



Switch to SOLAR for
a Brighter Tomorrow

OPTIMA SERIES G12R

N-TOPCon 132 Cells

595Wp-625Wp

Warranty



Product Warranty: 12 Years: Materials & Workmanship

Linear Performance Warranty: 30 Years

First Year Degradation: $\leq 1.0\%$

Annual Degradation: $\leq 0.4\%$ till 30 Years

KEY FEATURES



SolarSpace advanced N-Type cells combined with MBB and high-density encapsulation provides ultra-high power output.



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 87.4 power generation.



Excellent harsh tests results and advanced half-cell tech improve cycle.



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

CERTIFICATIONS



CERTIFIED
IEC

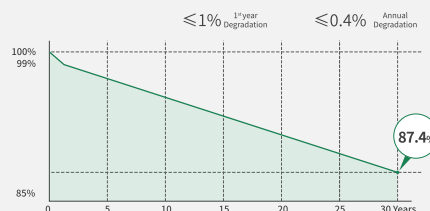
IS 14286:2010 | IEC 61215: 2005 IS | IEC 61730-2:2004 IS
| IEC 61730-1:2004 | IEC 62804 | IEC 61853 | IEC 61701

625W

Maximum
Power Output

23.14%

Maximum
Module Efficiency



12 Years Product Warranty 30 Years Linear Power Warranty



ELECTRIC CHARACTERISTICS (STC)

Module Type	595	600	605	610	615	620	625
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

ELECTRIC CHARACTERISTICS (NMOT)

Module Type	595	600	605	610	615	620	625
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

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

Temperature Coefficient

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

Operating Conditions

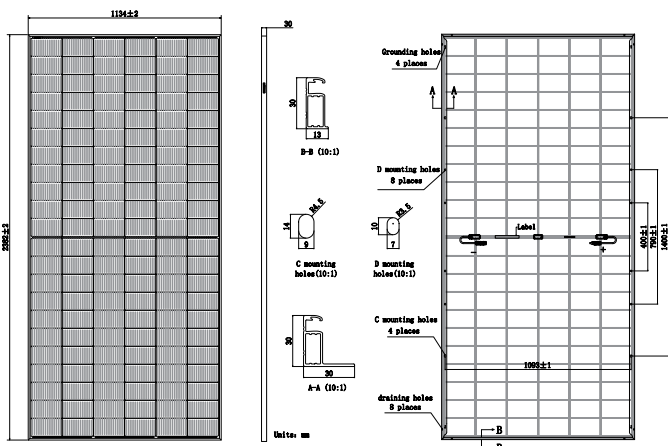
Maximum System Voltage	1500V DC (IEC)
Power Tolerance	0~+3%
Operating Temperature	-40°C~+85°C
Maximum Series Fuse Rating	30A
Mechanical Load Front Rear	5400Pa
Mechanical Load Back Rear	2400Pa
Bifaciality	80±5%

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	4mm ² (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

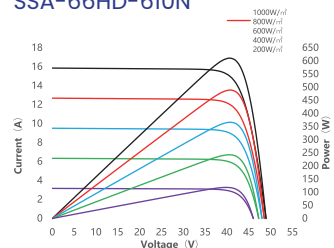
• IFrame color and cable length are subject to the actual order

Engineering Design



Characteristics

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



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

