

Hyundai Solar Module

MF-Series

Mono-crystalline Type

HiS-S220MF | HiS-S223MF | HiS-S225MF | HiS-S230MF | HiS-S235MF | HiS-S240MF

Mechanical Characteristics

Dimensions	983 mm (38.7")(W) × 1,476 mm (58.11")(L) × 35 mm (1.38")(H)
Weight	Approx. 16.5 kg (36.4 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 (UL 1703), 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

Fast and Inexpensive Mounting

- Delivered ready for connection
- Pre-confectioned cables
- IEC (UL) certified and weatherproof connectors
- Integrated bypass diodes

Limited Warranty

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

※ Important Notice on Warranty

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



Electrical Characteristics

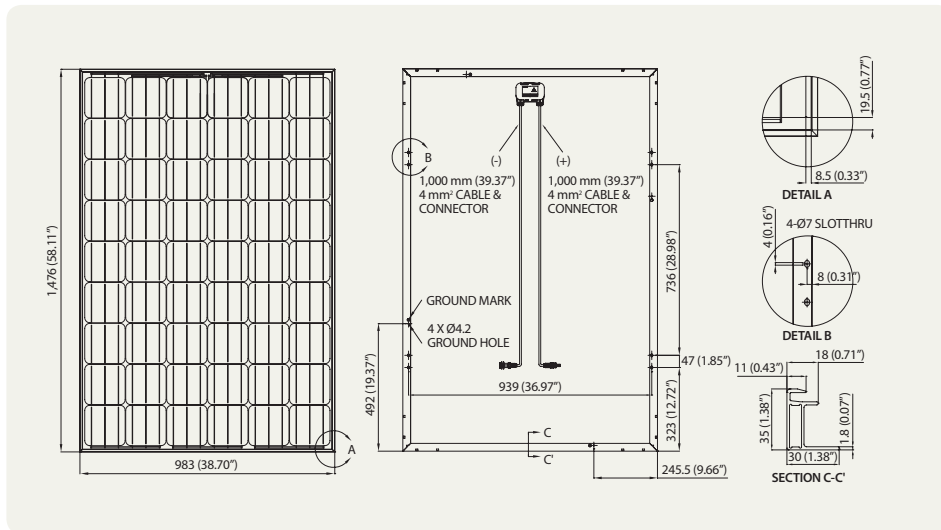
| Mono-crystalline Type |

		HIS-S□□□MF					
		220	223	225	230	235	240
Nominal output (Pmpp)	W	220	223	225	230	235	240
Voltage at Pmax (Vmpp)	V	27.6	27.6	27.8	28.1	28.3	28.6
Current at Pmax (Impp)	A	8.0	8.1	8.1	8.2	8.3	8.4
Open circuit voltage (Voc)	V	33.6	33.7	33.7	33.8	33.9	34.0
Short circuit current (Isc)	A	8.5	8.5	8.6	8.7	8.8	8.9
Output tolerance	%	+3/-0					
No. of cells & connections	pcs	54 in series					
Cell type	-	6" Mono-crystalline silicon					
Module efficiency	%	15.2	15.4	15.5	15.9	16.2	16.5
Temperature coefficient of Pmpp	%/K	-0.45	-0.45	-0.45	-0.45	-0.45	-0.45
Temperature coefficient of Voc	%/K	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33
Temperature coefficient of Isc	%/K	0.032	0.032	0.032	0.032	0.032	0.032

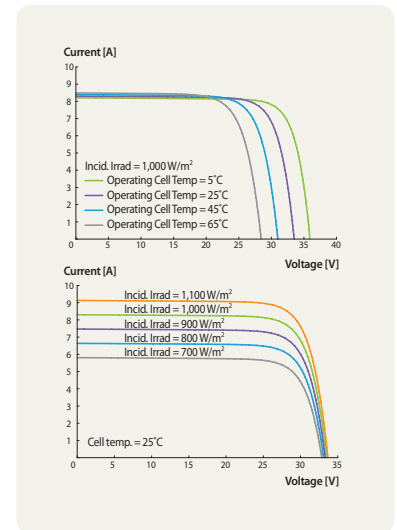
※ All data at STC (Standard Test Conditions). Above data may be changed without prior notice.

| Module Diagram |

(unit : mm, inch)



| 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

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