# HYUNDAI BIFACIAL MODULE



# **Bifacial Mono PERL Module**

HiS-S380GI HiS-S385GI HiS-S390GI

UL 1,500V

Saves BOS Costs

HiS-S395GI



**Bifacial Cells** 



For commercial

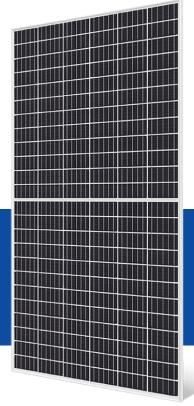
& Utility

Applications





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.



# **Reliable Warranty**

Global brand with powerful financial strength provide reliable 30-year warranty.

### Hyundai's Warranty Provisions



30

YEARS

### 12-Years Product Warranty On materials and workmanship

 30-Year Performance Warranty Initial year: 97.6%

· Linear warranty after second year: with 0.6%p annual degradation, 80% is guaranteed up to 30 years



More Power

Generation

In Low Light

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



**Mechanical Strength** 

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



**Corrosion Resistant** 

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



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

### **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



UL 1703 and UL61730 certified by UL. Type 19(for Fire Class A)



# **Flectrical Characteristics**

Electrical Characteristics		Mono-Crystalline Type(HiS-SGI)			
		380	385		395
Nominal Output (Pmpp)	W	380	385	390	395
Open Circuit Voltage (Voc)		47.9	48.2	48.5	48.8
Short Circuit Current (Isc)		10.09	10.13	10.18	10.23
Voltage at Pmax (Vmpp)		39.6	39.9	40.2	40.5
Current at Pmax (Impp)		9.61	9.67	9.72	9.77
Output Tolerance			0~ -	⊦3 %	

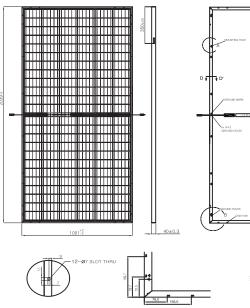
### **Additional Bifacial Output**

Power Gain		380	385	390	395
5%	W	399	404	410	415
10%	W	418	424	429	435
15%	W	437	443	449	454
20%	W	456	462	468	474

# **Mechanical Characteristics**

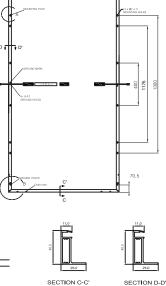
Size	1001 mm (W) x 2039 mm (L) x 40 mm (H) (39.4" x 80.3" x 1.6")		
Weight	Approx. 25.7 kg (56.7 lbs)		
Solar Cells	144 half cells (2 parallel x 72 half cells in series)		
Output Cables	4 mm <sup>2</sup> (12AWG) cables with polarized weatherproof MC4 compatible connectors, IEC certified (UL listed), Length 1400 mm (55.1") (* System of protrait type : customized length )		
Junction Box	3 boxes-split, IP68, weatherproof, IEC certified (UL listed)		
Bypass Diodes	3 bypass diodes to prevent power decrease by partial shade		
Construction	Superstrate : Anti-reflection coated tempered glass, 2.0 mm (0.079") Encapsulant : EVA film Substrate : Low-iron tempered glass 2.0 mm (0.079")(white patterned glass)		
Frame	Clear anodized aluminum alloy type 6063-T5		
Packing	594pcs/Container (27pcs x 22PLTs)		

### Module Diagram (unit : mm)











#### 10 Incid. Irrad = 1,000W/m<sup>2</sup> - Incid. Irrad = 800W/m<sup>2</sup> - Incid. Irrad = 600W/m<sup>2</sup> - Incid. Irrad = 400W/m<sup>2</sup> - Incid. Irrad = 200W/m<sup>2</sup> 10 20 30 40 Voltage[V]



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# **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.

45°C ± 2
-40 ~ +85°C
DC 1,500V
20A
Front 113 psf (5,400 Pa) Rear 75 psf (3,600 Pa)

### **I-V Curves**

Current [A]

