

# HYUNDAI SOLAR MODULE

## UF SERIES

**M3+  
Shingled  
Technology**

HiE-S400UF HiE-S395UF HiE-S390UF  
HiE-S385UF



Shingled  
Technology



For Utility-Scale  
Applications



More Power  
Generation  
In Low Light



**M3+ PERC Shingled**

M3+ PERC Shingled 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. (Australia and Europe Only)



**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



- 25-Year Product Warranty
- On materials and workmanship
- Australia and Europe Only**



- 25-Year Performance Warranty
- Initial year: 98.0%
- Linear warranty after second year: with 0.55%p annual degradation, 84.8% 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



## Electrical Characteristics

		Mono-Crystalline Module (HIE-S___UF)			
		400	395	390	385
Maximum Rating Power(Pm)	W	400	395	390	385
Open Circuit Voltage(Voc)	V	49.5	49.4	49.3	49.3
Short Circuit Current(Isc)	A	10.12	10.07	10.03	9.98
Maximum Power Voltage(Vmp)	V	41	40.9	40.8	40.8
Maximum Power Current(Imp)	A	9.76	9.66	9.56	9.44
Module Efficiency	%	21.3	21.1	20.8	20.5
Maximum System Voltage	V	DC 1,500			
Temperature Coefficient of Pmax	%/°C	-0.340			
Temperature Coefficient of Voc	%/°C	-0.270			
Temperature Coefficient of Isc	%/°C	+0.040			

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

## Mechanical Characteristics

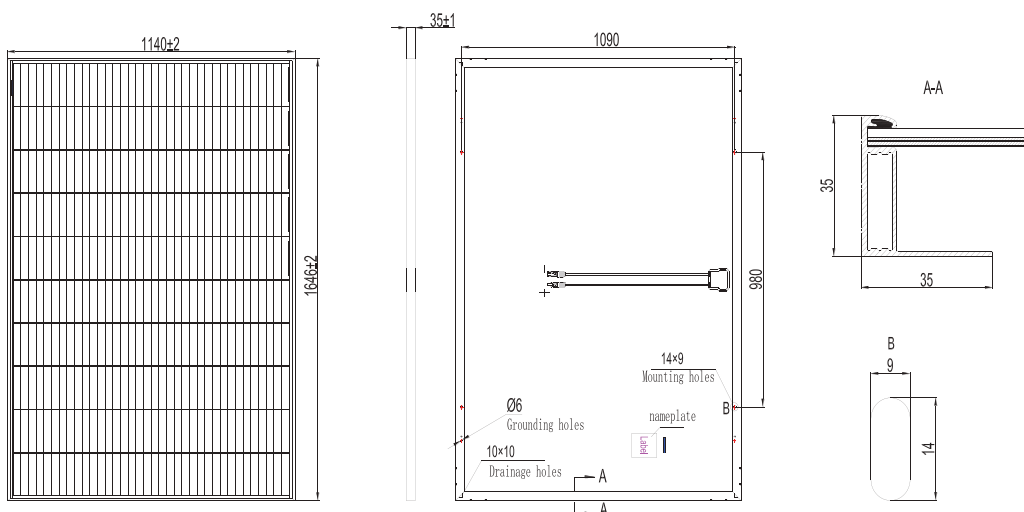
Dimensions	1646×1140×35 mm (L×W×H)	Weight	20.5kg
Back Sheet	High weatherability backsheet	Encapsulation	EVA
Cells	158.75x158.75 PERC solar cells		
Cable	Length 1500mm, 1×4mm <sup>2</sup>		
Junction Box	Rated current:15A, IP67, TUV&UL		
Frame	Anodized aluminum profile		
Front Glass	White toughened safety glass, 3.2mm		
Connector	Zhejiang Renhe Photovoltaic Technology Co., Ltd./05-8 Staubli Electrical Connectors AG/ PV-KST4-EVO 2/xy_UR(male); PV-KBT4-EVO 2xy_UR(female)		

## Installation Safety Guide

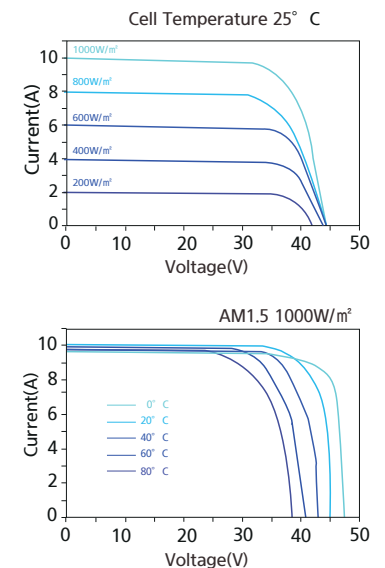
- Only qualified personnel should install or perform maintenance.
- Be aware of dangerous high DC voltage.
- Do not damage or scratch the rear surface of the module.
- Do not handle or install modules when they are wet.

Nominal Module Operating Temperature (NMOT)	42.3°C ( ±2°C )
Temperature Range	-40° C to +85° C
Maximum System Voltage	1500V DC(IEC)
Series Fuse Rating	20A
Maximum Surface Load Capacity	5400Pa

## Module Diagram (unit : mm)



## I-V Curves



Manufactured in China

**HYUNDAI**  
ENERGY SOLUTIONS



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Printed Date : 08/2021