

# Certificate



This certifies that the company:

**Lepton Solar (Changshu) Co., Ltd.**  
No. 9, Sunshine Avenue, Yushan High Technology Industry  
Zone, Changshu City, Jiangsu Province, 215500  
P.R. China

is authorized to provide the product(s) mentioned below with the mark as illustrated.

Manufacturer and factory(-ies): See Annex 1

Description of product(s) (details see Annex 2): **Crystalline Silicon Terrestrial Photovoltaic (PV) Modules**

Certification program: P12-VA-01 Rev. 17 / 09.20

Certification fundamental(s): IEC 61215-1:2021 / EN IEC 61215-1:2021,  
IEC 61215-1-1:2021 / EN IEC 61215-1-1:2021, IEC 61215-2:2021 / EN IEC 61215-2:2021,  
IEC 61730-1:2023, IEC 61730-2:2023

It is certified by TÜV NORD CERT GmbH that the product(s) described above has(have) been assessed according to the certification program mentioned above and found in compliance with the requirements of above specified certification fundamental(s). This certification is based on evaluation results as documented in test report(s) referenced below and production site(s) audit results as documented in factory inspection report(s) referenced in Annex 1. This certificate is valid in conjunction with these quoted report(s).

Registration no.: 44 780 24 406749 - 251R3M3  
Report no.: 492013113.005  
File no.: PVP10051/25P

Valid from: 2025-11-06  
Valid until: 2029-06-25

Essen, 2025-11-06

Certification Body - Consumer Products

**TÜV NORD CERT GmbH**  
Am TÜV 1, 45307 Essen, Germany  
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Visit our database to  
verify the validity of  
this certificate.

Please also pay attention to the information stated overleaf.

# Annex 1

to certificate registration no. 44 780 24 406749 - 251R3M3

**Manufacturer:** **Lepton Solar (Changshu) Co., Ltd.**  
No. 9, Sunshine Avenue, Yushan High Technology Industry Zone, Changshu City  
Jiangsu Province, 215500, P.R. China

**Factory:** **Lepton Solar (Changshu) Co., Ltd.**  
No. 9, Sunshine Avenue, Yushan High Technology Industry Zone, Changshu City  
Jiangsu Province, 215500, P.R. China

Factory inspection report no.: 862010379.008

Remark: Factory inspection is mandatory to be performed annually. Please refer to factory inspection report for detailed information.

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# Annex 2

to certificate registration no. 44 780 24 406749 - 251R3M3

**Description of product(s):**

Module types:	<b>Double Glass PV Modules with Half-cut 210*210mm n-type TOPCon Bifacial Silicon Solar Cells:</b> 132 cells: LP210*210-M-66-NB-***W (** = 665-730, in increment of 5) 120 cells: LP210*210-M-60-NB-***W (** = 610-665, in increment of 5) 108 cells: LP210*210-M-54-NB-***W (** = 550-595, in increment of 5) 96 cells: LP210*210-M-48-NB-***W (** = 490-530, in increment of 5) 84 cells: LP210*210-M-42-NB-***W (** = 430-465, in increment of 5) *** indicates rated output power generated from front side under STC
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	30A
Electrical protection class:	Class II
Pollution degree:	1
98 <sup>th</sup> percentile module operating temperature (T <sub>98</sub> ):	70°C
Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class A according to UL790
Isc bifaciality coefficient (ϕ <sub>Isc</sub> ):	80% ± 10%

Module types:	<b>Double Glass PV Modules with Half-cut 182*182/188mm n-type TOPCon Bifacial Silicon Solar Cells:</b> 156 cells: LP182*182-M-78-NB-***W (** = 580-620, in increment of 5) 144 cells: LP182*182-M-72-NB-***W (** = 535-635, in increment of 5) 132 cells: LP182*182-M-66-NB-***W (** = 490-580, in increment of 5) 120 cells: LP182*182-M-60-NB-***W (** = 445-530, in increment of 5) 108 cells: LP182*182-M-54-NB-***W (** = 400-475, in increment of 5) *** indicates rated output power generated from front side under STC
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	25A
Electrical protection class:	Class II

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Pollution degree: 1  
98<sup>th</sup> percentile module operating temperature (T<sub>98</sub>): 70°C  
Design load (positive / negative): 3600Pa / 1600Pa  
Safety factors: 1.5  
Fire safety class: Class A according to UL790  
Isc bifaciality coefficient (φIsc): 80% ± 10%

Module types: **Double Glass PV Modules with Half-cut 182\*210mm n-type TOPCon Bifacial Silicon Solar Cells:**

132 cells: LP182\*210-M-66-NB-\*\*\*W (\*\*\*) = 580-640, in increment of 5)  
120 cells: LP182\*210-M-60-NB-\*\*\*W (\*\*\*) = 530-580, in increment of 5)  
108 cells: LP182\*210-M-54-NB-\*\*\*W (\*\*\*) = 475-520, in increment of 5)  
96 cells: LP182\*210-M-48-NB-\*\*\*W (\*\*\*) = 420-465, in increment of 5)  
\*\*\* indicates rated output power generated from front side under STC

Maximum system voltage: 1500V  
Maximum overcurrent protection rating: 30A  
Electrical protection class: Class II  
Pollution degree: 1  
98<sup>th</sup> percentile module operating temperature (T<sub>98</sub>): 70°C  
Design load (positive / negative): 3600Pa / 1600Pa  
Safety factors: 1.5  
Fire safety class: Class A according to UL790  
Isc bifaciality coefficient (φIsc): 80% ± 10%

Module types: **Double Glass PV Modules with Half-cut 182\*199/191mm n-type TOPCon Bifacial Silicon Solar Cells:**

144 cells: LP182\*199-M-72-NB-\*\*\*W (\*\*\*) = 570-655, in increment of 5)  
132 cells: LP182\*199-M-66-NB-\*\*\*W (\*\*\*) = 525-600, in increment of 5)  
120 cells: LP182\*199-M-60-NB-\*\*\*W (\*\*\*) = 475-545, in increment of 5)  
108 cells: LP182\*199-M-54-NB-\*\*\*W (\*\*\*) = 430-490, in increment of 5)  
\*\*\* indicates rated output power generated from front side under STC

Maximum system voltage: 1500V  
Maximum overcurrent protection rating: 25A  
Electrical protection class: Class II  
Pollution degree: 1  
98<sup>th</sup> percentile module operating temperature (T<sub>98</sub>): 70°C  
Design load (positive / negative): 3600Pa / 1600Pa

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Safety factors: 1.5  
Fire safety class: Class A according to UL790  
Isc bifaciality coefficient ( $\phi_{Isc}$ ):  $80\% \pm 10\%$

Remark:

For detailed product information, please refer to CDF (Constructional Data Form) with the same file no.

Isc bifaciality coefficient ( $\phi_{Isc}$ ) =  $I_{Sc_{rear}}/I_{Sc_{front}}$ , as defined in IEC TS 60904-1-2.

The tolerance of Isc bifaciality coefficient ( $\phi_{Isc}$ ) is claimed by client.

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