

HYUNDAI SOLAR MODULE

**UF
SERIES**

**M3+
Shingled
Techonology**

HiE-S390UF HiE-S395UF HiE-S400UF



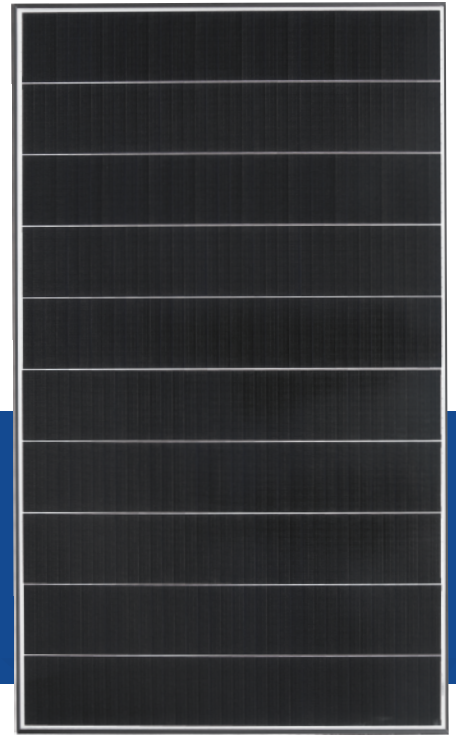
Shingled
Technology



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&Europe and New Zealand 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&Europe and New Zealand 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 Co., Ltd

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



**HYUNDAI
ENERGY SOLUTIONS**

Electrical Characteristics

| | | Mono-Crystalline Module (HIE-S____UF) | | |
|---------------------------------|------|---------------------------------------|-------|-------|
| | | 390 | 395 | 400 |
| Maximum Rating Power(Pm) | W | 390 | 395 | 400 |
| Open Circuit Voltage(Voc) | V | 49.3 | 49.4 | 49.5 |
| Short Circuit Current(Isc) | A | 10.03 | 10.07 | 10.12 |
| Maximum Power Voltage(Vmp) | V | 40.8 | 40.9 | 41 |
| Maximum Power Current(Imp) | A | 9.56 | 9.66 | 9.76 |
| Module Efficiency | % | 20.8 | 21.1 | 21.3 |
| 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.

*Tolerance of Pmax:0~+5W.

*Measuring uncertainty of power:±3%.

* Performance deviation of Voc [V], Isc [A], Vm[V] and Im[A]:±3%.

Mechanical Characteristics

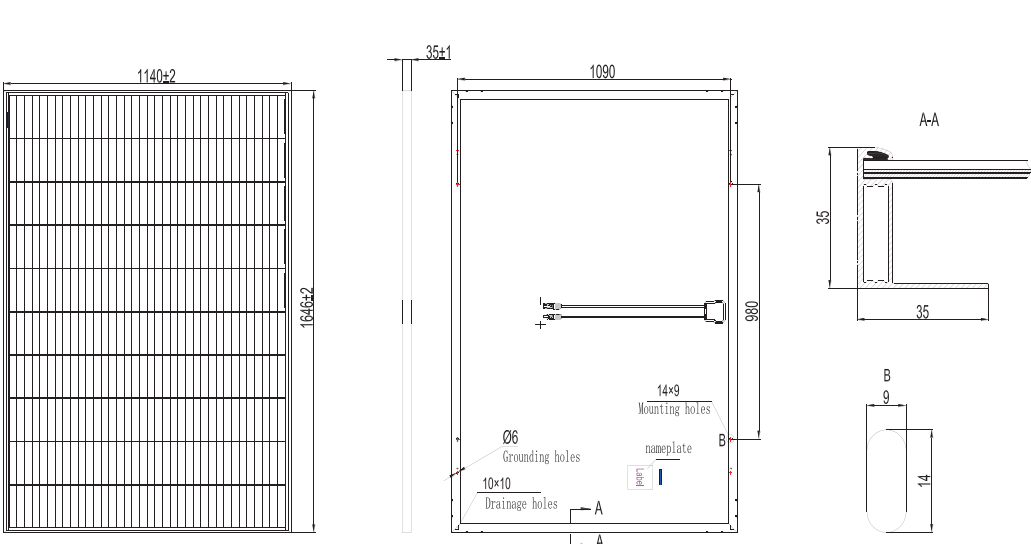
| | | | |
|--------------|---|---------------|--------|
| Dimensions | 1646×1140×35 mm (L×W×H) | Weight | 20.5kg |
| Back Sheet | High weatherability backsheet | Encapsulation | EVA |
| Cells | 158.75x158.75 PERC solar cells | | |
| Cable | Length 1500mm, 1×4mm ² | | |
| Junction Box | Rated current:15A, 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

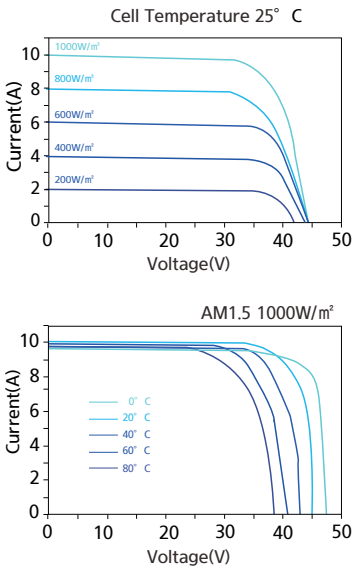
- Only qualified personnel should install or perform maintenance.
- Be aware of dangerous high DC voltage.
- Do not damage or scratch the rear surface of the module.
- Do not handle or install modules when they are wet.

| | |
|---|------------------|
| 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



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