

MAXIMUM EFFICIENCY %

23.30

POSITIVE POWER TOLERANCE WP

0~+5.00

WATTAGE RANGE WP

610-630

CELLS

132



Low electricity generation costs

Optimized module layout to boost module power and improve LCOE.



PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



Better Shadow Performance

Implementation of bypass diodes in split JB series-parallel



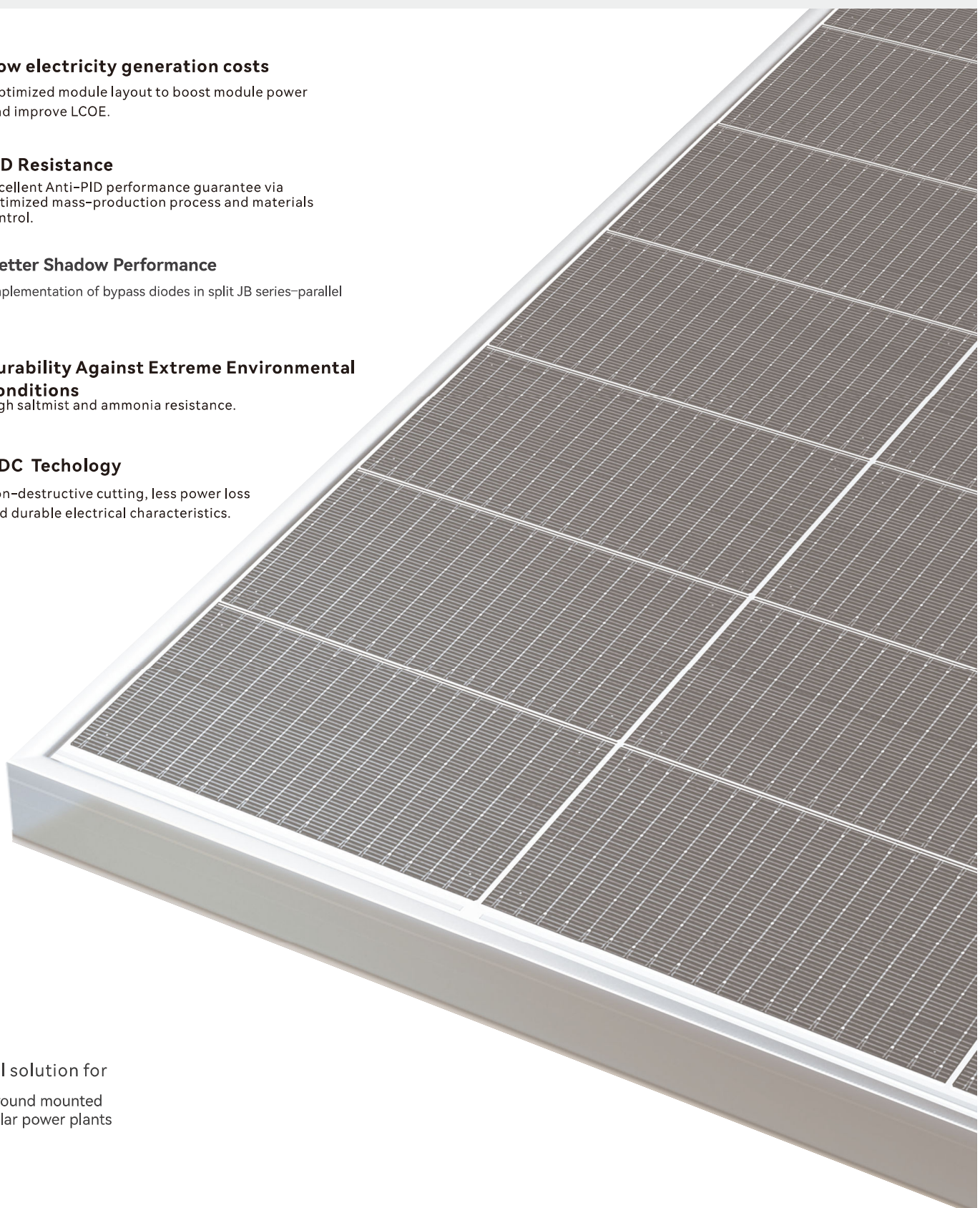
Durability Against Extreme Environmental Conditions

High saltmist and ammonia resistance.



NDC Technology

Non-destructive cutting, less power loss and durable electrical characteristics.



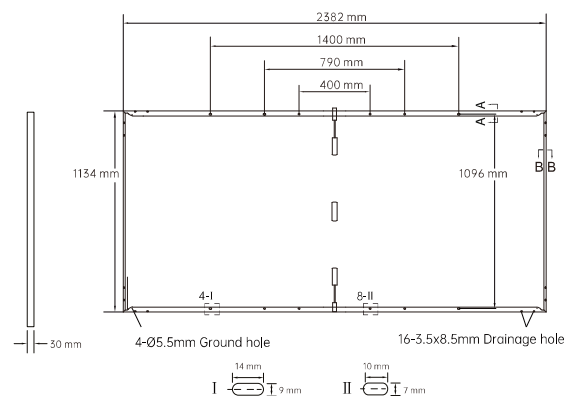
The ideal solution for



Ground mounted
solar power plants

■ Mechanical Specification

Dimension	2382x1134x30mm (93.77x44.64x1.18 in)
Weight	31.9kg
Front Cover	2.0 mm (0.08 in) tempered glass , Anti-Reflection Coated
Back Cover	2.0 mm (0.08 in), Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Cell	N-Type Monocrystalline
Junction Box	Protection class IP68, with bypass diodes
Cable	4mm ² Solar Cable (+)≤13.7 in (350 mm) (-)≤9.8 in (250 mm)
Connector	MC 4 or MC 4 Compatible; -IP68



■ Electrical Characteristics

POWER CLASS	610	615	620	625	630
-------------	-----	-----	-----	-----	-----

MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC¹ (POWER TOLERANCE +5W / -0W)

			610	BSTC*	615	BSTC*	620	BSTC*	625	BSTC*	630	BSTC*
Minimum	Power at MPP ¹	P _{MPP}	[W]	610	670	615	675	620	680	625	685	690
	Short Circuit Current ¹	I _{SC}	[A]	15.94	17.53	16.02	17.61	16.11	17.72	16.19	17.83	17.94
	Open Circuit Voltage ¹	V _{OC}	[V]	48.74	48.94	48.89	49.09	49.04	49.14	49.19	49.19	49.34
	Current at MPP	I _{MPP}	[A]	14.77	16.29	14.84	16.36	14.92	16.44	14.99	16.51	15.07
	Voltage at MPP	V _{MPP}	[V]	41.31	41.13	41.43	41.25	41.56	41.37	41.69	41.49	41.82
	Efficiency ¹	η	[%]	≥22.6		≥22.8		≥23.0		≥23.1		≥23.3

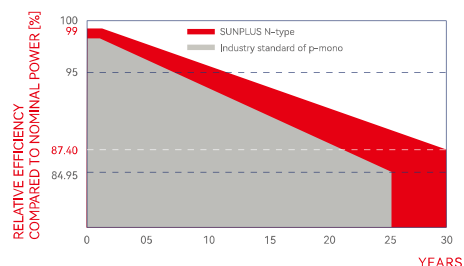
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS NMOT²

Minimum	Power at MPP	P _{MPP}	[W]	466		471		476		481		486
	Short Circuit Current	I _{SC}	[A]	12.78		12.81		12.84		12.87		13.00
	Open Circuit Voltage	V _{OC}	[V]	46.50		46.80		47.10		47.40		47.70
	Current at MPP	I _{MPP}	[A]	12.16		12.23		12.30		12.37		12.44
	Voltage at MPP	V _{MPP}	[V]	38.30		38.50		38.70		38.90		39.10

¹Measurement tolerances P_{MPP} ± 3 %; I_{SC}; V_{OC} ± 5 % at STC: 1000 W/m², 25 ± 2 °C, AM 1.5 according to IEC 60904-3 • ²800 W/m², NMOT, spectrum AM 1.5

*at BSCT: 1000 W/m² + φ × 135 W/m², φ = 80 %, 25 ± 2 °C, AM 1.5 according to IEC 60904-3

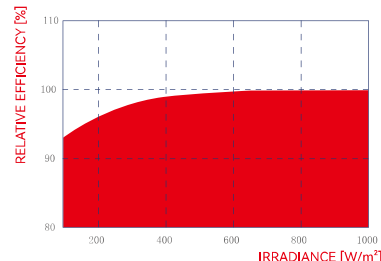
MODULE PERFORMANCE WARRANTY



At least 99 % of nominal power during first year. Thereafter max. 0.4% degradation per year. At least 95 % of nominal power up to 10 years. At least 87.40 % of nominal power up to 30 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the FutureSolar sales organisation of your respective country.

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²).

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I _{SC}	α	[% / K]	+0.043	Temperature Coefficient of V _{OC}	β	[% / K]	-0.25
Temperature Coefficient of P _{MPP}	γ	[% / K]	-0.29	Nominal Module Operating Temperature	NMOT	[°C]	43±3

■ Properties for system Design

Maximum System Voltage	V _{SYS}	1500VDC (IEC)	PV module classification	Class II
Maximum Reverse Current	I _R	35A	Fire Rating based UL61730	Type 29
Max. Design Load, Push / Pull		5400 / 2400	Permitted Module Temperature	-40°C~+85°C
Max. Test Load, Push / Pull		8100 / 4000	on Continuous Duty	

■ Qualifications and Certificates

Quality Controlled PV –
CSA;
UL 61730-1;
UL 61730-2.



Packaging Information

Vertical packaging	2396 mm	1110 mm	1251 mm	1190 kg	18 pallets	20 pallets	36 modules
--------------------	---------	---------	---------	---------	------------	------------	------------

SUNPLUS pursues minimizing paper output in consideration of the global environment

SUNPLUS OPTIMUM INC 90 State Street, Suite 700, Albany, NY, 12207 | TEL +1 (209) 389-9861 | EMAIL info@wesunplus.com | WEB www.wesunplus.com