



# Lumina I



## High Power Output

With 210 large wafer technology and slicing technology, multi-grid technology, high-density module packaging to ensure higher power output of modules



## 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



## Great Adaptability

Our modules are cost-effective and compatible with mainstream trackers, making them an ideal choice for large power plants

**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 50GW+ capacity of solar cell and 5.7GW capacity of solar module in China and overseas.

\*Please refer to SolarSpace for details

**SS9-66HD**

**645-665M**

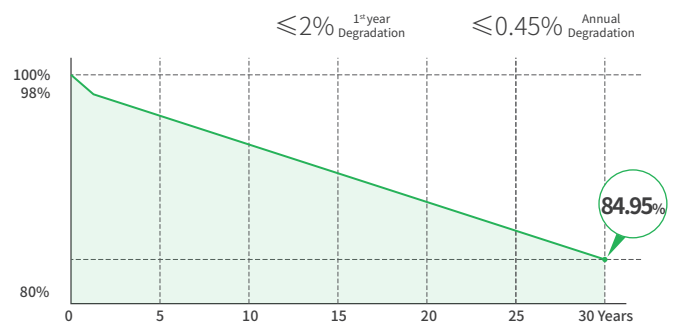
Bifacial Dual Glass Module

**665W**

Maximum Power Output

**21.41%**

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	SS9-66HD -645M	SS9-66HD -650M	SS9-66HD -655M	SS9-66HD -660M	SS9-66HD -665M
Maximum Power (Pmax) [W]	645	650	655	660	665
Open-Circuit Voltage (Voc)[V]	44.60	44.80	45.00	45.20	45.40
Maximum Power Voltage (Vmp) [V]	37.60	37.80	38.00	38.20	38.40
Short-Circuit Current (Isc)[A]	18.42	18.47	18.52	18.56	18.60
Maximum Power Current (Imp) [A]	17.18	17.21	17.24	17.28	17.32
Module Efficiency	20.76%	20.92%	21.09%	21.25%	21.41%

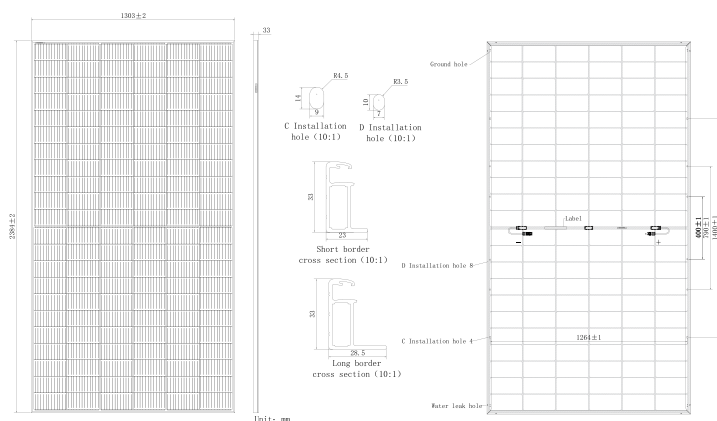
Irradiation 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM=1.5

## Electric Characteristics (NMOT)

Module Type	SS9-66HD -645M	SS9-66HD -650M	SS9-66HD -655M	SS9-66HD -660M	SS9-66HD -665M
Maximum Power (Pmax) [W]	483	487	491	495	499
Open-Circuit Voltage (Voc)[V]	42.50	42.70	42.90	43.00	43.20
Maximum Power Voltage (Vmp) [V]	35.40	35.60	35.80	36.00	36.20
Short-Circuit Current (Isc)[A]	14.82	14.86	14.89	14.93	14.96
Maximum Power Current (Imp) [A]	13.65	13.69	13.72	13.76	13.79

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

## Engineering Design



## Bifacial Output-Rearside Power Gain (655W)

Power Gain	5%	10%	15%	20%	25%
Maximum Power (Pmax) [W]	688	721	753	786	819
Open-Circuit Voltage (Voc)[V]	45.20	45.20	45.20	45.20	45.20
Maximum Power Voltage (Vmp) [V]	38.10	38.10	38.10	38.10	38.10
Short-Circuit Current (Isc)[A]	19.35	20.27	21.19	22.12	23.05
Maximum Power Current (Imp) [A]	18.06	18.93	19.78	20.64	21.50

## Temperature coefficients

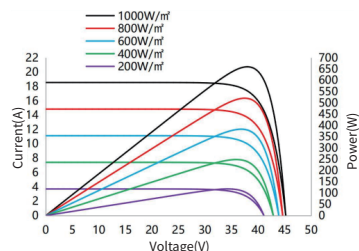
Temperature coefficient of Isc	+0.046%/°C
Temperature coefficient of Voc	-0.260%/°C
Temperature coefficient of Pmax	-0.330%/°C
NMOT	45±2°C

## Mechanical Characteristics

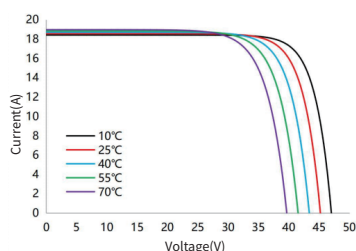
Cell Type	Mono PERC (G12)
Number of Cells	132(6x22)
Dimensions	2384X1303X33mm
Weight	37.5kg
Glass	Front Glass, 2.0mm AR coated semi-tempered glass Back Glass, 2.0mm glazed semi-tempered glass
Frame	Silver, Anodized Aluminum Alloy
Output Cables	4mm <sup>2</sup> (IEC),12AWG(UL) 300mm (including connector) or Customized Length
Junction Box	IP68 Rated, 3 diodes
Connector	MC4-EVO2 or MC4 Compatible
Packaging	33 Pieces/Pallet, 594 pieces/40' container

## Characteristics

I-V/P-V Curve at Different Irradiation  
SS9-66HD-655M



I-V Curve at Different Temperature  
SS9-66HD-655M



## 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%

