

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% 1st year degradation guaranteed, in addition lower temperature coefficient and better weak-light response provide extra power generation



High ROI

Bifacial power generation reduces BOS and system LCOE dramatically, promoting the project ROI

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 58.75GW+ capacity of solar cell and 5.7GW capacity of solar module in China and overseas.

*Please refer to SolarSpace for details

SS8-54HDT 420-440N

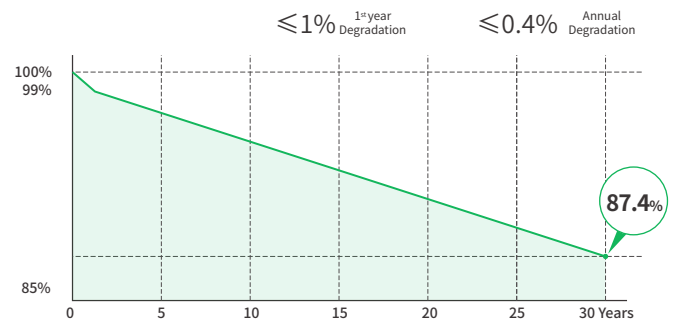
N-TOPCon Bifacial Dual Glass Module
(Transparent Back Glass)

440W

Maximum
Power Output

22.53%

Maximum
Module Efficiency



15Years 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 | SS8-54HD -420N | SS8-54HD -425N | SS8-54HD -430N | SS8-54HD -435N | SS8-54HD -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% |

Irradiation 1000W/m², Cell Temperature 25°C, AM=1.5

Electric Characteristics (NMOT)

| Module Type | SS8-54HD -420N | SS8-54HD -425N | SS8-54HD -430N | SS8-54HD -435N | SS8-54HD -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/m², Ambient Temperature 20 °C, Wind Speed 1 m/s, AM=1.5

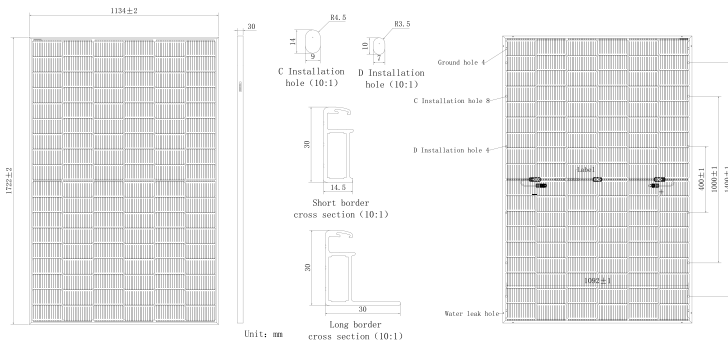
Bifacial Output-Rearside Power Gain (420W)

| Power Gain | 5% | 10% | 15% | 20% | 25% |
|---------------------------------|-------|-------|-------|-------|-------|
| Maximum Power (Pmax) [W] | 441 | 462 | 483 | 504 | 525 |
| Open-Circuit Voltage (Voc)[V] | 38.10 | 38.10 | 38.10 | 38.20 | 38.20 |
| Maximum Power Voltage (Vmp) [V] | 31.94 | 31.94 | 31.94 | 31.95 | 31.95 |
| Short-Circuit Current (Isc)[A] | 14.51 | 15.06 | 15.60 | 16.16 | 16.71 |
| Maximum Power Current (Imp) [A] | 13.81 | 14.47 | 15.13 | 15.78 | 16.44 |

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

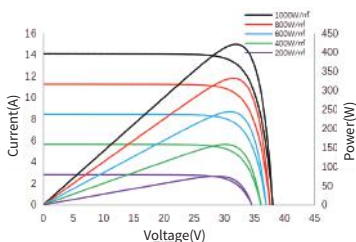


Mechanical Characteristics

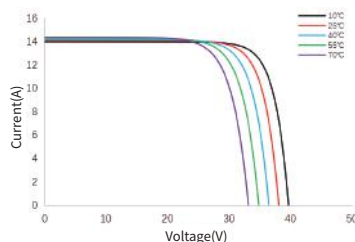
| | |
|-----------------|--|
| Cell Type | N-TOPCon |
| Number of Cells | 108(6x18) |
| Dimensions | 1722X1134X30mm |
| Weight | 24.0kg |
| Glass | Front glass, 2.0mm coated semi-tempered glass Back Glass, 2.0mm transparent semi-tempered glass |
| Frame | Anodized Aluminum Alloy |
| Output Cables | 4mm ² (IEC), 12AWG(UL), 300mm (including connector) or 1200mm(including connector) |
| Junction Box | IP68 Rated, 3 diodes |
| Connector | MC4-EVO2 or MC4 Compatible |
| Packaging | 36 Pieces/Pallet, 936 pieces/40' container Frame color and cable length are subject to the actual order |

Characteristics

I-V/P-V Curve at Different Irradiation
SS8-54HDT-420N



I-V Curve at Different Temperature
SS8-54HDT-420N



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% |