HYUNDAI SOLAR MODULE

VG SERIES

PERC Shingled

HiE-S390VG HiE-S395VG HiE-S400VG
HiE-S405VG HiE-S410VG HiE-S415VG
HiE-S420VG

Shingled Technology

For Both Residential & Commercial Applications

More Power Generation In Low Light

M6 PERC Shingled

M6 PERC Shingled Technology provides ultra-high efficiency with better performance in low irradiation. Maximizes installation capacity in limited space.

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)**

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 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____VG)						
		390	395	400	405	410	415	420
Nominal Output(Pmpp)	W	390	395	400	405	410	415	420
Open Circuit Voltage(Voc)	V	46.3	46.3	46.4	46.5	46.6	46.7	46.8
Short Circuit Current(Isc)	A	10.87	10.92	10.97	11.02	11.07	11.12	11.17
Voltage at Pmax(Vmpp)	V	38.5	38.5	38.6	38.7	38.8	38.9	39.0
Currnt at Pmax(Impp)	A	10.13	10.26	10.36	10.47	10.57	10.67	10.78
Module Efficiency	%	19.9	20.2	20.4	20.7	20.9	21.2	21.4
Cell Type	-	PERC Mono-Crystalline Silicon Shingled						
Maximum System Voltage	V	1,500						
Temperature Coefficiency of Pmax	%/°C	-0.34						
Temperature Coefficiency of Voc	%/°C	-0.27						
Temperature Coefficiency of Isc	%/°C	0.04						

*All Date 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

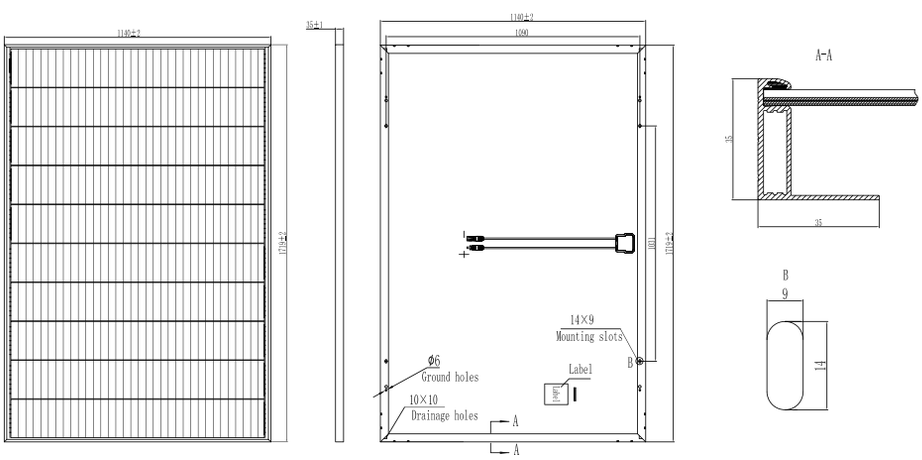
Dimensions	1,719 × 1,140 × 35mm (L × W × H)		
Weight	22kg		
Solar Cells	340 Cells, PERC Mono-crystalines Shingled (166 × 166mm)		
Output Cables	Length1,500mm, 1×4mm²	**Connector**	Stäubli : MC4-Evo2
Junction Box	Rated Current : 20A, IP67, TUV&UL		
Construction	Front Glass: White toughened safety glass, 3.2mm Encapsulation: EVA (Ethylene-Vinyl-Acetate)		
Frame	Anodized aluminum		

Installation Safety Guide

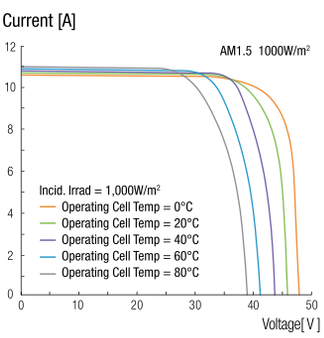
- Only qualified personnel should install or perform maintainence.
- Be aware of dangerous high DC voltage.
- Do not damage or scratch the rear surface of the module.
- Do not handle or install modules when they are wet.

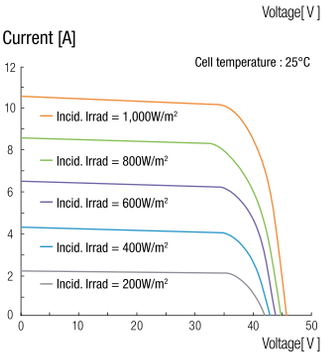
Nominal Operating Cell Temperature	42.3℃ (±2℃)
Operating Temperature	-40 ~ 85° C
Maximum System Voltage	DC 1,500
Fire Rating	Class C
Series Fuse Rating	20A
Maximum Surface Load Capacity	Front 5,400 Pa Rear 2,400 Pa

Module Diagram (unit : mm)



I-V Curves





HYUNDAI ENERGY SOLUTIONS

Manufactured in China

Sales & Marketing
sales@hyundai-es.co.kr

Printed date: 08/2021