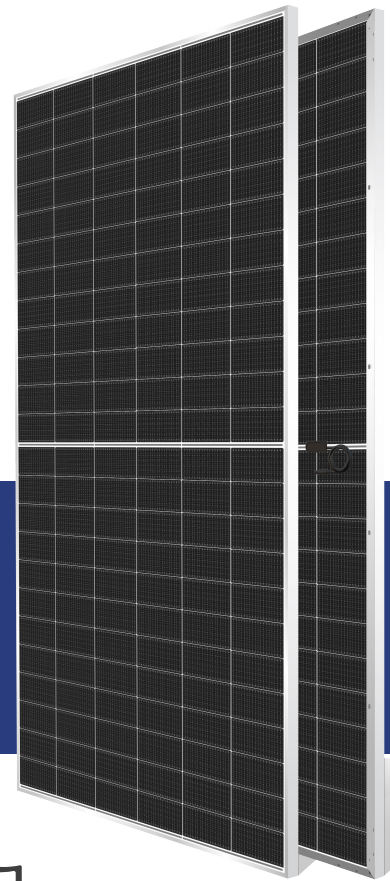


HD HYUNDAI SOLAR MODULE

OI
SERIES

HeteroMax™ Premium N-Type HJT module

HiT-H580~6000I



High-End
Heterojunction
Technology



For commercial
& Utility
Applications



More Power
Generation
In Low Light

KOREA

Designed in
Korea



**High Efficiency with
HJT Technology**

HJT (Heterojunction Technology) cells with excellent light absorption and passivation effects can increase module efficiency compared to TOPCon and PERC modules.



**Enhanced Power
Generation with low
Temp. Coefficient**

Low temperature coefficient ($-0.26\%/^{\circ}\text{C}$) enables modules to generate more electricity than PERC & TOPCon modules in high temperature environments which allows the perfect suitability for rooftop installation with large temperature fluctuations.



Long-Term Reliability

HeteroMax™ is a durable and high-yield product with an N-type wafer that eliminates LID. It uses a TCO film and features a double-glass design to prevent internal material corrosion.



Higher Bifaciality

HJT's natural bifacial symmetrical structure brings higher bifaciality up to 90% and generates approximately 2%-4% higher power than bifacial PERC Cells.



Certified Test Labs

HD Hyundai's R&D center is an accredited test laboratory of UL, international certification institutions, and guarantees the best quality in the world through rigorous product testing.



Reliable Warranty

HD HYUNDAI

HD Hyundai Energy Solutions, Global brand with powerful financial strength, offers a 30-year warranty and comprehensive customer after-sales service.

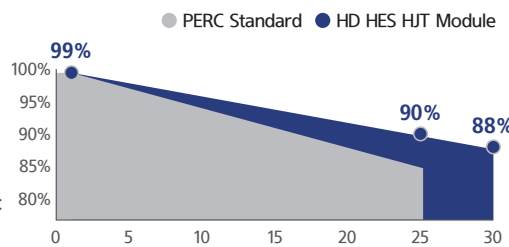
HD Hyundai's Warranty Provisions

15
YEARS

- 15-Year Product Warranty
- Materials and workmanship

30
YEARS

- 30-Year Performance Warranty
- First year degradation: 1%
- Linear warranty after second year: with 0.375%p annual degradation, 88% is guaranteed up to 30 years



*Refer to HD HES standard warranty for details.

Certification



About HD Hyundai Energy Solutions

Established in 1972, HD Hyundai 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, HD Hyundai 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 HD Hyundai, HD Hyundai Energy Solutions has strong pride in providing high-quality PV products to more than 3,000 customers worldwide.

Electrical Characteristics (STC*)

		HiT-HxxxOI				
		580	585	590	595	600
Nominal Output (P _{mpp})	W	580	585	590	595	600
Open Circuit Voltage (V _{oc})	V	53.92	54.12	54.31	54.50	54.70
Short Circuit Current (I _{sc})	A	13.35	13.40	13.45	13.50	13.55
Voltage at P _{max} (V _{mpp})	V	45.00	45.21	45.42	45.63	45.84
Current at P _{max} (I _{mpp})	A	12.89	12.94	12.99	13.04	13.09
Module Efficiency	%	22.45	22.65	22.84	23.03	23.23
Maximum System Voltage	V	DC 1,500V (IEC)				
Temperature Coefficient of P _{max}	%/°C	-0.26				
Temperature Coefficient of V _{oc}	%/°C	-0.24				
Temperature Coefficient of I _{sc}	%/°C	0.04				
Bifaciality	-	85% ± 5%				

*STC : Irradiance 1,000 W/m², cell temperature 25°C, AM=1.5 / Tolerance of P_{mpp} 0~+3%; V_{oc} ±3%; I_{sc} ±5%
 **Power Sorting Tolerance: 0~+5W

BSTC**

		580	585	590	595	600
Nominal Output (P _{mpp})	W	640	645	650	655	660
Voltage at P _{max} (V _{mpp})	V	45.00	45.21	45.42	45.63	45.84
Current at P _{max} (I _{mpp})	A	14.23	14.27	14.32	14.36	14.40
Open Circuit Voltage (V _{oc})	V	53.92	54.12	54.31	54.50	54.70
Short Circuit Current (I _{sc})	A	14.73	14.77	14.82	14.86	14.91

**BSTC : Front side Irradiance 1,000 W/m², back side reflection irradiation 135 W/m², AM=1.5, Ambient temperature 25°C.

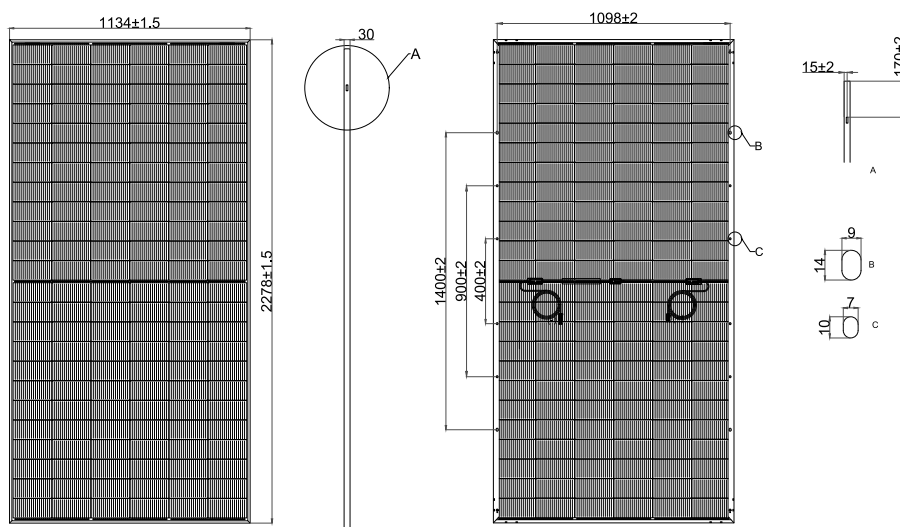
Mechanical Characteristics

Dimensions	2,278 mm (L) x 1,134 mm (W) x 30 mm (H)
Weight	32 kg
Solar Cells	N-Type HJT, 182mm x 91.75mm, 144 cells
Output Cables	Cable : (+)1,200 mm, (-)1,200mm / 4mm ² / UV resistant Connector : Stäubli MC4 original
Junction Box	IP68
Construction	Front Glass : anti-reflective solar glass, 2mm Rear Glass : solar glass, 2mm
Frame	Anodized aluminum alloy

Shipping Configurations

Container Size	40	Modules Per Pallet (pcs)	36
Pallets Per Container	20	Modules Per Container (pcs)	720

Module Diagram (unit : mm)



Manufactured in China

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 Temp. (NOCT)	44°C ± 2°C
Operating Temperature	-40°C ~ +85°C
Maximum System Voltage	DC 1,500V (IEC)
Maximum Reverse Current	25A
Maximum Test Load	Front 5,400 Pa Rear 2,400 Pa
Fire Rating Class	C

I-V Curves (HiT-H590OI)

