ib SOLAR™

Switch to SOLAR for a Brighter Tomorrow

Optima Series -G12R

N-TOPCon

595Wp-625Wp

Key Features

Super Power Output

SolarSpace advanced N-Type 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

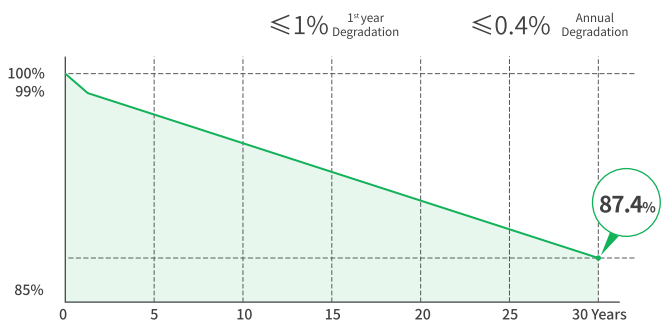
Bifacial power generation reduces BOS and system LCOE dramatically, promoting the project ROI

625W

Maximum
Power Output

23.14%

Maximum
Module Efficiency



12 Years Product Warranty **30** Years Linear Power Warranty

Electric Characteristics（STC）

Module Type	595 Wp	600 Wp	605 Wp	610 Wp	615 Wp	620 Wp	625 Wp
Maximum Power (Pmax) [W]	595	600	605	610	615	620	625
Open-Circuit Voltage (Voc)[V]	48.38	48.58	48.78	48.98	49.18	49.38	49.58
Maximum Power Voltage (Vmp) [V]	40.33	40.47	40.61	40.75	40.89	41.03	41.17
Short-Circuit Current (Isc)[A]	15.68	15.74	15.80	15.86	15.92	15.98	16.04
Maximum Power Current (Imp) [A]	14.77	14.84	14.91	14.98	15.05	15.12	15.19
Module Efficiency	22.03%	22.21%	22.40%	22.58%	22.77%	22.95%	23.14%

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

Bifacial Output-Rearside Power Gain (610W)

Power Gain	5%	10%	15%	20%	25%
Maximum Power (Pmax) [W]	641	671	702	732	763
Open-Circuit Voltage (Voc)[V]	48.98	48.98	48.98	49.00	49.00
Maximum Power Voltage (Vmp) [V]	40.75	40.75	40.75	40.77	40.77
Short-Circuit Current (Isc)[A]	16.64	17.46	18.28	19.11	19.93
Maximum Power Current (Imp) [A]	15.74	16.47	17.23	17.96	18.72

Electric Characteristics (NMOT)

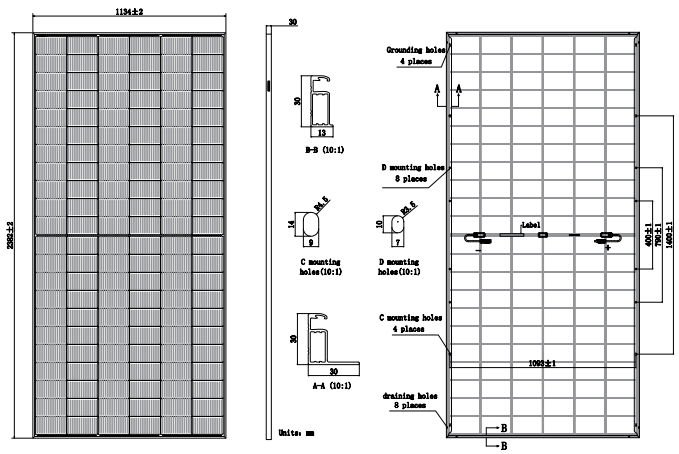
Module Type	595 Wp	600 Wp	605 Wp	610 Wp	615 Wp	620 Wp	625 Wp
Maximum Power (Pmax) [W]	449	453	457	461	465	469	473
Open-Circuit Voltage (Voc)[V]	45.99	46.18	46.37	46.56	46.75	46.94	47.13
Maximum Power Voltage (Vmp) [V]	37.71	37.88	38.05	38.22	38.39	38.55	38.73
Short-Circuit Current (Isc)[A]	12.65	12.71	12.77	12.83	12.89	12.95	13.01
Maximum Power Current (Imp) [A]	11.92	11.97	12.02	12.07	12.12	12.17	12.22

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	-0.260%/°C
Temperature coefficient of Pmax	-0.290%/°C
NMOT	45±2°C

Engineering Design



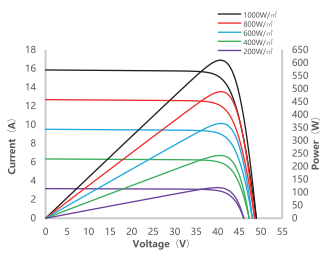
Mechanical Characteristics

Cell Type	Mono N-Type
Number of Cells	132(6x22)
Dimensions	2382X1134X30mm
Weight	32.5kg
Glass	Front Glass, 2.0mm AR coated semi-tempered glass
	Back Glass, 2.0mm glazed semi-tempered glass
Frame	Anodized Aluminum Alloy
Output Cables	4mm²(IEC),12AWG(UL), 300mm (including connector)
Junction Box	IP68 Rated, 3 diodes
Connector	MC4-EVO2 or MC4 Compatible
Packaging	36 Pieces/Pallet, 720 pieces/40' container

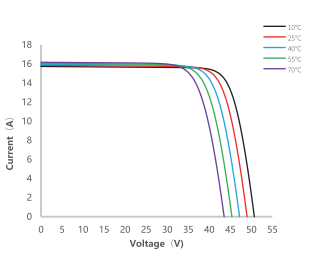
Frame color and cable length are subject to the actual order

Characteristics

I-V/P-V Curve at Different Irradiation
SSA-66HD-610N



I-V Curve at Different Temperature
SSA-66HD-610N



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±5%

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