

HYUNDAI SOLAR MODULE

PI
SERIES

**Dual Max™
Mono-Crystalline Type**

HiS-S390PI HiS-S395PI HiS-S400PI HiS-S405PI



144

Bifacial 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



- 12-Year Product Warranty
- Materials and workmanship



- 25-Year Performance Warranty
- Initial year : 97.6%
- Linear warranty after second year: with 0.6%p annual degradation, 83.2% 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



- UL61730 certified by UL, Type 1(for Fire Class A)
- KS C 8561 certified by KEA



Electrical Characteristics

		Mono-Crystalline Type(HiS-S ___PI)			
		390	395	400	405
Nominal Output (P _{mp})	W	390	395	400	405
Open Circuit Voltage (V _{oc})	V	48.5	48.8	49.1	49.4
Short Circuit Current (I _{sc})	A	10.18	10.23	10.28	10.33
Voltage at P _{max} (V _{mp})	V	40.2	40.5	40.8	41.1
Current at P _{max} (I _{mp})	A	9.72	9.77	9.82	9.87
Module Efficiency	%	19.1	19.4	19.6	19.8
Cell Type	-	Mono-crystalline, 9busbar, bifacial			
Maximum System Voltage	V	1,500			
Temperature Coefficient of P _{max}	%/K	-0.356			
Temperature Coefficient of V _{oc}	%/K	-0.272			
Temperature Coefficient of I _{sc}	%/K	0.034			

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

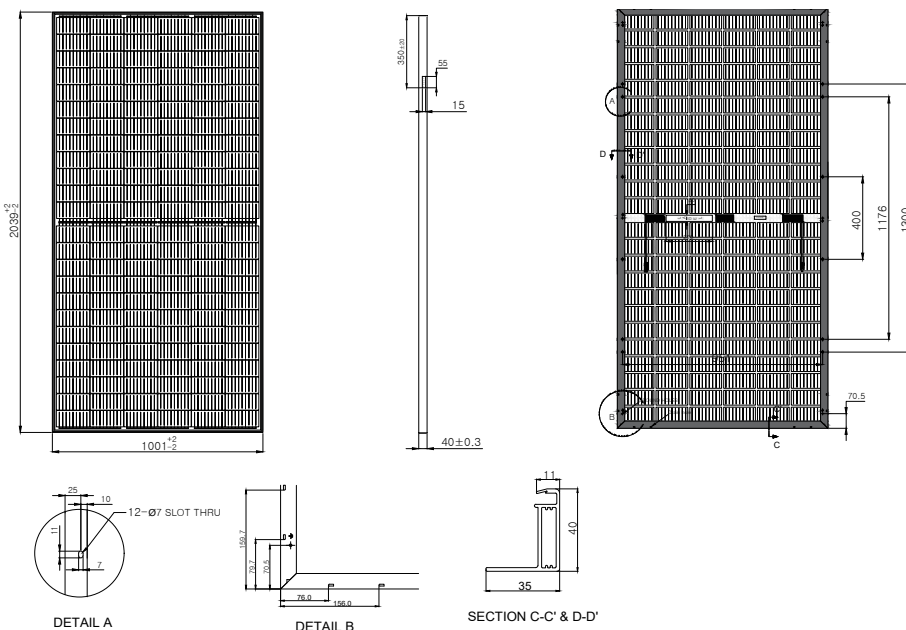
Additional Power Gain		390	395	400	405
5%	W	410	415	420	425
15%	W	449	454	460	466
25%	W	488	494	500	506

Mechanical Characteristics

Dimensions	2,039mm(W) x 1,001mm(L) x 40 mm(H) / 80.3" x 39.4" x 1.6"
Weight	Approx. 22.2 kg / 48.9lbs
Solar Cells	144 half cut bifacial 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 1.4 m (55 ")
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 : Transparent Back Sheet (White grid)
Frame	Clear anodized aluminum alloy type 6063

Module Diagram (unit : mm)

Mono-Crystalline
Si Type-Front Side View

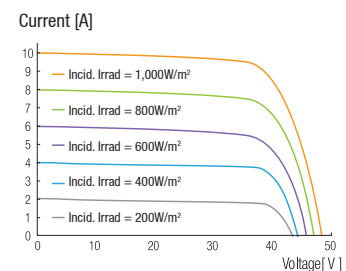
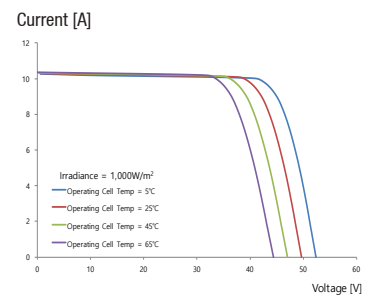


Installation Safety Guide

- 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)

I-V Curves



HYUNDAI
ENERGY SOLUTIONS



Sales & Marketing

55, Bundang-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, 13591, Korea | info@hyundai-es.co.kr
Tel: America : +1-212-220-5764, Japan : +81-3-6717-4435 | Fax : +82-31-8006-6967
Europe : +49-89-71042-2023, Australia : +61-2-9238-2283

Printed Date : 10/2020