



# 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

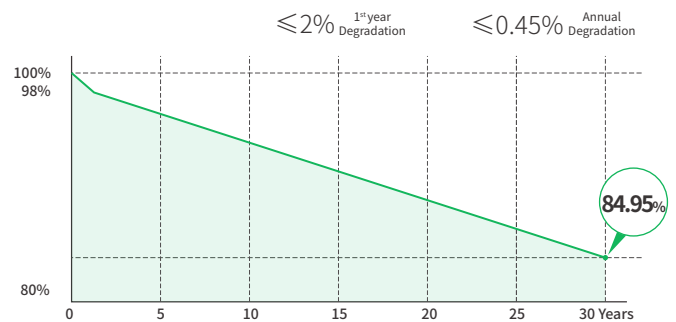
### Bifacial Dual Glass Module

# 460W

Maximum Power Output

# 21.25%

Maximum Module Efficiency



**12**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	SS8-60HDB	SS8-60HDB	SS8-60HDB	SS8-60HDB	SS8-60HDB
	-440M	-445M	-450M	-455M	-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%

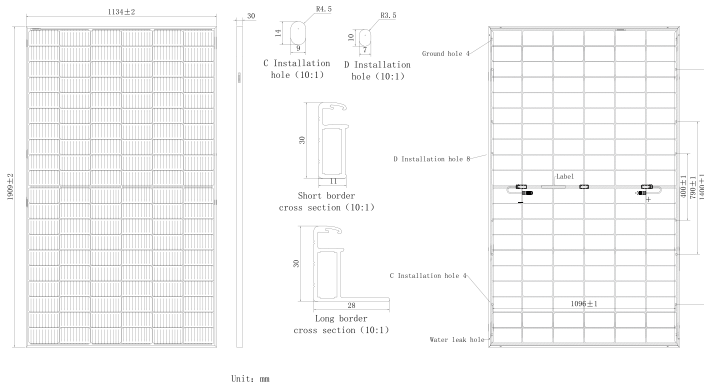
Irradiation 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM=1.5

## Electric Characteristics (NMOT)

Module Type	SS8-60HDB	SS8-60HDB	SS8-60HDB	SS8-60HDB	SS8-60HDB
	-440M	-445M	-450M	-455M	-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/m<sup>2</sup>, Ambient Temperature 20 °C, Wind Speed 1 m/s, AM=1.5

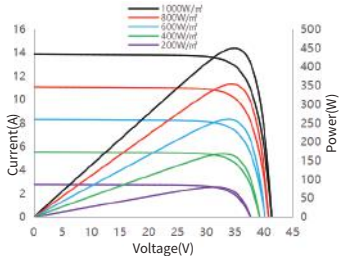
## Engineering Design



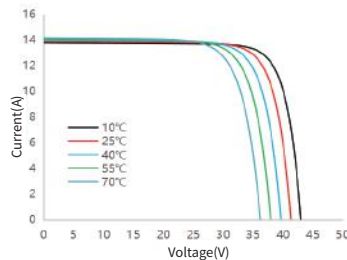
Unit: mm

## Characteristics

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



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



## Bifacial Output-Rearside Power Gain (440W)

Power Gain	5%	10%	15%	20%	25%
	Maximum Power (Pmax) [W]	462	484	506	528
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

## 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

## 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 <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, 864 pieces/40' container

## 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%