

HYUNDAI SOLAR MODULE

RI  
SERIES

Multi-Crystalline Type

HiS-M310RI    HiS-M315RI    HiS-M320RI

Mono-Crystalline Type

HiS-S330RI    HiS-S335RI    HiS-S340RI    HiS-S345RI  
HiS-S350RI    HiS-S355RI    HiS-S360RI



72

Cells



For Commercial &  
Utility Applications



More Power  
Generation  
In Low Light



Hyundai Cell,  
Made in Korea



PERL Technology

PERL technology provides ultra-high efficiency with better performance in low irradiation. Maximizes installation capacity in limited space.



Anti-LID / PID

Both LID(Light Induced Degradation) and PID(Potential Induced Degradation) are strictly eliminated to ensure higher actual yield during lifetime.



Mechanical Strength

Tempered glass and reinforced frame design withstand rigorous weather conditions such as heavy snow and strong wind.



Reliable Warranty

Global brand with powerful financial strength provide reliable 25-year warranty.



Corrosion Resistant

Various tests under harsh environmental conditions such as ammonia and salt-mist passed.



UL / VDE Test Labs

Hyundai's R&D center is an accredited test laboratory of both UL and VDE.

Hyundai's Warranty Provisions

- 10 YEARS**
- 10-Year Product Warranty
  - On materials and workmanship

- 25 YEARS**
- 25-Year Performance Warranty
  - Initial year: 97%
  - Linear warranty after second year: with 0.7% annual degradation, 80.2% is guaranteed up to 25 years

About Hyundai Solar

Established in 1972, Hyundai Heavy Industries (HHI) is one of the most trusted names in the heavy industries sector with 48,000 employees and more than 40 Billion USD in annual sales (2015). As a global leader and innovator, Hyundai Heavy Industries is committed to building a future growth engine by developing and investing heavily in the field of renewable energy.

Started as a core business division of HHI, Hyundai Solar (Hyundai Heavy Industries Green Energy) now stands as an independent company and an affiliate of HHI as from December 2016. It is the largest and the longest standing PV cell and module manufacturer in South Korea with 800 MW of module production capacity. We have strong pride in providing high-quality solar PV products to more than 3,000 customers worldwide.

Certification



Electrical Characteristics

Electrical Characteristics		Multi-Crystalline Module (HiS-M__RI)			Mono-Crystalline Module (HiS-S__RI)						
		310	315	320	330	335	340	345	350	355	360
Nominal Output (Pmpp)	W	310	315	320	330	335	340	345	350	355	360
Open Circuit Voltage (Voc)	V	45.3	45.3	45.5	46.3	46.5	46.7	46.9	47.1	47.3	47.4
Short Circuit Current (Isc)	A	8.9	9.0	9.0	9.3	9.4	9.5	9.6	9.6	9.7	9.8
Voltage at Pmax (Vmpp)	V	36.0	36.2	36.4	38.0	38.2	38.4	38.6	38.7	38.9	39.1
Current at Pmax (Impp)	A	8.6	8.7	8.8	8.7	8.8	8.9	9.0	9.0	9.1	9.2
Module Efficiency	%	15.8	16.1	16.4	16.9	17.1	17.4	17.6	17.9	18.1	18.4
Cell Type	-	6", multi-crystalline silicon			6", mono-crystalline silicon						
Maximum System Voltage	V	1,000			1,000						
Temperature coefficient of Pmax	%/K	-0.41			-0.40						
Temperature coefficient of Voc	%/K	-0.31			-0.29						
Temperature coefficient of Isc	%/K	0.039			0.039						

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

Mechanical Characteristics

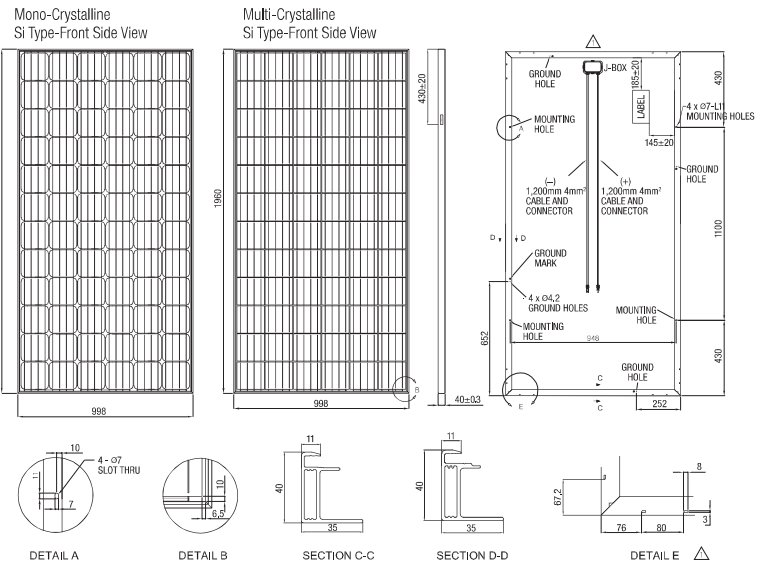
Dimensions	998 mm (39.29")(W) x 1,960 mm (77.17")(L) x 40 mm (1.57")(H)
Weight	Approx. 22.9 kg (50.5 lbs)
Solar Cells	72 cells in series (6 x 12 matrix) (Hyundai cell, Made in Korea)
Output Cables	4 mm <sup>2</sup> (12AWG) cables with polarized weatherproof connectors, IEC certified (UL listed and UL 4703 certified), Length 1.2 m (47.2")
Junction Box	IP67, weatherproof, IEC certified (UL listed)
Bypass Diodes	3 bypass diodes to prevent power decrease by partial shade
Construction	Front : Anti-reflection coated glass, 3.2 mm (0.126") Encapsulant : EVA   Back Sheet : Weatherproof film
Frame	Clear anodized aluminum alloy type 6063

Installation Safety Guide

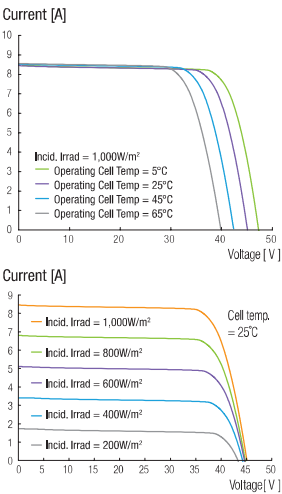
- Only qualified personnel should install or perform maintenance.
- Be aware of dangerous high DC voltage.
- Do not damage or scratch the rear surface of the module.
- Do not handle or install modules when they are wet.

Nominal Operating Cell Temperature	46°C ± 2
Operating Temperature	-40 – 85°C
Maximum System Voltage	DC 1,000 V (IEC) DC 1,000 V (UL)
Maximum Reverse Current	15A (Up to 350W) 20A (Above 355W)

Module Diagram (unit : mm)



I-V Curves



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