

HYUNDAI SOLAR MODULE

HI
SERIES

Mono-Crystalline Type

HiA-S380HI HiA-S385HI HiA-S390HI
HiA-S395HI HiA-S400HI HiA-S405HI



144

Cells



For commercial
& Utility
Applications



UL 1,500V
IEC 1,500V
Saves BOS Costs



More Power
Generation
In Low Light



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-Year Product Warranty
- On materials and workmanship



- 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



· IEC 61215 and IEC 61730 New Standard by TUV SUD
· UL 1703 Listed by UL, Type 1(for Fire Class A)



Electrical Characteristics

		Mono-Crystalline Type(HiA-S ___ HI)					
		380	385	390	395	400	405
Nominal Output (P _{mpp})	W	380	385	390	395	400	405
Open Circuit Voltage (V _{oc})	V	47.80	48.00	48.18	48.37	48.55	48.73
Short Circuit Current (I _{sc})	A	10.01	10.08	10.48	10.56	10.64	10.71
Voltage at P _{max} (V _{mpp})	V	40.02	40.21	40.37	40.55	40.77	40.95
Current at P _{max} (I _{mp})	A	9.50	9.58	9.66	9.74	9.81	9.89
Module Efficiency	%	19.15	19.14	19.38	19.63	19.88	20.13
Cell Type	-	mono-crystalline silicon					
Maximum System Voltage	V	1,500					
Output Power Tolerance	%	-0/+3					
Temperature Coefficient of P _{max}	%/K	-0.417					
Temperature Coefficient of V _{oc}	%/K	-0.306					
Temperature Coefficient of I _{sc}	%/K	+0.046					

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

Mechanical Characteristics

Dimensions	2008 mm x 1002 mm x 40 mm
Weight	Approx. 23 kg
Solar Cells	144 half cells (2 parallel x 72 half cells in series)
Output Cables	4 mm ² (12AWG) cables with polarized weatherproof connectors, IEC certified (UL listed and UL 4703 certified), Length 1.2 m (47")
Junction Box	IP68, weatherproof, IEC certified (UL listed)
Bypass Diodes	3 bypass diodes to prevent power decrease by partial shade
Construction	Front : Anti-reflection coated glass Encapsulant : EVA Back Sheet : Weatherproof film
Frame	Clear anodized aluminum alloy type 6063

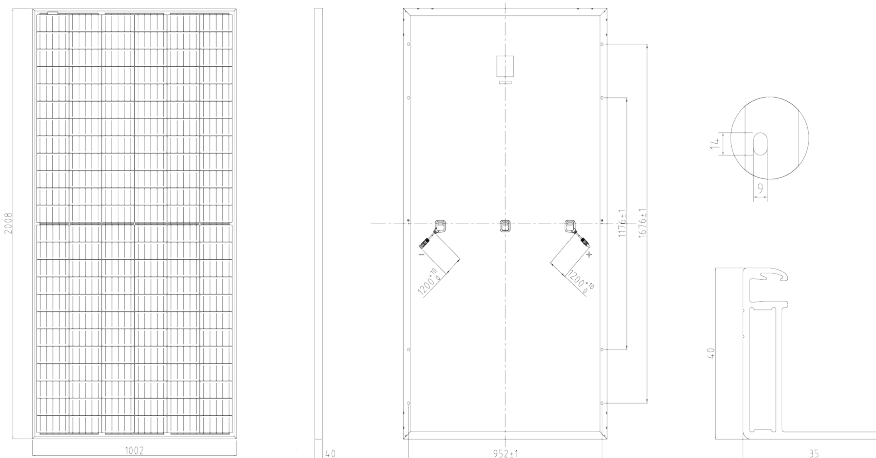
Installation Safety Guide

- 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	45°C ± 2
Operating Temperature	-40°C ~ +85°C
Maximum System Voltage	DC 1,500V
Maximum Reverse Current	20A
Maximum Test Load	Front 113 psf (5,400 Pa) Rear 50 psf (2,400 Pa)

Module Diagram (unit : mm)

Mono-Crystalline
Si Type-Front Side View



I-V Curves

