



**LEAPTON**  
SOLAR

Monofacial

Bifacial

# LP182\*182-M-60-NH N-Type

Rated Power 460-480W



**N-Type MBB Cell**  
New circuit design N-type cells, can increase the output power of 10W~20W



**Low Light Features**  
Higher performance under low light environment.



**Higher Output Power**  
Module adopts 120 pcs of 182\*182mm half cells, the maximum power can reach 480W.



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



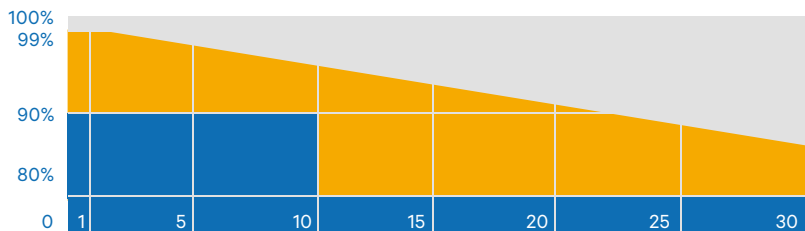
**Harsh Environmental Adaptability**  
Strict salt spray and ammonia corrosion test by TUV Nord.



**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



\*J-PEC Product



IEC 61215-2: 2016  
IEC 61730-2: 2016

Headquarter : Leapton Energy Co., Ltd.

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

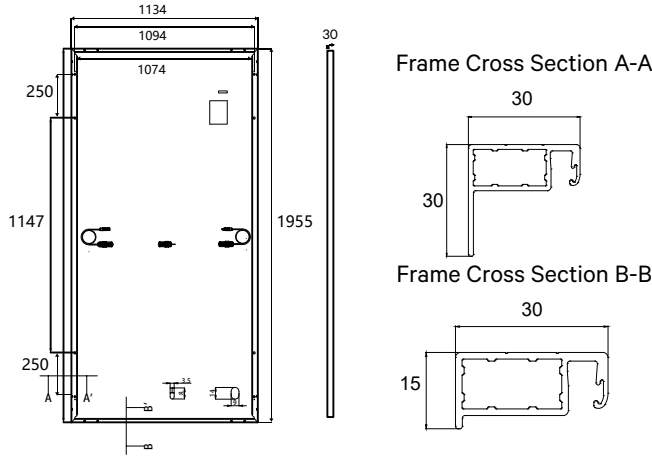
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## MECHANICAL DIAGRAMS



## SPECIFICATIONS

|                        |   |
|------------------------|---|
| Weight                 | 23.5kg  |
| Dimensions             | 1955mm*1134mm*30mm  |
| Cell Dimensions        | 182*182mm   |
| Cell Amount            | 60*2 pcs  |
| Maximum System Voltage | 1500V   |
| Junction Box           | IP68  |
| Frame                  | Aluminum Alloy  |
| Cable                  | 4mm <sup>2</sup> , N 1200mm/P 1200mm or customized length |
| Connector              | MC4 compatible  |
| Application Level      | Class A   |

## ELECTRICAL PARAMETERS AT STC

|                       |        |        |        |        |        |
|-----------------------|--------|--------|--------|--------|--------|
| Power                 | 460W   | 465W   | 470W   | 475W   | 480W   |
| Open Circuit Voltage  | 42.51V | 42.68V | 42.85V | 43.03V | 43.19V |
| Short Circuit Current | 13.60A | 13.67A | 13.75A | 13.83A | 13.90A |
| Maximum Power Voltage | 35.22V | 35.36V | 35.55V | 35.69V | 35.90V |
| Maximum Power Current | 13.06A | 13.15A | 13.22A | 13.31A | 13.37A |
| Module Efficiency     | 20.75% | 20.97% | 21.20% | 21.43% | 21.65% |

\* Under Standard Test Conditions (STC) of irradiance of 1000 W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature of 25°C.

## ELECTRICAL PARAMETERS AT NMOT

|                       |        |        |        |        |        |
|-----------------------|--------|--------|--------|--------|--------|
| Power                 | 346W   | 350W   | 354W   | 358W   | 361W   |
| Open Circuit Voltage  | 40.37V | 40.53V | 40.69V | 40.86V | 41.03V |
| Short Circuit Current | 10.90A | 10.97A | 11.03A | 11.09A | 11.15A |
| Maximum Power Voltage | 33.05V | 33.24V | 33.43V | 33.62V | 33.80V |
| Maximum Power Current | 10.47A | 10.53A | 10.59A | 10.65A | 10.68A |
| Module Efficiency     | 15.62% | 15.79% | 15.96% | 16.13% | 16.30% |

\* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m<sup>2</sup>, spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

## TEMPERATURE CHARACTERISTICS

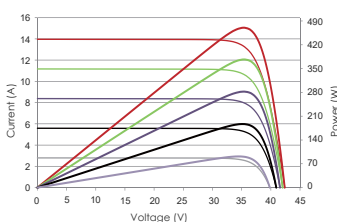
|                         |           |                          |            |
|-------------------------|-----------|--------------------------|------------|
| NMOT                    | 41±3°C    | Temp Coefficient of ISC  | +0.046%/°C |
| Temp Coefficient of VOC | -0.25%/°C | Temp Coefficient of Pmax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

## PACKING CONFIGURATION

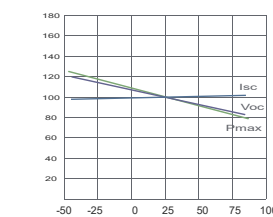
|                     |   |                      |            |
|---------------------|---|----------------------|------------|
| Modules/Pallet      | 36 Pieces                               | Modules/40'Container | 864 Pieces |
| Packing Description | 24 Pallets, Total=(36+36)x12=864 Pieces |                      |            |

## CHARACTERISTICS

LP182\*182-M-60-NH-480W



LP182\*182-M-60-NH-480W



## 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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