



# Hyundai Solar Module

Hyundai Heavy Industries was founded in 1972 and is a Fortune 500 company. The company employs more than 48,000 people, and has a global leading 6 business divisions with sales of 49.9 Billion USD in 2014. As one of our core businesses of the company, Hyundai Heavy Industries is committed to develop and invest heavily in the field of renewable energy.

Hyundai Solar is the largest and the longest standing PV cell and module manufacturer in South Korea. We have 600 MW of module production capacity and provide high-quality solar PV products to more than 3,000 customers worldwide. We strive to achieve one of the most efficient PV modules by establishing an R&D laboratory and investing more than 20 Million USD on innovative technologies.

## Black-Black RG-Series

### Multi-crystalline Type

HiS-M245RG (BK) | HiS-M250RG (BK) | HiS-M255RG (BK)

### Mono-crystalline Type

HiS-S250RG (BK) | HiS-S255RG (BK) | HiS-S260RG (BK) | HiS-S265RG (BK)

## Mechanical Characteristics

Dimensions	998 mm (39.29") (W) × 1,640 mm (64.57") (L) × 35 mm (1.38") (H)
Weight	Approx. 18.7 kg (41.2 lbs)
Solar cells	60 cells in series (6 × 10 matrix)
Output cables	4 mm <sup>2</sup> (12AWG) cables with polarized weatherproof connectors, IEC certified (UL listed), Length 1.0 m (39.4"), MC4 compatible connectors
Junction box	IP67, 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 (0.13") Encapsulant : EVA    Back Sheet : Weatherproof film (Black)
Frame	Clear anodized aluminum alloy type 6063 (Black)

### High Quality

- IEC 61215 (Ed.2) and IEC 61730 Certified by VDE
- Output power tolerance +3/-0 %
- ISO 9001:2008, ISO 14001:2004 and ISO 50001:2011 Certified
- OHSAS 18001:2007 Certified
- Advanced Mechanical Test (5,400 Pa) Passed (IEC 61215)
- IEC 62716 (Ammonia Corrosion Test) Certified
- IEC 61701 (Salt Mist Corrosion Test) Certified

### Accredited Test Lab

- VDE (Test Data Acceptance Program)
- UL (Witness Test Data Program)

### 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

## | Multi-crystalline Type |

		HIS-M□□□RG (BK)		
		245	250	255
Nominal output (Pmpp)	W	245	250	255
Voltage at Pmax (Vmpp)	V	30.7	30.9	31.0
Current at Pmax (Impp)	A	8.0	8.1	8.2
Open circuit voltage (Voc)	V	37.3	37.4	37.6
Short circuit current (Isc)	A	8.5	8.7	8.8
Output tolerance	%	+3/-0		
No. of cells & connections	pcs	60 in series		
Cell type	-	6" Multi-crystalline silicon		
Module efficiency	%	15.0	15.3	15.6
Temperature coefficient of Pmpp	%/K	-0.41	-0.41	-0.41
Temperature coefficient of Voc	%/K	-0.32	-0.32	-0.32
Temperature coefficient of Isc	%/K	0.039	0.039	0.039

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

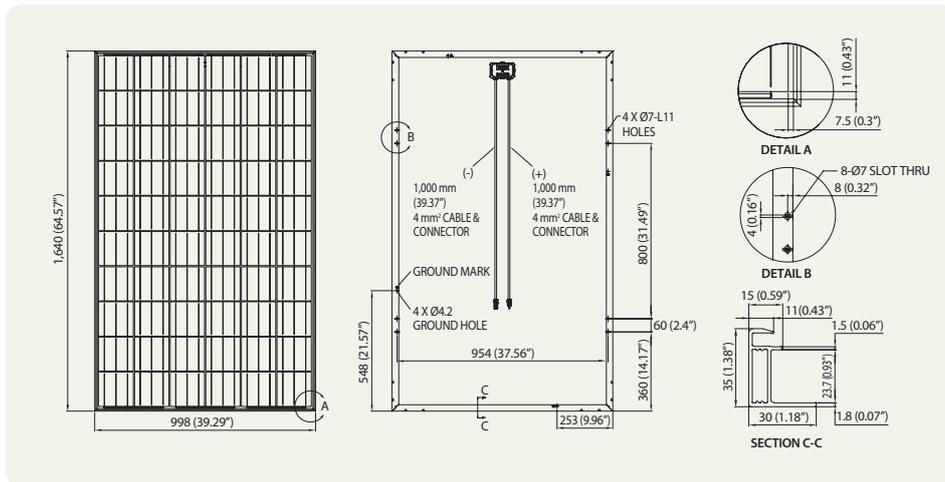
## | Mono-crystalline Type |

		HIS-S□□□RG (BK)			
		250	255	260	265
Nominal output (Pmpp)	W	250	255	260	265
Voltage at Pmax (Vmpp)	V	30.9	31.0	31.1	31.3
Current at Pmax (Impp)	A	8.1	8.2	8.4	8.5
Open circuit voltage (Voc)	V	37.6	37.8	37.9	38.1
Short circuit current (Isc)	A	8.7	8.8	8.9	9.0
Output tolerance	%	+3/-0			
No. of cells & connections	pcs	60 in series			
Cell type	-	6" Mono-crystalline silicon			
Module efficiency	%	15.3	15.6	15.9	16.2
Temperature coefficient of Pmpp	%/K	-0.42	-0.42	-0.42	-0.42
Temperature coefficient of Voc	%/K	-0.30	-0.30	-0.30	-0.30
Temperature coefficient of Isc	%/K	0.047	0.047	0.047	0.047

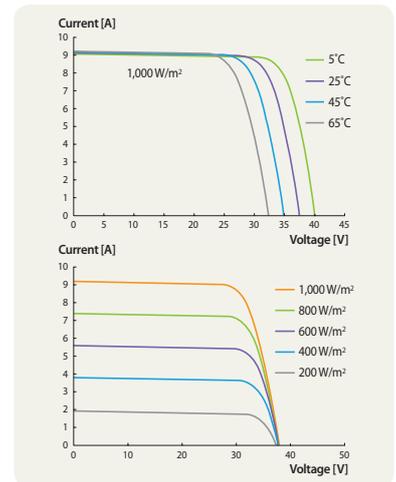
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## | Module Diagram |

(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

[ Printed Date : December 2015 ]



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