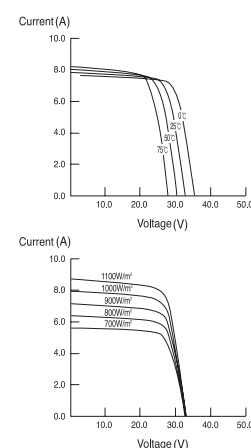
		HiS-S□□□SF					
		206	209	212	215	218	221
Nominal output (P _{mpp})	W	206	209	212	215	218	221
Voltage at P _{mpp} (V _{mpp})	V	26.8	26.9	27.0	27.1	27.2	27.3
Current at P _{mpp} (I _{mpp})	A	7.7	7.8	7.9	8.0	8.1	8.1
Open circuit voltage (V _{oc})	V	33.4	33.5	33.6	33.7	33.8	33.9
Short circuit current (I _{sc})	A	8.2	8.2	8.3	8.3	8.4	8.5
Output tolerance	%	+3/-0					
No. of cells & connections	pcs	54 in series					
Cell type	—	6" Mono-crystalline silicon					
Module efficiency	%	14.2	14.4	14.6	14.8	15.0	15.2
Temperature coefficient of P _{mpp}	%/K	-0.44	-0.44	-0.44	-0.44	-0.44	-0.44
Temperature coefficient of V _{oc}	%/K	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34
Temperature coefficient of I _{sc}	%/K	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.

Nominal Operating Cell Temperature	46 °C ± 2
Operating Temperature	-40 - 85 °C
Maximum System Voltage	DC 1,000 V (IEC), DC 600 V (UL)
Maximum Reverse Current	15 A