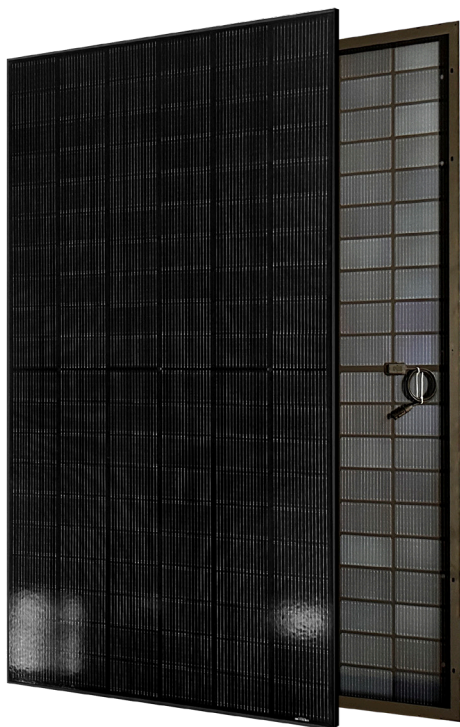


JLSDG120R500W
470 - 500
 FullBlack - Bifacial

0~+3W Positive power tolerance | **22,55%** Maximum efficiency


JNL SOLAR, A HIGH-QUALITY MODULE THROUGH ITS HIGH PERFORMANCE CONSTRUCTION

Leveraging our expertise in solar technology and commitment to ongoing innovation, JNL Solar is proud to introduce the OptimaX+ 500Wc Black Frame module. This module benefits from our advanced manufacturing process, ensuring optimal quality at every stage, from assembly to the finished product. The OptimaX 500Wc Black Frame incorporates bifacial technology with a double-glass design, providing exceptional durability and performance. Its all-black aesthetic makes it the ideal choice for installations where design is paramount. Designed to be versatile and durable, this module guarantees energy efficiency above 22.55%, with excellent low-light performance, ready to excel in all conditions.



A sleek, elegant design that blends in perfectly with the roof - an all-black photovoltaic module from cell to frame.



Efficient & Low-Maintenance: Our JNL module boosts energy with over 80% bifaciality and self-cleaning glass



Guaranteed Performance: Our modules maintain up to 89.4% energy output for 25 years and 87.4% for 30 years.



High Reliability and Efficiency: N-type components with reduced LID/LETID attenuation, 22.55% efficiency, and improved low-light performance.



High conversion efficiency thanks to high-quality modules and advanced cell technology.



Enhanced PID Resistance and Protection: Our rigorous production process minimizes PID risk and protects against hotspots, with a power tolerance of 0 to +3%.



Ideal for private or commercial installations. High power output reduces installation costs.



High reliability thanks to rigorous quality control. More than 30 in-house tests (UV, HF, and many others). Our tests go beyond certification requirements.



Our panels are tested and certified to withstand extreme environmental conditions: wind loads (2400 Pa) and snow loads (5400 Pa).

MECHANICAL DATA

Dimensions	1955×1134×35mm (with frame)
Weight	26.5kg
Cells	N type Mono-Crystalline , 182x93.4mm
Glass	(F) 2.0mm ultra clear embossed double layer colorless glass (B) 2.0mm black mesh semi-tempered glasst
Junction box	IP68
Cable	4mm², symmetrical lengths 1100mm
Connector	MC4 Compatible IP68
Number of cells	120cells (Half-Cell)

ELECTRICAL DATA (parameters at standard test conditions)

TYPICAL TYPE		470W	475W	480W	485W	490W	495W	500W
Max Power	P_{max}	470	475	480	485	490	495	500
Max Power Voltage	V_{mp}	35.56	35.72	35.88	36.04	36.19	36.35	36.53
Max Power Current	I_{mp}	13.22	13.30	13.38	13.46	13.54	13.62	13.69
Open Circuit Voltage	V_{oc}	43.00	43.15	43.29	43.43	43.57	43.72	43.87
Short Circuit Current	I_{sc}	13.77	13.85	13.94	14.02	14.09	14.17	14.25
Module Efficiency	%	21,20%	21,43%	21,65%	21,88%	22,10%	22,33%	22,55%
Power Tolerance		0~+5W						
Max System Voltage		DC 1500V (TUV) / 1500V (UL)						
Maximum Series Fuse Rating		30A						

(STC:AM=1.5, 1000W/m², Cells Temperature 25°C)

ELECTRICAL CHARACTERISTICS with 15% Rear Side Power Gain

TYPICAL TYPE		470W	475W	480W	485W	490W	495W	500W
Max Power	P_{max}	540.50	546.25	552	557.75	563.50	569.25	575
Max Power Voltage	V_{mp}	35.56	35.72	35.88	36.04	36.19	36.35	36.53
Max Power Current	I_{mp}	15.20	15.29	15.38	15.48	15.57	15.66	15.74
Open Circuit Voltage	V_{oc}	43.00	43.15	43.29	43.43	43.57	43.72	43.87
Short Circuit Current	I_{sc}	15.84	15.93	16.03	16.12	16.20	16.30	16.39

ELECTRICAL PARAMETERS AT NMOT TEST CONDITIONS

TYPICAL TYPE		470W	475W	480W	485W	490W	495W	500W
Max Power	P_{max}	540.50	546.25	552	557.75	563.50	569.25	575
Max Power Voltage	V_{mp}	35.56	35.72	35.88	36.04	36.19	36.35	36.53
Max Power Current	I_{mp}	15.20	15.29	15.38	15.48	15.57	15.66	15.74
Open Circuit Voltage	V_{oc}	43.00	43.15	43.29	43.43	43.57	43.72	43.87
Short Circuit Current	I_{sc}	15.84	15.93	16.03	16.12	16.20	16.30	16.39

(Irradiance 800W/m², Ambient Temperature 20, AM 1.5, Wind Speed 1m/s)

TEMPERATURE RATINGS

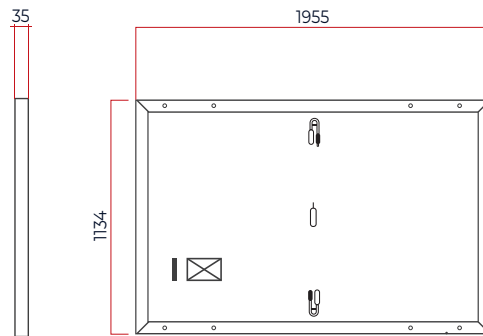
Temperature Coefficient of Isc	0.046%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Pmax	-0.30%/°C
Operational Temperature	-40±85°C
NOCT (Nominal Operating Cell Temperature)	42±2°C

CERTIFICATIONS

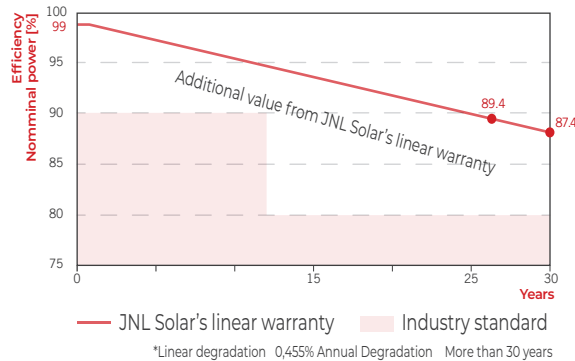
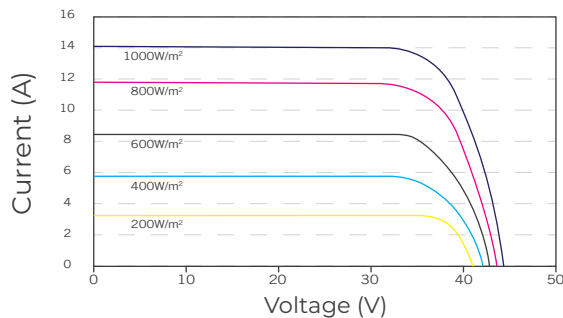
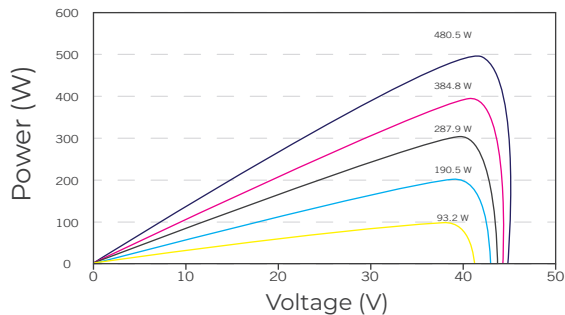


IEC 61215-1:2021 / IEC 61215-1-1:2021 / IEC 61215-2:2021
IEC 61730-1:2023 / IEC 61730-2:2023

DIMENSIONS AND STRUCTURE



CHARACTERISTICS AT DIFFERENT IRRADIATION



PACKAGING CONFIGURATION

Container	40 HQ
Quantity / pallet	31 pieces
Pallets / container	24 pieces
Quantity / container	744 pieces

AUTHORIZED DEALER

CAUTION: Read the instructions for safety installations before using the product JNLSolar (All rights reserved) © 2024. Specifications included in this data sheet are subject to change without notice