



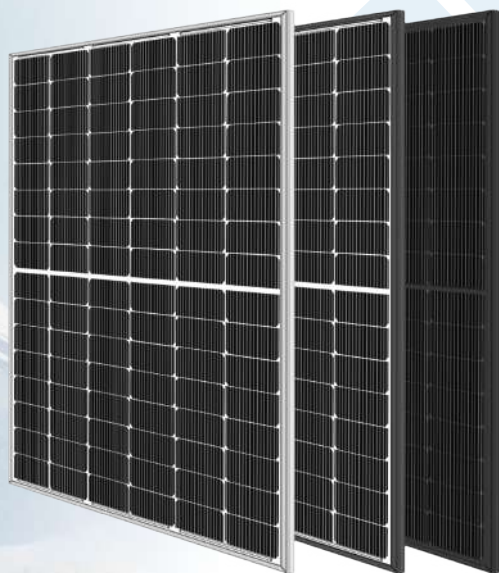
LEAPTON
SOLAR

Monofacial

Bifacial

LP182*210-M-48-NB N-Type TOPCon Dual Glass

Rated Power 440-460W



N-Type 182*210mm Cell
Adopting the 182*210mm N-Type TOPCon solar cells with the highest efficiency.



Low Light Features
Higher performance under low light environment.



Bifacial with dual glass
Module adopts 182*210mm half cells, bifacial module provide an additional 5%~25% output.



PID Protection
Ensure the attenuation probability caused by PID phenomenon is minimized.



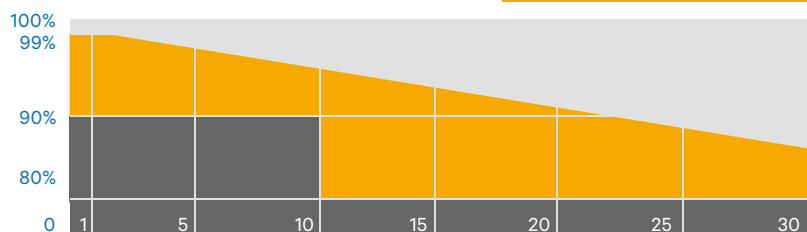
Harsh Environmental Adaptability
Strict salt spray and ammonia corrosion test by TUV Nord.



Load Capacity
Mechanical load tests including wind load 2400 Pa and snow load 5400 Pa done by TUV Nord.

■ Leapton N-Type Linear Power Warranty ■ Industry Warranty

0.4% Annual Degradation over 30 years



Headquarter : Leapton Energy Co., Ltd.

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🌐 www.leaptonenergy.jp

Manufacturer : Leapton Solar (Changshu) Co., Ltd.

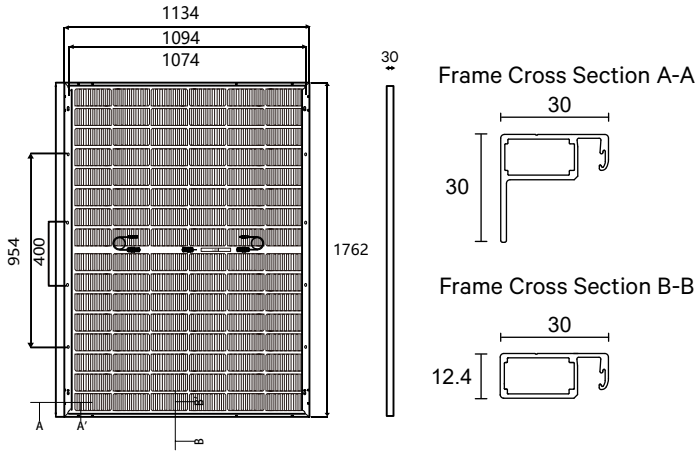
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MECHANICAL DIAGRAMS



SPECIFICATIONS

Weight	24kg
Dimensions	1762mm*1134mm*30mm
Cell Dimensions	182*210mm
Cell Amount	48*2 pcs
Maximum System Voltage	1500V
Junction Box	IP68
Front glass	2.0mm, Anti-Reflection Coating
Back glass	2.0mm, Heat Strengthened Glass
Frame	Aluminum Alloy
Cable	4mm ² , N 1100mm/P 1100mm for Horizontal installation 4mm ² , N 300mm/P 300mm for Vertical installation
Connector	MC4 compatible
Bifaciality	80±5%

ELECTRICAL PARAMETERS AT STC

Power	440W	445W	450W	455W	460W
Open Circuit Voltage	35.38V	35.63V	35.88V	36.13V	36.39V
Short Circuit Current	15.84A	15.90A	15.97A	16.02A	16.08A
Maximum Power Voltage	29.38V	29.58V	29.78V	29.98V	30.23V
Maximum Power Current	14.98A	15.04A	15.11A	15.18A	15.22A
Module Efficiency	22.02%	22.27%	22.52%	22.77%	23.02%

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL PARAMETERS AT NMOT

Power	335W	339W	343W	347W	350W
Open Circuit Voltage	33.56V	33.82V	34.08V	34.34V	34.54V
Short Circuit Current	12.74A	12.79A	12.85A	12.88A	12.92A
Maximum Power Voltage	27.67V	27.86V	28.05V	28.24V	28.43V
Maximum Power Current	12.11A	12.17A	12.23A	12.29A	12.31A

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

ELECTRICAL PARAMETERS (AT 10% BIFACIAL POWER OUTPUT)

Output Power	484W	490W	495W	501W	506W
Open Circuit Voltage	35.38V	35.63V	35.88V	36.13V	36.39V
Short Circuit Current	17.38A	17.47A	17.53A	17.61A	17.66A
Maximum Power Voltage	29.38V	29.58V	29.78V	29.98V	30.23V
Maximum Power Current	16.47A	16.57A	16.62A	16.71A	16.74A

TEMPERATURE CHARACTERISTICS

NMOT	41±3°C	Temp Coefficient of ISC	+0.046%/°C
Temp Coefficient of VOC	-0.25%/°C	Temp Coefficient of Pmax	-0.30%/°C

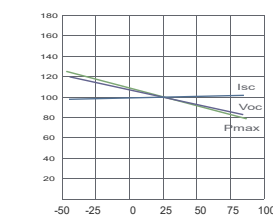
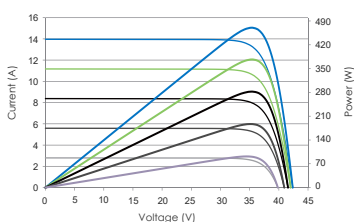
PACKING CONFIGURATION

Modules/Pallet	37 Pieces	Modules/40'Container	962 Pieces
Packing Description	26 Pallets, Total=(37+37)x13=962 Pieces		

CHARACTERISTICS

LP182*210-M-48-NB-450W

LP182*210-M-48-NB-450W



MAXIMUM RATING

Output Tolerance	0~+5W
Operating Temperature	-40°C~+85°C
Wind Load/Snow Load	2400pa/5400pa
Fuse Current	25A



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