HYUNDAI SOLAR MODULE

RG BLACK

Mono-Crystalline Type

HiD-S310RG(BK) **HiD-S315RG(BK)** HiD-S320RG(BK)

60
Cells

All black Module

More Power Generation In Low Light

Assembled in USA with Hyundai Cell

PERC Technology

PERC 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

12 YEARS
- 12-Year Product Warranty
  - On materials and workmanship

25 YEARS
- 25-Year Performance Warranty
  - Initial year: 97%
  - Linear warranty after second year: with 0.7%p annual degradation, 80% is guaranteed up to 25 years

About Hyundai Energy Solutions

Established in 1972, Hyundai Heavy Industries Group is one of the most trusted names in the heavy industries sector and is a Fortune 500 company. 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.

As a core energy business entity of HHI, Hyundai Energy Solutions has strong pride in providing high-quality PV products to more than 3,000 customers worldwide.

Certification

c UL us LISTED

UL 1703-3rd Edition - Flat-Plate Photovoltaic Modules and Panels

HYUNDAI ENERGY SOLUTIONS

Electrical Characteristics

		Mono-Crystalline Module (HiD-S____RG(BK))		
		310	315	320
Nominal Output (Pmpp)	W	310	315	320
Open Circuit Voltage (Voc)	V	40.3	40.5	40.6
Short Circuit Current (Isc)	A	9.94	9.99	10.04
Voltage at Pmax (Vmpp)	V	33.1	33.4	33.7
Current at Pmax (Impp)	A	9.45	9.51	9.57
Cell Type	-	6.25", mono-crystalline silicon		
Maximum System Voltage	V	1,000		
Temperature Coefficient of Pmax	%/K	-0.391		
Temperature Coefficient of Voc	%/K	-0.31		
Temperature Coefficient of Isc	%/K	0.031		

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

Mechanical Characteristics

Dimensions	1,007 mm(39") x 1,681 mm(66") x 33 mm(1.3")
Weight	18.2 kg (40.1lbs)
Solar Cells	60 cells in series (6 × 10 matrix) (Hyundai cell)
Output Cables	4 mm² (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 Glass : Anti-reflection coated glass, 3.2 mm (0.126") Encapsulant : EVA I Back Sheet : Weatherproof film
Frame	Clear anodized aluminum alloy type 6063 (Black color)

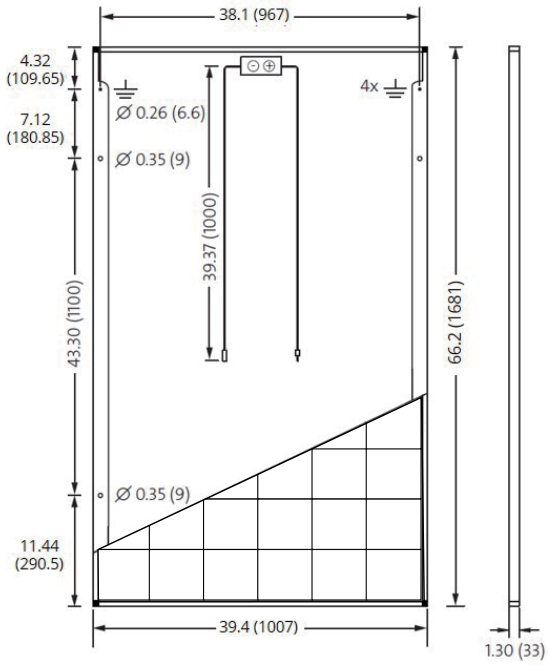
Installation Safety Guide

- 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.

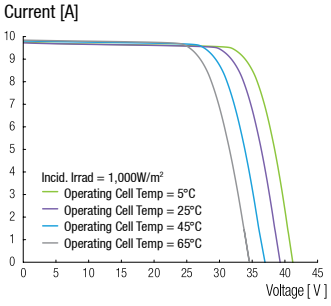
Nominal Operating Cell Temperature	46°C ± 2
Operating Temperature	-40 ~ 85°C
Maximum System Voltage	DC 1,000 V
Maximum Reverse Current	20A

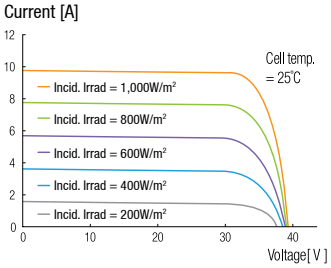
Module Diagram (unit : mm)

Mono-Crystalline
Si Type-Front Side View



I-V Curves





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