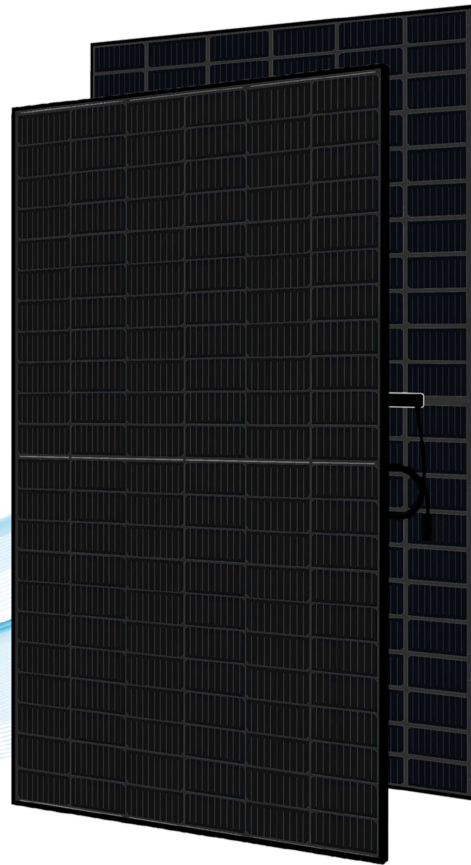


# HD HYUNDAI SOLAR MODULE

## YH Series

### Dual Black Max

HiS-S400YH(BK) | HiS-S405YH(BK) | HiS-S410YH(BK)



Maximum Test Load  
Front 5,400Pa  
Rear 5,400Pa



More Power Generation  
In Low Light



UL 1,500V  
IEC 1,500V  
Saves Bos Costs



High Reliability  
in all-weather



For Residential  
(Full Black Design)

#### HD Hyundai's Warranty Provisions

**25**  
YEARS

- 25-Year Product Warranty
- Materials and workmanship

**25**  
YEARS

- 25-Year Performance Warranty
- Initial year : 98.0%
- Linear warranty after initial year:

#### Certification



- UL61730 certified by UL
- IEC 61215: 2016 Hailstone 40mm by kiwa PVEL
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- ISO 45001: 2018 Occupational health and safety

## Electrical Characteristics

HiS-SxxxYH(BK)				
Item	Unit	400	405	410
Nominal Output (Pmpp)	W	400	405	410
Open Circuit Voltage (Voc)	V	45.3	45.6	45.9
Short Circuit Current (Isc)	A	11.25	11.33	11.40
Voltage at Pmax (Vmpp)	V	37.7	37.9	38.1
Current at Pmax (Impp)	A	10.61	10.69	10.76
Module Efficiency	%	20.0	20.3	20.5
Temperature Coefficient of Pmax	%/K		-0.347	
Temperature Coefficient of Voc	%/K		-0.268	
Temperature Coefficient of Isc	%/K		+0.032	

\*All data at STC / Measurement tolerances Pmpp ±3%; Isc; Voc ±3%. Above data may be changed without prior notice

Additional Power Gain from rear side, Pmpp[W]				
Item		400	405	410
Power Gain		400	405	410
	5%	415	425	431
	15%	454	466	472
	25%	494	506	513

## Mechanical Characteristics

Dimensions	1,924mm (L) x 1,038mm (W) x 32mm (H)
Weight	21.1 kg
Solar Cells	Mono PERC, 132 (6x22) monocrystalline half-cut bifacial cells
Output Cables	Cable : 4mm <sup>2</sup> / 12AWG / (+)1,200mm, (-)1,200mm / Customized length Connector: Stäubli MC4 genuine Connector / Compatible, IP68
Junction Box	3-part, 3 bypass diodes, IP68 rated
Construction	Front : 3.2mm full-tempered solar glass with high transmittance, and antireflective coating Rear : Highly resistant and weatherproof film (Black mesh transparent)
Frame	Anodized aluminum alloy

## Shipping Configurations

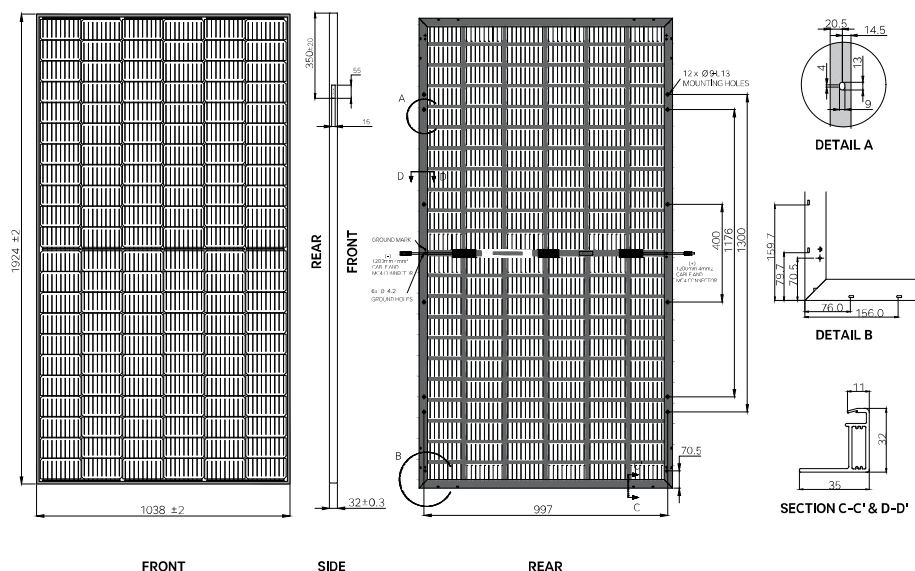
Container Size (HC)	40'	Modules Per Pallet (pcs)	32
Pallets Per Container	24	Modules Per Container (pcs)	768

## 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 Operation Temperature	45.5°C ± 2°C
Operating Temperature	-40°C ~ +85°C
Maximum System Voltage	DC 1,500 V
Maximum Reverse Current	20A
Maximum Test Load	Front 5,400Pa Rear 5,400Pa
Fire Performance	Type 1

## Module Diagram (unit : mm)



## I-V Curves

