



Lumina I



High Power Output

Solarspace efficient cells with MBB and high-density encapsulation ensures higher power output



High Reliability

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



More Power Generation

Gallium doped wafers reduce annual power degradation, optimized circuit design ensures more power generation under shading



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

SS8-60HDB 440-460M

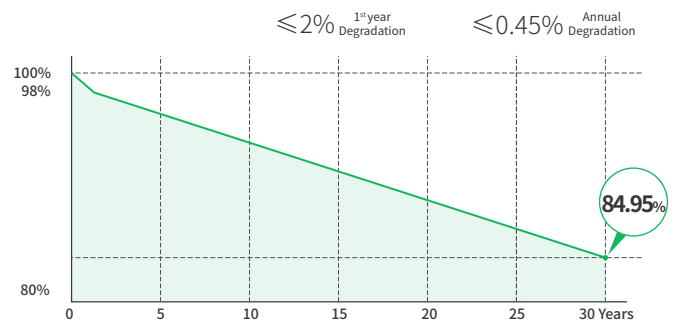
Bifacial Dual Glass Module

460W

Maximum Power Output

21.25%

Maximum Module Efficiency



12Years 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	SS8-60HDB -440M	SS8-60HDB -445M	SS8-60HDB -450M	SS8-60HDB -455M	SS8-60HDB -460M
Maximum Power (Pmax) [W]	440	445	450	455	460
Open-Circuit Voltage (Voc)[V]	41.08	41.21	41.33	41.46	41.58
Maximum Power Voltage (Vmp) [V]	34.33	34.50	34.67	34.87	35.07
Short-Circuit Current (Isc)[A]	13.71	13.79	13.87	13.94	14.01
Maximum Power Current (Imp) [A]	12.82	12.90	12.98	13.05	13.12
Module Efficiency	20.33%	20.56%	20.79%	21.02%	21.25%

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

Bifacial Output-Rearside Power Gain (440W)

Power Gain	5%	10%	15%	20%	25%
Maximum Power (Pmax) [W]	462	484	506	528	550
Open-Circuit Voltage (Voc)[V]	41.10	41.10	41.20	41.20	41.20
Maximum Power Voltage (Vmp) [V]	34.30	34.30	34.40	34.40	34.40
Short-Circuit Current (Isc)[A]	14.40	15.08	15.77	16.45	17.14
Maximum Power Current (Imp) [A]	13.47	14.11	14.71	15.35	15.99

Electric Characteristics (NMOT)

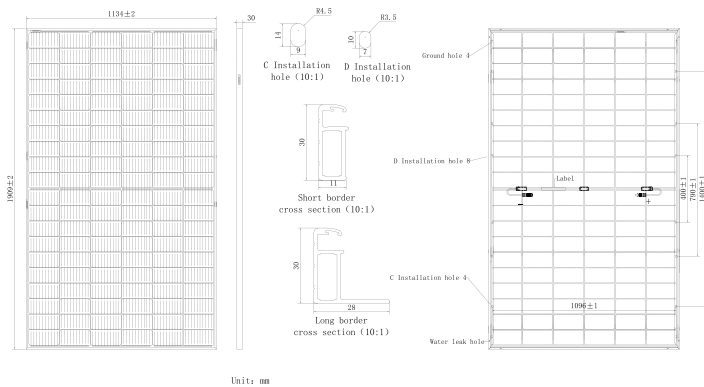
Module Type	SS8-60HDB -440M	SS8-60HDB -445M	SS8-60HDB -450M	SS8-60HDB -455M	SS8-60HDB -460M
Maximum Power (Pmax) [W]	333	336	340	344	348
Open-Circuit Voltage (Voc)[V]	38.45	38.57	38.68	38.81	38.92
Maximum Power Voltage (Vmp) [V]	32.46	32.56	32.76	32.96	33.15
Short-Circuit Current (Isc)[A]	10.97	11.03	11.10	11.15	11.21
Maximum Power Current (Imp) [A]	10.26	10.32	10.38	10.44	10.51

Irradiance 800 W/m², Ambient Temperature 20 °C, Wind Speed 1 m/s, AM=1.5

Temperature coefficients

Temperature coefficient of Isc	+0.045%/°C
Temperature coefficient of Voc	-0.265%/°C
Temperature coefficient of Pmax	-0.334%/°C
NMOT	45±2°C

Engineering Design



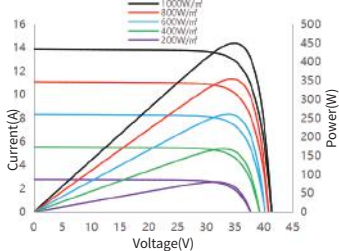
Unit: mm

Mechanical Characteristics

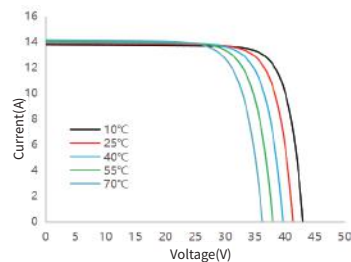
Cell Type	Mono PERC (M10)
Number of Cells	120(6x20)
Dimensions	1909X1134X30mm
Weight	25.0kg
Glass	Front Glass, 2.0mm AR coated semi-tempered glass Back Glass, 2.0mm glazed semi-tempered glass
Frame	Black, Anodized Aluminum Alloy
Output Cables	4mm ² (IEC), 12AWG(UL) 300mm (including connector) or Customized Length
Junction Box	IP68 Rated, 3 diodes
Connector	MC4-EVO2 or MC4 Compatible
Packaging	36 Pieces/Pallet, 864 pieces/40' container

Characteristics

I-V/P-V Curve at Different Irradiation
SS8-60HDB-440M



I-V Curve at Different Temperature
SS8-60HDB-440M



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	70±10%