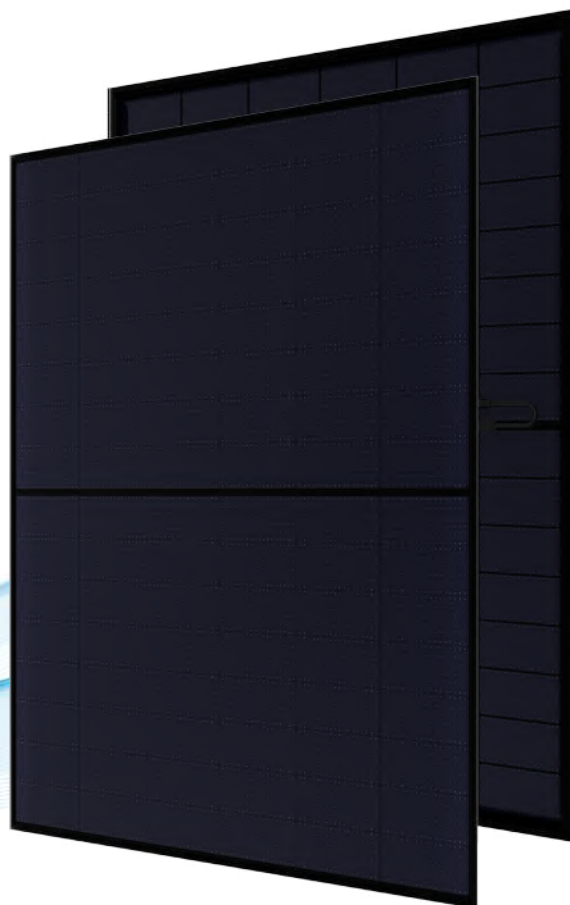


# HD HYUNDAI SOLAR MODULE

## HeteroMax™ (LE-FB Series)

### Premium N-Type HJT module

HiT-H435LE-FB | HiT-H440LE-FB | HiT-H445LE-FB | HiT-H450LE-FB | HiT-H455LE-FB



22.77%  
High Efficiency



High-End  
Heterojunction  
Technology



Enhanced Power  
Generation with low  
Temp. Coefficient



More Power  
Generation  
In Low Light



For Residential  
(Full Black Design)

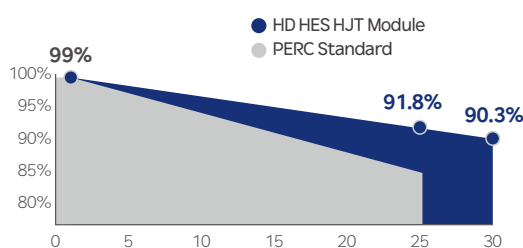
#### HD Hyundai's Warranty Provisions

30  
YEARS

- 30-Year Product Warranty
- Materials and workmanship

30  
YEARS

- 30-Year Performance Warranty
- First year degradation: 1%
- Linear warranty after initial year:  
with 0.3%p annual degradation,  
90.3% is guaranteed up to 30years



\*Refer to HD HES standard warranty for details.

#### Certification



- ISO 9001:2015:ISO Quality Management System
- ISO 14001:2015:ISO Environment Management System
- ISO 45001:Occupational Health and Safety



## Electrical Characteristics (STC\*)

| HiT-HxxxxLE-FB                  |      |       |       |       |       |       |
|---------------------------------|------|-------|-------|-------|-------|-------|
| Item                            | Unit | 435   | 440   | 445   | 450   | 455   |
| Nominal Output (Pmax)           | W    | 435   | 440   | 445   | 450   | 455   |
| Open Circuit Voltage (Voc)      | V    | 36.42 | 36.52 | 36.62 | 36.72 | 36.82 |
| Short Circuit Current (Isc)     | A    | 15.20 | 15.31 | 15.42 | 15.53 | 15.64 |
| Voltage at Pmax (Vmpp)          | V    | 30.50 | 30.61 | 30.72 | 30.83 | 30.94 |
| Current at Pmax (Impp)          | A    | 14.27 | 14.38 | 14.49 | 14.60 | 14.71 |
| Module Efficiency               | %    | 21.77 | 22.02 | 22.27 | 22.52 | 22.77 |
| Temperature Coefficient of Pmax | %/K  | -0.24 |       |       |       |       |
| Temperature Coefficient of Voc  | %/K  | -0.24 |       |       |       |       |
| Temperature Coefficient of Isc  | %/K  | 0.04  |       |       |       |       |

\*STC : Irradiance 1,000 W/m<sup>2</sup>, cell temperature 25°C, AM=1.5 / Measurement tolerances Pmpp ±3%; Voc ±3%; Isc ±5%

## NMOT

| Item                        | Unit | 435   | 440   | 445   | 450   | 455   |
|-----------------------------|------|-------|-------|-------|-------|-------|
| Nominal Output (Pmax)       | W    | 332   | 335   | 339   | 343   | 347   |
| Open Circuit Voltage (Voc)  | V    | 34.76 | 34.86 | 34.95 | 35.05 | 35.14 |
| Short Circuit Current (Isc) | A    | 12.15 | 12.24 | 12.32 | 12.41 | 12.50 |
| Voltage at Pmax (Vmpp)      | V    | 29.12 | 29.23 | 29.34 | 29.45 | 29.55 |
| Current at Pmax (Impp)      | A    | 11.40 | 11.49 | 11.58 | 11.67 | 11.76 |

NMOT: Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s.

## Mechanical Characteristics

|               |                                                                                                                                 |
|---------------|---------------------------------------------------------------------------------------------------------------------------------|
| Dimensions    | 1,762 mm (L) x 1,134 mm (W) x 30 mm (H)                                                                                         |
| Weight        | 21.8 kg                                                                                                                         |
| Solar Cells   | N-Type HJT, 96 (6x16) monocrystalline half-cut bifacial cells                                                                   |
| Output Cables | Cable : 4mm <sup>2</sup> / 12AWG / (+)1,250 mm, (-)1,250 mm / Customized length<br>Connector : MC4-EVO2                         |
| Junction Box  | 3-part, 3 bypass diodes, IP68 rated                                                                                             |
| Construction  | Front : 1.6mm semi-tempered solar glass with high cut-off and anti-reflective coating<br>Rear : 1.6mm semi-tempered solar glass |
| Frame         | Black Anodized aluminum alloy                                                                                                   |

## Shipping Configurations

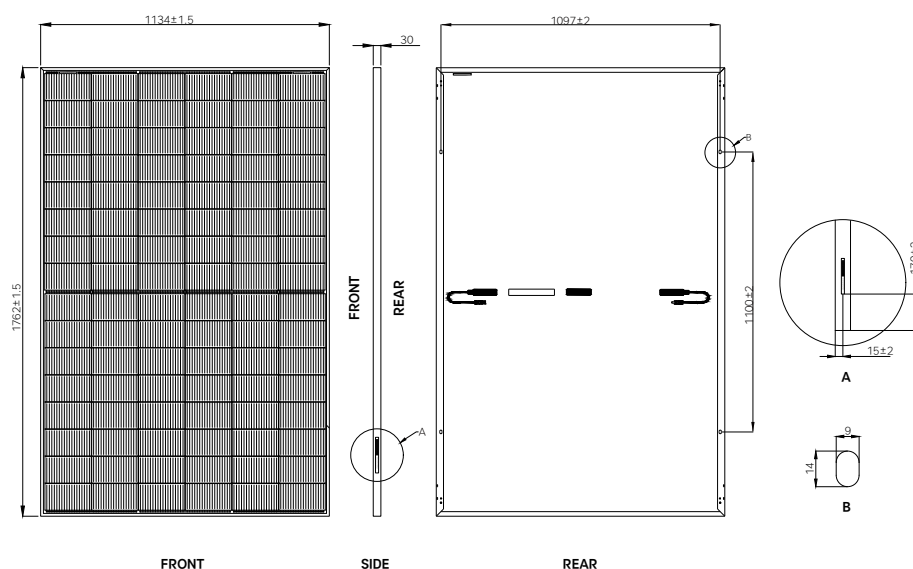
|                       |     |                             |     |
|-----------------------|-----|-----------------------------|-----|
| Container Size (HC)   | 40' | Modules Per Pallet (pcs)    | 36  |
| Pallets Per Container | 26  | Modules Per Container (pcs) | 936 |

## 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 | 44°C ± 2°C                    |
| Operating Temperature                | -40°C~+85°C                   |
| Maximum System Voltage               | DC 1,500 V                    |
| Maximum Reverse Current              | 30A                           |
| Maximum Test Load                    | Front 5,400Pa<br>Rear 2,400Pa |

## Module Diagram (unit : mm)



## I-V Curves (HiT-H445LE-FB)

