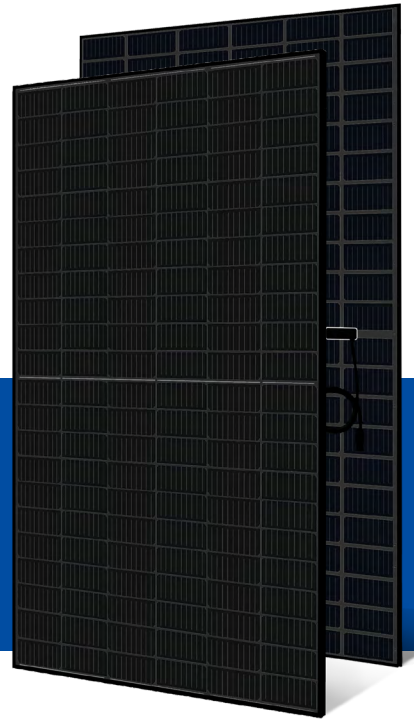


HYUNDAI SOLAR MODULE



YH
SERIES

Dual Black Max

HiS-S385YH(BK) HiS-S390YH(BK) HiS-S395YH(BK)
HiS-S400YH(BK) HiS-S405YH(BK) HiS-S410YH(BK)



Bifacial Cells
132



More Power Generation
In Low Light



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



All black Module
For Sleek Design
(Black Meshed
T-Back sheet)



Maximized Power Generation

Increased total power output through capturing light from both the front and back of Bifacial solar modules. Back side power gain up to 25% of the front output depending on PV system design.



Half-Cut & Multi-Wire Technology

Improved current flow with half-cut technology and 9 thin wiring technology allows high module efficiency of up to 20.5%. It also reduces power generation loss due to micro-cracks.



Anti-LID / PID

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



Mechanical Strength

Tempered glass and reinforced frame design withstand rigorous weather conditions such as heavy snow(5,400Pa) and strong wind(4,000Pa).



UL / VDE Test Labs

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



Reliable Warranty

Global brand with powerful financial strength provide reliable 25-year warranty.

Hyundai's Warranty Provisions



- 25-Year Product Warranty
- Materials and workmanship



- 25-Year Performance Warranty
- Initial year : 98.0%
- Linear warranty after second year: with 0.54%p annual degradation, 85.0% 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



UL61730 certified by UL, Type 1(for Fire Class A)

Printed Date : 03/2022(final)

Electrical Characteristics

| | | Mono-Crystalline Type(Hi-S YH(BK)) | | | | | |
|---|-----|------------------------------------|-------|-------|-------|-------|-------|
| | | 385 | 390 | 395 | 400 | 405 | 410 |
| Nominal Output (P _{mpp}) | W | 385 | 390 | 395 | 400 | 405 | 410 |
| Open Circuit Voltage (V _{oc}) | V | 44.5 | 44.8 | 45.0 | 45.3 | 45.6 | 45.9 |
| Short Circuit Current (I _{sc}) | A | 11.04 | 11.11 | 11.18 | 11.25 | 11.33 | 11.40 |
| Voltage at P _{max} (V _{mpp}) | V | 37.1 | 37.3 | 37.5 | 37.7 | 37.9 | 38.1 |
| Current at P _{max} (I _{mp}) | A | 10.40 | 10.47 | 10.54 | 10.61 | 10.69 | 10.76 |
| Module Efficiency | % | 19.3 | 19.5 | 19.8 | 20.0 | 20.3 | 20.5 |
| Cell Type | - | Mono crystalline, 9busbar | | | | | |
| Maximum System Voltage | V | 1,500 | | | | | |
| Temperature Coefficient of P _{max} | %/K | -0.347 | | | | | |
| Temperature Coefficient of V _{oc} | %/K | -0.268 | | | | | |
| Temperature Coefficient of I _{sc} | %/K | +0.032 | | | | | |

*All data at STC (Measurement tolerances P_{mpp} ±3%; I_{sc} ; V_{oc} ±3%). Above data may be changed without prior notice.

| Additional Power Gain from rear side | | 385 | 390 | 395 | 400 | 405 | 410 |
|--------------------------------------|---|-----|-----|-----|-----|-----|-----|
| 5% | W | 399 | 404 | 410 | 415 | 425 | 431 |
| 15% | W | 437 | 443 | 449 | 454 | 466 | 472 |
| 25% | W | 475 | 482 | 488 | 494 | 506 | 513 |

Mechanical Characteristics

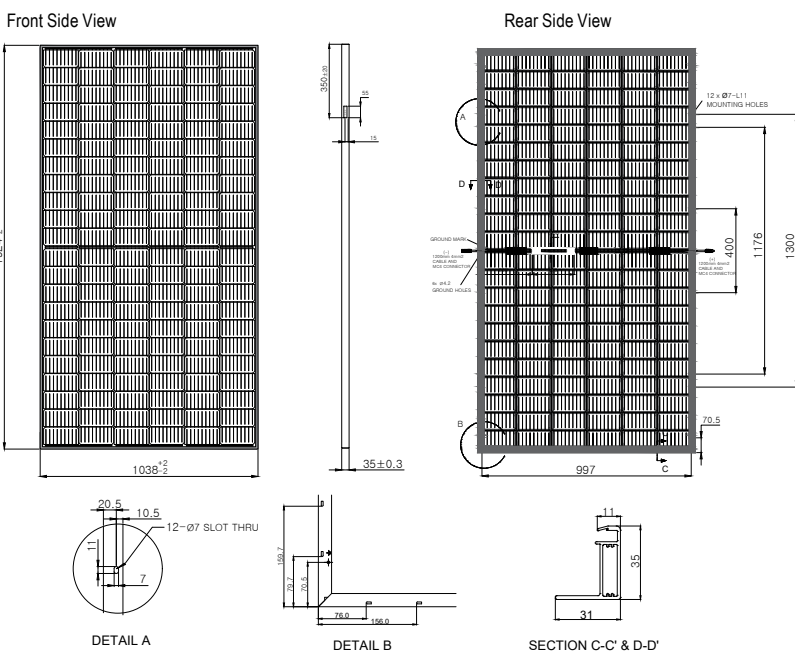
| | |
|---------------|---|
| Dimensions | 1,038 mm (W) x 1,924 mm (L) x 35 mm(H) |
| Weight | Approx. 21.1 kg |
| Solar Cells | 132 half cut bifacial cells (2 parallel x 66 half cells in series) |
| Output Cables | Cable : 1,200mm / 4mm ² Connector : MC4 genuine connector |
| Junction Box | IP68, weatherproof, IEC certified (UL listed) |
| Bypass Diodes | 3 bypass diodes to prevent power decrease by partial shade |
| Construction | Front : 3.2mm, High Transmission, AR Coated Tempered Glass Encapsulant : EVA Back Sheet : Black Meshed Transparent Backsheet |
| Frame | Anodized aluminum alloy type 6063 |

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 Operating Cell Temperature | 45.5°C ± 2 |
| Operating Temperature | -40°C ~ +85°C |
| Maximum System Voltage | DC 1,500V |
| Maximum Reverse Current | 20A |
| Maximum Test Load | Front 5,400 Pa (113psf) Rear 4,000 Pa (84psf) |

Module Diagram (unit : mm)



I-V Curves

