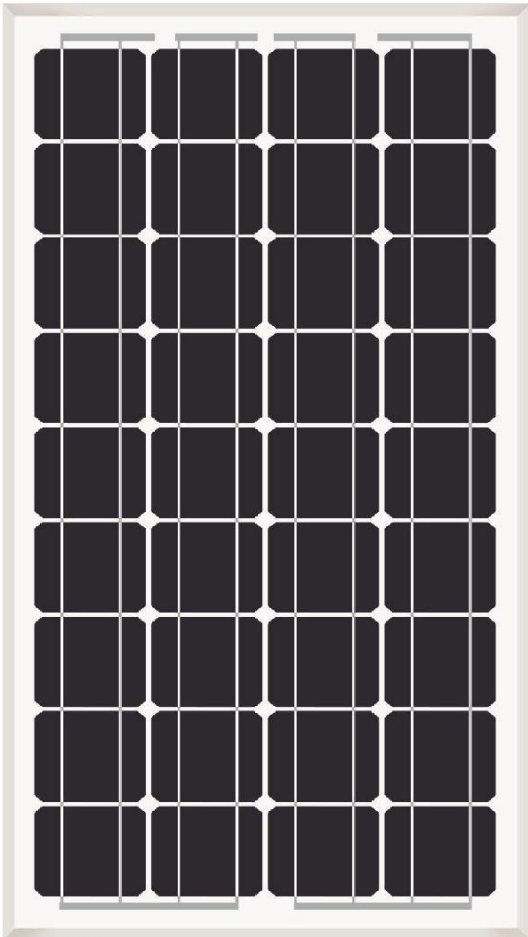


LN90(18)M-xxx (90-110W mono)

Secured Premium Quality:



Quality & Long Lifetime: 10 year product guarantee of material and workmanship of Linuo Modules.



Warranty: Linuo offers linear power guarantee over 25 years for all modules.



Insurance: all guarantee items are covered by 25 year non-cancellable insurance for quality and performance--soalsafe.



Power Output: Linuo Modules are 100% plus tolerance by up to 5W.



Quality Control: More than 100 control points and test processes and 3 times 100% EL test.



TUV-Certificate: Linuo Modules fully match with DIN IEC 61215 und 61730 certification requirements.



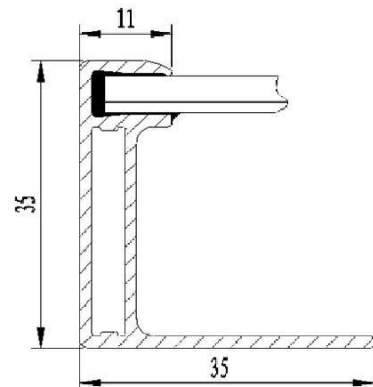
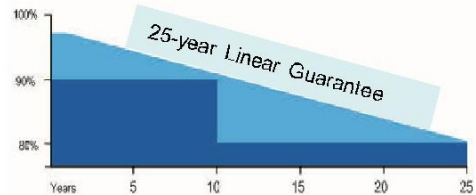
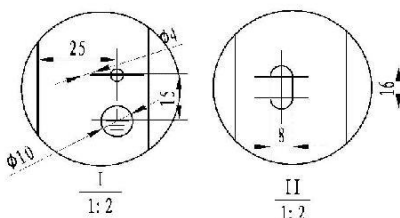
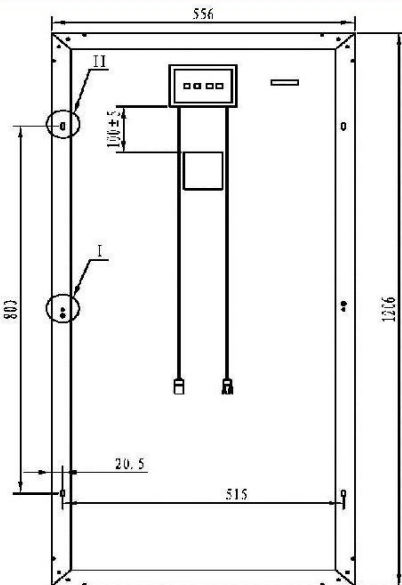
Durability: Linuo Modules fully match with DIN IEC requirements on resistance against ammonia & salt mist corrosion.



Superior Performance: High performance and power output in low solar irradiation.



Stability: 5400 Pa Snow Load and 2400 Pa Wind Load fully matching with DIN IEC 61215 requirements.



Power Output: Coating film on glass surface enable modules self cleaning function



Assurance: German Contract Partner and German law



Top-Ranking in STS Long-term Test - Linuo Module can fulfill all international standards.

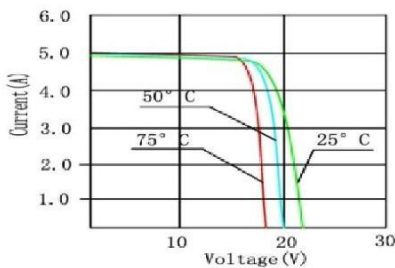


Electrical Data

Pmax (W)	Uoc (V)	Isc (A)	Ump (V)	Imp (A)	FF	Module Efficiency	Max System Voltage	Max Series Fuse
90	22.29	5.33	18.45	4.88	75.784%	13.42%	1000V	10A
95	22.43	5.54	18.6	5.11	76.488%	14.17%	1000V	10A
100	22.98	5.62	18.73	5.34	77.445%	14.91%	1000V	10A
105	23.75	5.68	19.17	5.48	77.874%	15.66%	1000V	10A
110	24.61	5.73	19.80	5.56	78.068%	16.40%	1000V	10A

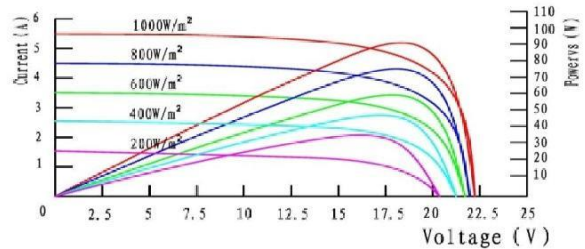
Temperature coefficient

Temperature Cycling Range	-40°C to +85°C
Nominal Operating Cell Temperature	48 °C
Temperature Coefficient of Isc:	0.027%/°C
Temperature Coefficient of Voc	-0.337%/°C
Temperature Coefficient of Pmax	-0.469%/°C



Mechanical Data

Module Dimension:	1206*556*35mm
Weight:	9kg
Mechanical Load:	5400 pa
Number of Cells:	36pcs
Thickness of Glass:	3.2mm



Guarantee

10-year product warranty (manufacturer guarantee)

For the general terms of 10-year product warranty on materials and workmanship of modules will be effective from the date of current contract.

25-year Power Output Warranty (Linear Guarantee)

In the first year of the warranty, the peak power of poly-crystalline module should be no less than 97.5% of the rated power (Pmax.) and 96.5% for mono-crystalline module. At the end of the 25th Year power of both types modules should be at least 80% of rated power. The annual decline in performance is 0.729% maximum for poly-crystalline modules and 0.68% for mono-crystalline modules.

STC (Standard Test Conditions): Irradiance 1000 W/m². Spectrum AM 1.5. Cell Temperature: 25 °C. NOCT(Nominal Operating Cell Temperature): Irradiance 800 W/m². Spectrum: AM 1.5. Environment Temperature: 20°C. Rated Operating Temperature: 48.2°C. Dimension: + / - 3 mm. Measurement Tolerances: + / - 3.5%. Data Tolerance: + / - 10% (except rated power). Technical Changes Reserved. All information without guarantee. Status: 12/2012. Please note that the output of black modules (All Black Type) can be reduced by up to 5% (per 1 °C increased of module temperature, the output drops by 0.5%). Please provide good ventilation condition.

