

# Lumina II



## Super Power Output

SolarSpace advanced TOPCon cells combined with MBB and high-density encapsulation provides ultra-high power output



## High Reliability

Excellent harsh tests results and advanced half-cell tech improve product reliability for long-term life cycle



## Extra power generation

N-type wafers and cells bring ultralow LID&LeTID degradation, less than 1% 1<sup>st</sup> year degradation guaranteed, in addition lower temperature coefficient and better weak-light response provide extra power generation



## Aesthetic Design

All black design brings highly consistent appearance for rooftops

**SolarSpace Technology Co., Ltd.** was established in 2011, as a world leading solar cell and module manufacturer, concentrating on high efficient solar-technology production with 60GW+ capacity of solar cell and 7.2GW capacity of solar module in China and overseas.

\*Please refer to SolarSpace for details

**SS8-54HDB 420-440N**

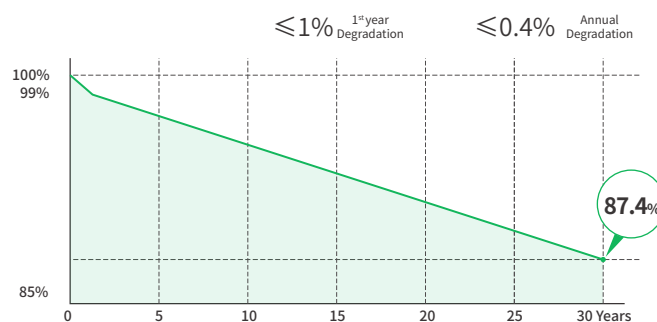
All Black Module

**440W**

Maximum  
Power Output

**22.53%**

Maximum  
Module Efficiency



**15**Years Product Warranty **30**Years Linear Power Warranty

## Comprehensive Certificates

- IEC61215 • IEC61730
- IEC61701: Salt mist corrosion test • IEC62716: Ammonia corrosion test
- IEC60068: Dust and Sand test
- ISO9001:2015: Quality Management System
- ISO14001:2015: Environment Management System
- ISO45001:2018: Occupational Health and Safety Management Systems



### Electric Characteristics (STC)

| Module Type                     | SS8-54HDB<br>-420N | SS8-54HDB<br>-425N | SS8-54HDB<br>-430N | SS8-54HDB<br>-435N | SS8-54HDB<br>-440N |
|---------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Maximum Power (Pmax) [W]        | 420                | 425                | 430                | 435                | 440                |
| Open-Circuit Voltage (Voc)[V]   | 37.89              | 38.08              | 38.27              | 38.46              | 38.65              |
| Maximum Power Voltage (Vmp) [V] | 31.85              | 32.03              | 32.21              | 32.37              | 32.55              |
| Short-Circuit Current (Isc)[A]  | 13.99              | 14.07              | 14.13              | 14.21              | 14.29              |
| Maximum Power Current (Imp) [A] | 13.19              | 13.28              | 13.36              | 13.44              | 13.52              |
| Module Efficiency               | 21.51%             | 21.76%             | 22.02%             | 22.28%             | 22.53%             |

Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM=1.5

### Electric Characteristics (NMOT)

| Module Type                     | SS8-54HDB<br>-420N | SS8-54HDB<br>-425N | SS8-54HDB<br>-430N | SS8-54HDB<br>-435N | SS8-54HDB<br>-440N |
|---------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Maximum Power (Pmax) [W]        | 319                | 323                | 327                | 331                | 335                |
| Open-Circuit Voltage (Voc)[V]   | 36.42              | 36.60              | 36.78              | 36.96              | 37.14              |
| Maximum Power Voltage (Vmp) [V] | 29.99              | 30.17              | 30.34              | 30.52              | 30.69              |
| Short-Circuit Current (Isc)[A]  | 11.40              | 11.47              | 11.54              | 11.61              | 11.68              |
| Maximum Power Current (Imp) [A] | 10.64              | 10.71              | 10.78              | 10.85              | 10.92              |

Irradiance 800 W/m<sup>2</sup>, Ambient Temperature 20 °C, Wind Speed 1 m/s, AM=1.5

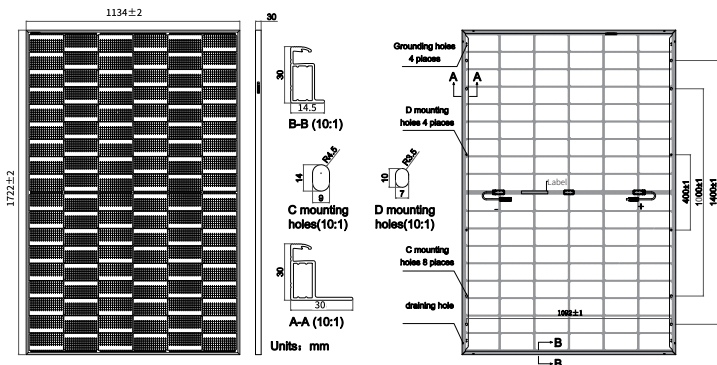
### Bifacial Output-Rearside Power Gain (425W)

| Power Gain                      | 5%    | 10%   | 15%   | 20%   | 25%   |
|---------------------------------|-------|-------|-------|-------|-------|
| Maximum Power (Pmax) [W]        | 446   | 468   | 489   | 510   | 531   |
| Open-Circuit Voltage (Voc)[V]   | 38.29 | 38.29 | 38.29 | 38.39 | 38.39 |
| Maximum Power Voltage (Vmp) [V] | 32.12 | 32.12 | 32.12 | 32.13 | 32.13 |
| Short-Circuit Current (Isc)[A]  | 14.59 | 15.15 | 15.69 | 16.25 | 16.81 |
| Maximum Power Current (Imp) [A] | 13.89 | 14.58 | 15.23 | 15.88 | 16.53 |

### Temperature coefficients

|                                 |            |
|---------------------------------|------------|
| Temperature coefficient of Isc  | +0.045%/°C |
| Temperature coefficient of Voc  | -0.260%/°C |
| Temperature coefficient of Pmax | -0.290%/°C |
| NMOT                            | 45±2°C     |

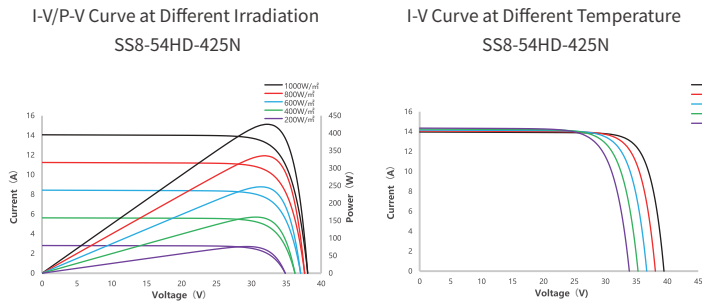
### Engineering Design



### Mechanical Characteristics

|                 |                                                                                               |
|-----------------|-----------------------------------------------------------------------------------------------|
| Cell Type       | N-TOPCon                                                                                      |
| Number of Cells | 108(6x18)                                                                                     |
| Dimensions      | 1722X1134X30mm                                                                                |
| Weight          | 24.0kg                                                                                        |
| Glass           | Front glass, 2.0mm coated semi-tempered glass<br>Back Glass, 2.0mm glazed semi-tempered glass |
| Frame           | Black, Anodized Aluminum Alloy                                                                |
| Output Cables   | 4mm <sup>2</sup> (IEC), 12AWG(UL), 300mm(including connector) or Customized Length            |
| Junction Box    | IP68 Rated, 3 diodes                                                                          |
| Connector       | MC4-EVO2 or MC4 Compatible                                                                    |
| Packaging       | 36 Pieces/Pallet, 936 pieces/40' container                                                    |

### Characteristics



### Operating Conditions

|                            |                |
|----------------------------|----------------|
| Maximum System Voltage     | 1500V DC (IEC) |
| Power Tolerance            | 0~+3%          |
| Operating Temperature      | -40°C~+85°C    |
| Maximum Series Fuse Rating | 30A            |
| Mechanical Load Front Rear | 5400Pa         |
| Mechanical Load Back Rear  | 2400Pa         |
| Bifaciality                | 80±10%         |

