

保証・認証

国内・海外の国際機関の認証を取得

◆TÜV-NORD



国家規格に基づいたドイツ政府公認の検査機関による、厳しい条件下（高温・高湿・高電圧）での各種性能試験、安全性試験、塩水、アンモニアガス、PID耐久試験に当社の太陽電池モジュールがクリアしたことを証明しています。

1.モジュールの性能および安全性認証・規格

規格概要	IEC番号	対応JIS番号	内容
太陽電池モジュールの性能・信頼性	IEC 61215-1 : 2021	JIS C 61215-1 : 2025	地上設置の太陽電池（PV）モジュール－設計適格性確認及び型式認証－第1部：試験要求事項
	IEC 61215-1-1 : 2021	JIS C 61215-1-1 : 2025	地上設置の太陽電池（PV）モジュール－設計適格性確認及び型式認証－第1-1部：結晶シリコン太陽電池（PV）モジュールの試験に関する特別要求事項
	IEC 61215-2 : 2021	JIS C 61215-2 : 2025	地上設置の太陽電池（PV）モジュール－設計適格性確認及び型式認証－第2部：試験方法
太陽電池モジュールの安全性	IEC 61730-1 : 2023	-	太陽電池（PV）モジュールの安全適格性確認－第1部：構造に関する要求事項
	IEC 61730-2 : 2023	-	太陽電池（PV）モジュールの安全適格性確認－第2部：試験に関する要求事項
	IEC 62790:2020	-	太陽電池（PV）モジュール用端子箱－安全性要求事項及び試験
塩水噴霧腐食認証		IEC61701:2020	
アンモニアガス認証		IEC62716:2013	
PID試験		IEC TS 62804-1:2025	

2.火災等級・感電保護クラス

火災安全等級	片面モジュール ANSI/UL 1703-2018 (ANSI/UL 790-2018)	Class C
	両面モジュール UL790	Class A
感電保護クラス	IEC 61730	Class II

◆ J-pec



低炭素社会づくりに貢献する太陽光発電の普及を推進するため、住宅用太陽光発電システムを設置する方を対象とした補助金制度です。

◆ その他の承認



◆ 製品品質保証

P-type太陽電池モジュール	顧客に販売してから25年間、納入初年度は2.0%までの出力低下となり、2年目以降は毎年0.55%までの出力低下となります。保証期間終了時の最大出力は、84.8%以上を保証いたします。
N-type太陽電池モジュール	顧客に販売してから30年間、納入初年度は1.0%までの出力低下となり、2年目以降は毎年0.4%までの出力低下となります。保証期間終了時の最大出力は、87.4%以上を保証いたします。

生産物賠償責任保険（PL保険）	太陽電池モジュールのほか、当社が販売する製品によるリスクにも対応致します。
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CERTIFICATE

TÜV NORD CERT GmbH

herewith declares that

Leapton Energy Co., Ltd.

Tousei Bld.6F, 1-2-1, Aioicho, Chuo-ku Kobe-shi, Hyogo, Japan

is authorized to provide the product mentioned below with the mark as illustrated:

Description of product (details see Annex 2):

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules



Valid from: 2024-07-29

Valid until: 2029-07-10

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.

Registered No.:

44 780 24 406749 - 299

Manufacturer and factory(-ies):

See Annex 1

Test Report No.:

492013317.001

File No.:

PVP05178/24P-03

A blue handwritten signature, likely of a representative of TÜV NORD CERT.

TÜV NORD CERT GmbH
Certification Body
Consumer Products



Essen, 2024-07-29

Please also pay attention to the information stated overleaf.

Manufacturer and factory(-ies):

Manufacturer: **Leapton Energy Co., Ltd.**
Tousei Bld.6F,1-2-1,Aioicho,Chuo-ku Kobe-shi,Hyogo,Japan

Factory: **Leapton 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.: **862010379.007**

Remark:

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

Description of product(s):

Module types:	PV Modules with Half-cut 210*210mm Mono-crystalline Silicon Solar Cells: 132 cells: LP210*210-M-66-MH-***W (** = 630-665, in increment of 5) 120 cells: LP210*210-M-60-MH-***W (** = 575-605, in increment of 5) 108 cells: LP210*210-M-54-MH-***W (** = 515-545, in increment of 5) 96 cells: LP210*210-M-48-MH-***W (** = 460-480, in increment of 5) 84 cells: LP210*210-M-42-MH-***W (** = 400-420, in increment of 5)
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	30A
Electrical protection class:	Class II
Pollution degree:	1
98th percentile module operating temperature (T ₉₈)	70°C
Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)
Module types:	PV Modules with Half-cut 182*182/188mm n-type TOPCon Bifacial Silicon Solar Cells: 156 cells: LP182*182-M-78-NH-***W (** = 580-625, in increment of 5) 144 cells: LP182*182-M-72-NH-***W (** = 555-600, in increment of 5) 132 cells: LP182*182-M-66-NH-***W (** = 510-550, in increment of 5) 120 cells: LP182*182-M-60-NH-***W (** = 460-500, in increment of 5) 108 cells: LP182*182-M-54-NH-***W (** = 410-450, in increment of 5)
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	25A
Electrical protection class:	Class II
Pollution degree:	1
98th percentile module operating temperature (T ₉₈)	70°C
Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)



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Module types:	PV Modules with Half-cut 182*210mm n-type TOPCon Bifacial Silicon Solar Cells: 132 cells: LP182*210-M-66-NH-***W (** = 580-635, in increment of 5) 120 cells: LP182*210-M-60-NH-***W (** = 530-575, in increment of 5) 108 cells: LP182*210-M-54-NH-***W (** = 475-520, in increment of 5) 96 cells: LP182*210-M-48-NH-***W (** = 420-460, in increment of 5)
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	25A
Electrical protection class:	Class II
Pollution degree:	1
98th percentile module operating temperature (T ₉₈)	70°C
Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)

Module types:	PV Modules with Half-cut 182*199/191mm n-type TOPCon Bifacial Silicon Solar Cells: 144 cells: LP182*199-M-72-NH-***W (** = 570-655, in increment of 5) 132 cells: LP182*199-M-66-NH-***W (** = 525-600, in increment of 5) 120 cells: LP182*199-M-60-NH-***W (** = 475-545, in increment of 5) 108 cells: LP182*199-M-54-NH-***W (** = 430-490, in increment of 5)
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	25A
Electrical protection class:	Class II
Pollution degree:	1
98th percentile module operating temperature (T ₉₈)	70°C
Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)



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Module types:	PV Modules with Half-cut 210*210mm n-type TOPCon Bifacial Silicon Solar Cells: 132 cells: LP210*210-M-66-NH-***W (** = 675-700, in increment of 5) 120 cells: LP210*210-M-60-NH-***W (** = 615-635, in increment of 5) 108 cells: LP210*210-M-54-NH-***W (** = 555-570, in increment of 5) 96 cells: LP210*210-M-48-NH-***W (** = 490-510, in increment of 5) 84 cells: LP210*210-M-42-NH-***W (** = 430-445, in increment of 5)
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	30A
Electrical protection class:	Class II
Pollution degree:	1
98th percentile module operating temperature (T ₉₈)	70°C
Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)

Remark:

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



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Certificate



This certifies that the company:

Leapton Energy Co., Ltd.

Tousei Bld.6F,1-2-1,Aioicho,Chuo-ku Kobe-shi,Hyogo
Japan

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) **Crystalline Silicon Terrestrial Photovoltaic (PV) Modules**
(details see Annex 2):

Trademark: See Annex 1

Certification scheme: P12.4-VA-01 Rev. 01 / 01.26 Certification scheme type: Type 5 acc. to ISO/IEC 17067:2013

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 - 300R2M2

Report no.: 492013318.003

File no.: PVP05039/26P-001

Valid from: 2026-05-29

Valid until: 2029-06-25

Essen, 2026-05-29

Certification Body - Consumer Products

TÜV NORD CERT GmbH

Am TÜV 1, 45307 Essen, Germany

tuev-nord-cert.de | prodcert@tuev-nord.de

Please also pay attention to the information stated overleaf.

TÜV®



Scan the QR code or
visit cis.tuev-nord.com.cn to verify
the validity of the
certificate

Annex 1

to certificate registration no. 44 780 24 406749 - 300R2M2

Manufacturer:

Leapton Energy Co., Ltd.

Tousei Bld.6F,1-2-1,Aioicho,Chuo-ku Kobe-shi,Hyogo,Japan

Trademark:



Factory:

Leapton 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.

Essen, 2026-05-29



Certification Body - Consumer Products

TÜV NORD CERT GmbH

Am TÜV 1, 45307 Essen, Germany

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Annex 2

to certificate registration no. 44 780 24 406749 - 300R2M2

Description of product(s):

Module types:	Double Glass PV Modules with Half-cut 210*210mm n-type TOPCon Bifacial Silicon Solar Cells: 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 th percentile module operating temperature (T ₉₈):	70°C
Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class A according to UL790
Isc bifaciality coefficient (ϕ _{Isc}):	80% ± 10%

Module types:	Double Glass PV Modules with Half-cut 182*182/188mm n-type TOPCon Bifacial Silicon Solar Cells: 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

Essen, 2026-05-29

Certification Body - Consumer Products

TÜV NORD CERT GmbH

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Annex 2

to certificate registration no. 44 780 24 406749 - 300R2M2

Pollution degree:	1
98 th percentile module operating temperature (T ₉₈):	70°C
Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class A according to UL790
Isc bifaciality coefficient (ϕ _{Isc}):	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
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Maximum system voltage:	1500V
Maximum overcurrent protection rating:	30A
Electrical protection class:	Class II
Pollution degree:	1
98 th percentile module operating temperature (T ₉₈):	70°C
Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class A according to UL790
Isc bifaciality coefficient (ϕ _{Isc}):	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)
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Essen, 2026-05-29

Certification Body - Consumer Products

TÜV NORD CERT GmbH

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Annex 2

to certificate registration no. 44 780 24 406749 - 300R2M2

	*** 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 th percentile module operating temperature (T ₉₈):	70°C
Design load (positive / negative):	3600Pa / 1600Pa
Safety factors:	1.5
Fire safety class:	Class A according to UL790
Isc bifaciality coefficient (ϕ _{Isc}):	80% ± 10%

Module types:	Double Glass PV Modules with 1/4-cut 182.3*213mm n-type TOPCon Bifacial Silicon Solar Cells: 264 cells: LP182*210-M-66Q-NB-***W (***) = 620-670, in increment of 5) 252 cells: LP182*210-M-63Q-NB-***W (***) = 590-640, in increment of 5) 240 cells: LP182*210-M-60Q-NB-***W (***) = 565-610, in increment of 5) 228 cells: LP182*210-M-57Q-NB-***W (***) = 535-575, in increment of 5) 216 cells: LP182*210-M-54Q-NB-***W (***) = 510-545, in increment of 5) 204 cells: LP182*210-M-51Q-NB-***W (***) = 480-515, in increment of 5) 192 cells: LP182*210-M-48Q-NB-***W (***) = 450-485, in increment of 5) 180 cells: LP182*210-M-45Q-NB-***W (***) = 425-455, in increment of 5) 168 cells: LP182*210-M-42Q-NB-***W (***) = 395-425, in increment of 5) *** indicates rated output power generated from front side under STC
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Maximum system voltage:	1500V
Maximum overcurrent protection rating:	30A
Electrical protection class:	Class II
Pollution degree:	1
98 th percentile module operating temperature (T ₉₈):	70°C
Design load (positive / negative):	3600Pa / 1600Pa

Essen, 2026-05-29

Certification Body - Consumer Products

TÜV NORD CERT GmbH

Am TÜV 1, 45307 Essen, Germany

tuev-nord-cert.de | prodcert@tuev-nord.de

Annex 2

to certificate registration no. 44 780 24 406749 - 300R2M2

Safety factors:	1.5
Fire safety class:	Class A according to UL790
Isc bifaciality coefficient (ϕ_{Isc}):	85% $\pm$ 10%

Remark:

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

Isc bifaciality coefficient (ϕ_{Isc}) = $I_{SCrear}/I_{SCfront}$, as defined in IEC TS 60904-1-2.

The tolerance of Isc bifaciality coefficient (ϕ_{Isc}) is claimed by client.

Essen, 2026-05-29

Certification Body - Consumer Products

TÜV NORD CERT GmbH

Am TÜV 1, 45307 Essen, Germany

tuev-nord-cert.de | prodcert@tuev-nord.de

Zertifikat

Certificate

Registrier-Nr.

Registered No.

44 780 23 406749 - 107A2M2

Zeichen des Auftraggebers
Customer's reference

QT-PVP09154/23C

Auftragsdatum
Date of order

2023-09-18

Aktenzeichen
File reference

PVP09154/23C

Prüfbericht Nr.
Test report no.

492012397.003

**Name und Anschrift
des Auftraggebers**

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

*Name and address of
the customer*

ist berechtigt, das unten
genannte Produkt
mit dem abgebildeten Zeichen
zu kennzeichnen



*is authorized to
provide the product
mentioned below with
the mark as illustrated*

Fertigungsstätte

See Annex 1

Manufacturing plant

Geprüft nach

IEC 62790:2020

Tested in accordance with

**Beschreibung des
Produktes**
(Details s. Anlage 2)

Anschlussdose für Photovoltaik-Module
Junction box for PV modules

Description of products
(Details see Annex 2)

PV-LP-T01



TÜV NORD CERT GmbH
Zertifizierungsstelle
Fachleiter Konsumgüter



Gültig bis/ Valid until: 2028-04-24

Essen, 2023-11-14

Bitte beachten sie auch die umseitigen Hinweise
Please also pay attention to the information stated overleaf

Anlage 1 zum Zertifikat Nr.: / Annex 1 to Certificate No.: **44 780 23 406749 - 107A2M2**

Seite / Page **1** von / of **1**

Aktenzeichen: / File reference: **PVP09154/23C**

2023-11-14

Fertigungsstätte:

Manufacturer:

Fertigungsstätte 1:

Manufacturer 1:

Ningbo GZX PV Technology Co., Ltd.

No.28, Binhai 5th Road, Hangzhou Bay New District
Ningbo City, Zhejiang Province, 315336, P.R. China

Betriebsprüfbericht nr.:

Factory inspection report no.:

862010330.006

Fertigungsstätte 2:

Manufacturer 2:

Changzhou Greateen New Energy Technology Co.,Ltd.

Zhaiqiao Industrial Park,Qianhuang town Wujin District,
Changzhou 213174,P.R.China

Betriebsprüfbericht nr.:

Factory inspection report no.:

862010769.001

Fertigungsstätte 3:

Manufacturer 3:

Changshu Friends Connector Technology Co., Ltd.

No. 19 Zhongtian Road Changkun Industrial Park Shajiabang Town
Changshu City Jiangsu P.R. China

Betriebsprüfbericht nr.:

Factory inspection report no.:

862010851.001



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Beschreibung des Produktes:

Description of product(s):

Typbezeichnung:

Type designation:

PV-LP-T01

Beschreibung:

Description:

Anschlussdose für Photovoltaik-Module

Junction box for PV modules

Allgemeine Informationen:

General Information:

Nennspannung:

Rated voltage:

1500V DC

Bemessungsstrom:

Rated Current:

20A(with NINGBO GZX GF3545 diode)

25A(with NINGBO GZX GF5045 diode)

30A(with NINGBO GZX GF5545 diode)

Nenntemperatur:

Rated temperature:

-40°C to +85°C

IP Grad:

IP Degree:

IP68 (1m, 1h)

Application-Klasse:

Application Class:

Class A

Schutz-klasse:

Safety Class:

Class II



Die oben aufgeführten Produkte dürfen wie folgt gekennzeichnet werden:
The above mentioned products could be provided with the following marking:

TÜV NORD CERT GmbH
Certification Body
Consumer Products



CERTIFICATE

TÜV NORD CERT GmbH

herewith declares that

Leapton 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 mentioned below with the mark as illustrated:

Description of product (details see Annex 2):

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules



Valid from: 2024-07-23

Valid until: 2029-07-22

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	IEC 61701:2020 / EN IEC 61701:2020
Remark:	Test Method 5
	Test duration: 672 hours
Registered No.:	44 780 24 406749 - 286
Manufacturer and factory(-ies):	See Annex 1
Test Report No.:	492013306.001
File No.:	PVP01197/24P-03



TÜV NORD CERT GmbH
Certification Body
Consumer Products



Essen, 2024-07-23

Please also pay attention to the information stated overleaf.

Manufacturer and factory(-ies):

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

Factory: **Leapton 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.: **862010379.007**

Remark:

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



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Description of product(s):

Module types:	PV Modules with Half-cut 182*182/188mm n-type TOPCon Bifacial Silicon Solar Cells: 156 cells: LP182*182-M-78-NH-***W (** = 580-625, in increment of 5) 144 cells: LP182*182-M-72-NH-***W (** = 555-600, in increment of 5) 132 cells: LP182*182-M-66-NH-***W (** = 510-550, in increment of 5) 120 cells: LP182*182-M-60-NH-***W (** = 460-500, in increment of 5) 108 cells: LP182*182-M-54-NH-***W (** = 410-450, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	25A
Application class:	Class A
Electrical protection class:	Class II
Module types:	PV Modules with Half-cut 182*210mm n-type TOPCon Bifacial Silicon Solar Cells: 132 cells: LP182*210-M-66-NH-***W (** = 580-635, in increment of 5) 120 cells: LP182*210-M-60-NH-***W (** = 530-575, in increment of 5) 108 cells: LP182*210-M-54-NH-***W (** = 475-520, in increment of 5) 96 cells: LP182*210-M-48-NH-***W (** = 420-460, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	25A
Application class:	Class A
Electrical protection class:	Class II
Module types:	PV Modules with Half-cut 182*199/191mm n-type TOPCon Bifacial Silicon Solar Cells: 144 cells: LP182*199-M-72-NH-***W (** = 570-655, in increment of 5) 132 cells: LP182*199-M-66-NH-***W (** = 525-600, in increment of 5) 120 cells: LP182*199-M-60-NH-***W (** = 475-545, in increment of 5) 108 cells: LP182*199-M-54-NH-***W (** = 430-490, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	25A
Application class:	Class A
Electrical protection class:	Class II



TÜV NORD CERT GmbH
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Consumer Products

Module types:

PV Modules with Half-cut 210*210mm n-type TOPCon Bifacial Silicon Solar Cells:

132 cells: LP210*210-M-66-NH-***W (** = 675-700, in increment of 5)

120 cells: LP210*210-M-60-NH-***W (** = 615-635, in increment of 5)

108 cells: LP210*210-M-54-NH-***W (** = 555-570, in increment of 5)

96 cells: LP210*210-M-48-NH-***W (** = 490-510, in increment of 5)

84 cells: LP210*210-M-42-NH-***W (** = 430-445, in increment of 5)

Maximum system voltage:

1500V

Fuse rating:

25A

Application class:

Class A

Electrical protection class:

Class II

Remark:

For detailed product information, please refer to CDF (Constructional Data Form).



TÜV NORD CERT GmbH
Certification Body
Consumer Products

CERTIFICATE

TÜV NORD CERT GmbH

herewith declares that

Leapton 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 mentioned below with the mark as illustrated:

Description of product (details see Annex 2):

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules



Valid from: 2024-09-06

Valid until: 2028-07-30

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	IEC 61701:2020 / EN IEC 61701:2020
Remark:	Test Method 5
	Test duration: 672 hours
Registered No.:	44 780 23 406749 - 233R1M1
Manufacturer and factory(-ies):	See Annex 1
Test Report No.:	492012601.002
File No.:	PVP08123/24P-02



TÜV NORD CERT GmbH
Certification Body
Consumer Products



Essen, 2024-09-06

Please also pay attention to the information stated overleaf.

Anlage 1 zum Zertifikat Nr.: / Annex 1 to Certificate No.: **44 780 23 406749 - 233R1M1**

Seite / Page **1** von / of **1**

Aktenzeichen: / File reference: **PVP08123/24P-02**

2024-09-06

Manufacturer and factory(-ies):

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

Factory: **Leapton 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.: **862010379.007**

Remark:

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



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Description of product(s):

Module types:	Double Glass PV Modules with 7" Half Cut Mono-crystalline Silicon Solar Cells: 144 cells: LP182*182-M-72-MB-***W (***) = 520-550, in increment of 5) 132 cells: LP182*182-M-66-MB-***W (***) = 475-505, in increment of 5) 120 cells: LP182*182-M-60-MB-***W (***) = 435-455, in increment of 5) 108 cells: LP182*182-M-54-MB-***W (***) = 390-410, in increment of 5)
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	25A
Electrical protection class:	Class II

Module types:	Double Glass PV Modules with 8" Half Cut Mono-crystalline Silicon Solar Cells: 132 cells: LP210*210-M-66-MB-***W (***) = 630-670, in increment of 5) 120 cells: LP210*210-M-60-MB-***W (***) = 575-610, in increment of 5) 108 cells: LP210*210-M-54-MB-***W (***) = 515-545, in increment of 5) 96 cells: LP210*210-M-48-MB-***W (***) = 460-485, in increment of 5) 84 cells: LP210*210-M-42-MB-***W (***) = 400-425, in increment of 5) 110 cells: LP210*210-M-55-MB-***W (***) = 520-555, in increment of 5) 100 cells: LP210*210-M-50-MB-***W (***) = 475-505, in increment of 5) 90 cells: LP210*210-M-45-MB-***W (***) = 425-455, in increment of 5) 80 cells: LP210*210-M-40-MB-***W (***) = 380-400, in increment of 5)
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	30A
Electrical protection class:	Class II



TÜV NORD CERT GmbH
Certification Body
Consumer Products

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

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 30A

Electrical protection class: Class II

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 (** = 580-630, in increment of 5)
120 cells: LP182*210-M-60-NB-***W (** = 530-570, in increment of 5)
108 cells: LP182*210-M-54-NB-***W (** = 475-515, in increment of 5)
96 cells: LP182*210-M-48-NB-***W (** = 420-455, in increment of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Module types: **Double Glass PV Modules with Half-cut 182*182/188mm n-type TOPCon Bifacial Silicon Solar Cells:**
156 cells: LP182*182-M-78-NB-***W (** = 580-620, in increment of 5)
144 cells: LP182*182-M-72-NB-***W (** = 535-600, in increment of 5)
132 cells: LP182*182-M-66-NB-***W (** = 490-550, in increment of 5)
120 cells: LP182*182-M-60-NB-***W (** = 445-500, in increment of 5)
108 cells: LP182*182-M-54-NB-***W (** = 400-450, in increment of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

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)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

Remark:

For detailed product information, please refer to CDF (Constructional Data Form).



TÜV NORD CERT GmbH
Certification Body
Consumer Products

CERTIFICATE

TÜV NORD CERT GmbH

herewith declares that

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 mentioned below with the mark as illustrated:

Description of product (details see Annex 2):

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules



Valid from: 2024-07-23

Valid until: 2025-01-02

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	IEC 62716:2013 / EN 62716:2013.
Registered No.:	44 780 20 406749 - 006R4A1M4
Manufacturer and factory(-ies):	See Annex 1
Test Report No.:	492011340.005
File No.:	PVP01197/24P-02



Essen, 2024-07-23



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Please also pay attention to the information stated overleaf.

Manufacturer and factory(-ies):

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

Factory: **Leapton 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.: **862010379.007**

Remark:

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



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Description of product(s):

Module types:

PV Modules with 6" Half Cut Mono-crystalline Silicon Solar Cells:

144 cells: LP158*158-M-72-H-***W (** = 365-400, in increment of 5)
132 cells: LP158*158-M-66-H-***W (** = 335-365, in increment of 5)
120 cells: LP158*158-M-60-H-***W (** = 305-330, in increment of 5)
144 cells: LP158*158-M-72-MH-***W (** = 390-410, in increment of 5)
132 cells: LP158*158-M-66-MH-***W (** = 360-375, in increment of 5)
120 cells: LP158*158-M-60-MH-***W (** = 325-340, in increment of 5)
144 cells: LP166*166-M-72-MH-***W (** = 420-455, in increment of 5)
132 cells: LP166*166-M-66-MH-***W (** = 385-415, in increment of 5)
120 cells: LP166*166-M-60-MH-***W (** = 350-380, in increment of 5)

Maximum system voltage:

1500V

Fuse rating:

15A or 20A

Application class:

Class A

Electrical protection class:

Class II

Module types:

PV Modules with 6" Half Cut Poly-crystalline Silicon Solar Cells:

144 cells: LP156*156-P-72-H-***W (** = 335-370, in increment of 5)
120 cells: LP156*156-P-60-H-***W (** = 280-305, in increment of 5)

Maximum system voltage:

1500V

Fuse rating:

15A

Application class:

Class A

Electrical protection class:

Class II



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Module types: **PV Modules with 7" Half Cut Mono-crystalline Silicon Solar Cells:**
156 cells: LP182*182-M-78-MH-***W (** = 560-605, in increment of 5)
144 cells: LP182*182-M-72-MH-***W (** = 515-555, in increment of 5)
132 cells: LP182*182-M-66-MH-***W (** = 475-510, in increment of 5)
120 cells: LP182*182-M-60-MH-***W (** = 430-465, in increment of 5)
108 cells: LP182*182-M-54-MH-***W (** = 390-415, in increment of 5)

Maximum system voltage: 1500V

Fuse rating: 25A

Application class: Class A

Electrical protection class: Class II

Module types: **PV Modules with Half-cut 210*210mm Mono-crystalline Silicon Solar Cells:**
132 cells: LP210*210-M-66-MH-***W (** = 630-670, in increment of 5)
120 cells: LP210*210-M-60-MH-***W (** = 575-610, in increment of 5)
108 cells: LP210*210-M-54-MH-***W (** = 515-545, in increment of 5)
96 cells: LP210*210-M-48-MH-***W (** = 460-485, in increment of 5)
84 cells: LP210*210-M-42-MH-***W (** = 400-425, in increment of 5)
110 cells: LP210*210-M-55-MH-***W (** = 520-555, in increment of 5)
100 cells: LP210*210-M-50-MH-***W (** = 475-505, in increment of 5)
90 cells: LP210*210-M-45-MH-***W (** = 425-455, in increment of 5)
80 cells: LP210*210-M-40-MH-***W (** = 380-400, in increment of 5)

Maximum system voltage: 1500V

Fuse rating: 30A

Application class: Class A

Electrical protection class: Class II



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Module types: **PV Modules with Half-cut 182*182/188mm n-type TOPCon Bifacial Silicon Solar Cells:**
156 cells: LP182*182-M-78-NH-***W (** = 580-625, in increment of 5)
144 cells: LP182*182-M-72-NH-***W (** = 555-600, in increment of 5)
132 cells: LP182*182-M-66-NH-***W (** = 510-550, in increment of 5)
120 cells: LP182*182-M-60-NH-***W (** = 460-500, in increment of 5)
108 cells: LP182*182-M-54-NH-***W (** = 410-450, in increment of 5)

Maximum system voltage: 1500V
Fuse rating: 25A
Application class: Class A
Electrical protection class: Class II

Module types: **PV Modules with Half-cut 182*210mm n-type TOPCon Bifacial Silicon Solar Cells:**
132 cells: LP182*210-M-66-NH-***W (** = 580-635, in increment of 5)
120 cells: LP182*210-M-60-NH-***W (** = 530-575, in increment of 5)
108 cells: LP182*210-M-54-NH-***W (** = 475-520, in increment of 5)
96 cells: LP182*210-M-48-NH-***W (** = 420-460, in increment of 5)

Maximum system voltage: 1500V
Fuse rating: 25A
Application class: Class A
Electrical protection class: Class II

Module types: **PV Modules with Half-cut 182*199/191mm n-type TOPCon Bifacial Silicon Solar Cells:**
144 cells: LP182*199-M-72-NH-***W (** = 570-655, in increment of 5)
132 cells: LP182*199-M-66-NH-***W (** = 525-600, in increment of 5)
120 cells: LP182*199-M-60-NH-***W (** = 475-545, in increment of 5)
108 cells: LP182*199-M-54-NH-***W (** = 430-490, in increment of 5)

Maximum system voltage: 1500V
Fuse rating: 25A
Application class: Class A
Electrical protection class: Class II



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Module types:

PV Modules with Half-cut 210*210mm n-type TOPCon Bifacial Silicon Solar Cells:

132 cells: LP210*210-M-66-NH-***W (** = 675-700, in increment of 5)

120 cells: LP210*210-M-60-NH-***W (** = 615-635, in increment of 5)

108 cells: LP210*210-M-54-NH-***W (** = 555-570, in increment of 5)

96 cells: LP210*210-M-48-NH-***W (** = 490-510, in increment of 5)

84 cells: LP210*210-M-42-NH-***W (** = 430-445, in increment of 5)

Maximum system voltage:

1500V

Fuse rating:

30A

Application class:

Class A

Electrical protection class:

Class II

Remark:

For detailed product information, please refer to CDF (Constructional Data Form).



TÜV NORD CERT GmbH
Certification Body
Consumer Products

CERTIFICATE

TÜV NORD CERT GmbH

herewith declares that

Leapton 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 mentioned below with the mark as illustrated:

Description of product (details see Annex 2):

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules



Valid from: 2024-09-06

Valid until: 2028-07-30

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	IEC 62716:2013 / EN 62716:2013.
Registered No.:	44 780 23 406749 - 234R1M1
Manufacturer and factory(-ies):	See Annex 1
Test Report No.:	492012602.002
File No.:	PVP08123/24P-03

A blue ink signature, likely of a representative of TÜV NORD CERT.

TÜV NORD CERT GmbH
Certification Body
Consumer Products



Essen, 2024-09-06

Please also pay attention to the information stated overleaf.

Manufacturer and factory(-ies):

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

Factory: **Leapton 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.: 862010379.007

Remark:

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



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Description of product(s):

Module types:	Double Glass PV Modules with 7" Half Cut Mono-crystalline Silicon Solar Cells: 144 cells: LP182*182-M-72-MB-***W (** = 520-550, in increment of 5) 132 cells: LP182*182-M-66-MB-***W (** = 475-505, in increment of 5) 120 cells: LP182*182-M-60-MB-***W (** = 435-455, in increment of 5) 108 cells: LP182*182-M-54-MB-***W (** = 390-410, in increment of 5)
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	25A
Electrical protection class:	Class II

Module types:	Double Glass PV Modules with 8" Half Cut Mono-crystalline Silicon Solar Cells: 132 cells: LP210*210-M-66-MB-***W (** = 630-670, in increment of 5) 120 cells: LP210*210-M-60-MB-***W (** = 575-610, in increment of 5) 108 cells: LP210*210-M-54-MB-***W (** = 515-545, in increment of 5) 96 cells: LP210*210-M-48-MB-***W (** = 460-485, in increment of 5) 84 cells: LP210*210-M-42-MB-***W (** = 400-425, in increment of 5) 110 cells: LP210*210-M-55-MB-***W (** = 520-555, in increment of 5) 100 cells: LP210*210-M-50-MB-***W (** = 475-505, in increment of 5) 90 cells: LP210*210-M-45-MB-***W (** = 425-455, in increment of 5) 80 cells: LP210*210-M-40-MB-***W (** = 380-400, in increment of 5)
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	30A
Electrical protection class:	Class II



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Module types: **Double Glass PV Modules with Half-cut 182*182/188mm n-type TOPCon Bifacial Silicon Solar Cells:**
156 cells: LP182*182-M-78-NB-***W (** = 580-620, in increment of 5)
144 cells: LP182*182-M-72-NB-***W (** = 535-600, in increment of 5)
132 cells: LP182*182-M-66-NB-***W (** = 490-550, in increment of 5)
120 cells: LP182*182-M-60-NB-***W (** = 445-500, in increment of 5)
108 cells: LP182*182-M-54-NB-***W (** = 400-450, in increment of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

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)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

Remark:

For detailed product information, please refer to CDF (Constructional Data Form).



TÜV NORD CERT GmbH
Certification Body
Consumer Products

CERTIFICATE

TÜV NORD CERT GmbH

herewith declares that

Leapton 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 mentioned below with the mark as illustrated:

Description of product (details see Annex 2):

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules



Valid from: 2024-07-12

Valid until: 2024-12-12

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	P12.4-AA-02 Rev. 00 (IEC TS 62804-1:2015 modified)
Remark:	Test temperature: 85°C; Relative humidity: 85%; Test duration: 96 hours.
Registered No.:	44 780 19 406749 - 404R4A1M4
Manufacturer and factory(-ies):	See Annex 1
Test Report No.:	492011339.005
File No.:	PVP01197/24P-01



TÜV NORD CERT GmbH
Certification Body
Consumer Products



Essen, 2024-07-12

Please also pay attention to the information stated overleaf.

Anlage 1 zum Zertifikat Nr.: / *Annex 1 to Certificate No.:* **44 780 19 406749 - 404R4A1M4**

Seite / Page 1 von / of 1

Aktenzeichen: / *File reference:* **PVP01197/24P-01**

2024-07-12

Manufacturer and factory(-ies):

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

Factory: **Leapton 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.: 862010379.007

Remark:

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



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Description of product(s):

Module types: **PV Modules with 6" Half Cut Mono-crystalline Silicon Solar Cells:**
144 cells: LP158*158-M-72-H-***W (** = 365-400, in increment of 5)
120 cells: LP158*158-M-60-H-***W (** = 305-330, in increment of 5)

Maximum system voltage: 1500V

Fuse rating: 15A or 20A

Application class: Class A

Electrical protection class: Class II

Module types: **PV Modules with 6" Half Cut Mono-crystalline Silicon Solar Cells:**
144 cells: LP166*166-M-72-MH-***W (** = 420-455, in increment of 5)
132 cells: LP166*166-M-66-MH-***W (** = 385-415, in increment of 5)
120 cells: LP166*166-M-60-MH-***W (** = 350-380, in increment of 5)

Maximum system voltage: 1500V

Fuse rating: 20A

Application class: Class A

Electrical protection class: Class II

Module types: **PV Modules with 7" Half Cut Mono-crystalline Silicon Solar Cells:**
156 cells: LP182*182-M-78-MH-***W (** = 560-605, in increment of 5)
144 cells: LP182*182-M-72-MH-***W (** = 515-555, in increment of 5)
132 cells: LP182*182-M-66-MH-***W (** = 475-510, in increment of 5)
120 cells: LP182*182-M-60-MH-***W (** = 430-465, in increment of 5)
108 cells: LP182*182-M-54-MH-***W (** = 390-415, in increment of 5)

Maximum system voltage: 1500V

Fuse rating: 25A

Application class: Class A

Electrical protection class: Class II



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Module types:

PV Modules with Half-cut 210*210mm Mono-crystalline Silicon Solar Cells:

132 cells: LP210*210-M-66-MH-***W (** = 630-670, in increment of 5)
120 cells: LP210*210-M-60-MH-***W (** = 575-610, in increment of 5)
108 cells: LP210*210-M-54-MH-***W (** = 515-545, in increment of 5)
96 cells: LP210*210-M-48-MH-***W (** = 460-485, in increment of 5)
84 cells: LP210*210-M-42-MH-***W (** = 400-425, in increment of 5)
110 cells: LP210*210-M-55-MH-***W (** = 520-555, in increment of 5)
100 cells: LP210*210-M-50-MH-***W (** = 475-505, in increment of 5)
90 cells: LP210*210-M-45-MH-***W (** = 425-455, in increment of 5)
80 cells: LP210*210-M-40-MH-***W (** = 380-400, in increment of 5)

Maximum system voltage:

1500V

Fuse rating:

30A

Application class:

Class A

Electrical protection class:

Class II

Module types:

PV Modules with Half-cut 182*182/188mm n-type TOPCon Bifacial Silicon Solar Cells:

156 cells: LP182*182-M-78-NH-***W (** = 580-625, in increment of 5)
144 cells: LP182*182-M-72-NH-***W (** = 555-600, in increment of 5)
132 cells: LP182*182-M-66-NH-***W (** = 510-550, in increment of 5)
120 cells: LP182*182-M-60-NH-***W (** = 460-500, in increment of 5)
108 cells: LP182*182-M-54-NH-***W (** = 410-450, in increment of 5)

Maximum system voltage:

1500V

Fuse rating:

25A

Application class:

Class A

Electrical protection class:

Class II

Module types:

PV Modules with Half-cut 182*210mm n-type TOPCon Bifacial Silicon Solar Cells:

132 cells: LP182*210-M-66-NH-***W (** = 580-635, in increment of 5)
120 cells: LP182*210-M-60-NH-***W (** = 530-575, in increment of 5)
108 cells: LP182*210-M-54-NH-***W (** = 475-520, in increment of 5)
96 cells: LP182*210-M-48-NH-***W (** = 420-460, in increment of 5)

Maximum system voltage:

1500V

Fuse rating:

25A

Application class:

Class A



TÜV NORD CERT GmbH
Certification Body
Consumer Products

Electrical protection class: Class II

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

144 cells: LP182*199-M-72-NH-***W (** = 570-655, in increment of 5)

132 cells: LP182*199-M-66-NH-***W (** = 525-600, in increment of 5)

120 cells: LP182*199-M-60-NH-***W (** = 475-545, in increment of 5)

108 cells: LP182*199-M-54-NH-***W (** = 430-490, in increment of 5)

Maximum system voltage: 1500V

Fuse rating: 25A

Application class: Class A

Electrical protection class: Class II

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

132 cells: LP210*210-M-66-NH-***W (** = 675-700, in increment of 5)

120 cells: LP210*210-M-60-NH-***W (** = 615-635, in increment of 5)

108 cells: LP210*210-M-54-NH-***W (** = 555-570, in increment of 5)

96 cells: LP210*210-M-48-NH-***W (** = 490-510, in increment of 5)

84 cells: LP210*210-M-42-NH-***W (** = 430-445, in increment of 5)

Maximum system voltage: 1500V

Fuse rating: 30A

Application class: Class A

Electrical protection class: Class II

Remark:

For detailed product information, please refer to CDF (Constructional Data Form).



TÜV NORD CERT GmbH
Certification Body
Consumer Products

CERTIFICATE

TÜV NORD CERT GmbH

herewith declares that

Leapton 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 mentioned below with the mark as illustrated:

Description of product (details see Annex 2):

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules



Valid from: 2024-09-06
Valid until: 2028-07-30

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	P12.4-AA-02 Rev. 00 (IEC TS 62804-1:2015 modified)
Remark:	Test temperature: 85°C; Relative humidity: 85%; Test duration: 96 hours.
Registered No.:	44 780 23 406749 - 235R2M2
Manufacturer and factory(-ies):	See Annex 1
Test Report No.:	492012603.003
File No.:	PVP08123/24P-04



TÜV NORD CERT GmbH
Certification Body
Consumer Products



Essen, 2024-09-06

Please also pay attention to the information stated overleaf.

Manufacturer and factory(-ies):

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

Factory : **Leapton 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.: 862010379.007

Remark:

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



TÜV NORD CERT GmbH
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Consumer Products

Description of product(s):

Module types:	Double Glass PV Modules with 7" Half Cut Mono-crystalline Silicon Solar Cells: 144 cells: LP182*182-M-72-MB-***W (** = 520-550, in increment of 5) 132 cells: LP182*182-M-66-MB-***W (** = 475-505, in increment of 5) 120 cells: LP182*182-M-60-MB-***W (** = 435-455, in increment of 5) 108 cells: LP182*182-M-54-MB-***W (** = 390-410, in increment of 5)
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	25A
Electrical protection class:	Class II

Module types:	Double Glass PV Modules with 8" Half Cut Mono-crystalline Silicon Solar Cells: 132 cells: LP210*210-M-66-MB-***W (** = 630-670, in increment of 5) 120 cells: LP210*210-M-60-MB-***W (** = 575-610, in increment of 5) 108 cells: LP210*210-M-54-MB-***W (** = 515-545, in increment of 5) 96 cells: LP210*210-M-48-MB-***W (** = 460-485, in increment of 5) 84 cells: LP210*210-M-42-MB-***W (** = 400-425, in increment of 5) 110 cells: LP210*210-M-55-MB-***W (** = 520-555, in increment of 5) 100 cells: LP210*210-M-50-MB-***W (** = 475-505, in increment of 5) 90 cells: LP210*210-M-45-MB-***W (** = 425-455, in increment of 5) 80 cells: LP210*210-M-40-MB-***W (** = 380-400, in increment of 5)
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	30A
Electrical protection class:	Class II



TÜV NORD CERT GmbH
Certification Body
Consumer Products

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

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 30A

Electrical protection class: Class II

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 (** = 580-630, in increment of 5)
120 cells: LP182*210-M-60-NB-***W (** = 530-570, in increment of 5)
108 cells: LP182*210-M-54-NB-***W (** = 475-515, in increment of 5)
96 cells: LP182*210-M-48-NB-***W (** = 420-455, in increment of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II



TÜV NORD CERT GmbH
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Consumer Products

Module types: **Double Glass PV Modules with Half-cut 182*182/188mm n-type TOPCon Bifacial Silicon Solar Cells:**
156 cells: LP182*182-M-78-NB-***W (** = 580-620, in increment of 5)
144 cells: LP182*182-M-72-NB-***W (** = 535-600, in increment of 5)
132 cells: LP182*182-M-66-NB-***W (** = 490-550, in increment of 5)
120 cells: LP182*182-M-60-NB-***W (** = 445-500, in increment of 5)
108 cells: LP182*182-M-54-NB-***W (** = 400-450, in increment of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

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)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

Remark:

For detailed product information, please refer to CDF (Constructional Data Form).

<定義>

本保証内容における当社にて製造されたアルミ合金架台について、関係する各地位を以下に定義します。

- ・リープトンエネルギー株式会社は、アルミ合金架台のメーカーの立場となり、本保証書の文章上においては、「当社」と呼称する事とします。
- ・当社の販売先（卸先）である「商社」、「販売店（販売業者）」、「工事施工店（施工業者）」等の企業で当社との商流において「媒介」を行う企業を「媒介業社」と呼称する事とします。
- ・当社よりの商品を販売した媒介業者等において、最終的に当社の太陽光発電設備を設置配備した事業主を法人・個人を問わず、「お客様」と呼称する事とします。

<15年間の製品保証及び保証の範囲>

当社は、当社にて製造されたアルミ合金架台において、製品の品質を15年間（180ヶ月間）保証します。当該アルミ合金架台製品本体の品質が基準を満たさない場合、または保証期間内において本製品の故障や不具合が発生した場合には、以下の条件に従い、修理または交換を行う他、追加等で対処致します。また保証期間中に製品交換した場合、保証条項は新しい製品に適用します。但し、本保証は最初の納品より15年間の保証期間と致します。

また本品質保証書の対象は、アルミ合金架台製品本体のみに限定され、本製品の故障または不具合を原因とした二次的被害は本保証の対象外となります。

- ◎対象商品の取扱説明書に基づき、適切な設置が行われ、通常使用の環境下で適正な使用を行っていること。
- ◎保証対象となる製品の一部または全部において、引渡し時の検収において異常が無いこと。
- ◎保証対象となる製品の一部または全部の品質において、仕様の材料及び工場出荷時の異常が無いこと、欠陥がない商品と判断がされていること。
- ◎使用において対象商品の取扱説明書及び製品仕様書等に規定している通常の用途、設置、使用及び稼働の条件下で、機能性に異常が生じる状態でないもの。
- ◎当社製のアルミ合金架台の保証の範囲は、当社が定めた製品仕様・設計図面・施工マニュアル等に記載の指示や注意事項に従い、正常に使用した状態の範囲に限定されます。

当社は、不具合現品の返品または交換品の発送にかかる費用は、当社にて負担致します。

<適応除外と免責>

下記の事項に該当する場合は、如何なる場合でもアルミ合金架台の製品保証の適応除外となり、当社は一切の責任を負いませんので、ご了承ください。

- A. 製品保証に係る補償の申請が保証期間外で行われた時。
- B. 製品の取り扱いにおいて、間違った使用方法、誤用、不注意、怠慢または事故等に起因して不適切な使用があった場合。
- C. 製品を改造、不適切な設置及び使用をした場合、また、お客様または第三者の故意、過失により不具合が発生した場合。
- D. 当社の提供する製品に関する取扱説明書、製品説明書、設置・使用・保守等のマニュアルを遵守しなかった場合、またカタログ、パンフレットに記載の注意事項等を遵守していない場合。
- E. アルミ合金架台の汚濁による腐食等を原因とした場合。
- F. 本来の製品機能に異常が無く、経年劣化、外観の変化に起因する場合。

- G. 設置場所における構造物等の変形、変位、土地の地盤沈下や傾斜地の地崩れや崩壊、土壌流出等に起因する不具合が生じた場合。
- H. 重塩害地域とされる地域での塩害を原因とした製品の劣化等がある場合。（※ 太陽光発電所の全部またはその一部が、海岸線より 5 0 0 m の距離に接触する場合には、重塩害地域とする。）
- I. 設置場所より 5 0 0 m の距離に接触する場所において養鶏場、牛舎等の畜産設備がある場合、または温泉、間欠泉、硫黄等の噴出等（火山性ガスの発生や強酸・強アルカリ性の湯気の発生、そのた金属等に影響を及ぼす自然環境を含む）がある場合。
- J. 当社が認証した技術者以外の者による修理や仕様の変更を行った場合。
- K. 既設の太陽光システムからの電力サージの発生、落雷、洪水、火災、事故等による破損及び当社が制御できない事象に起因した破損等が発生した場合。
- L. 設置場所の変更、移動または移設を行った場合。届出書面等による設置場所の住所の誤記、相違等の場合を含む。
- M. 設置場所周辺の自然特性に起因し、金属サビ、摩耗、コケ、藻等による汚濁、変色等が生じた場合。
- N. 獣や小動物の害に起因する損傷、機能不良、不具合が生じた場合。
- O. 契約当時の技術では予見できなかった事象等を原因とした不具合が生じた場合。
- P. 戦争、暴動、爆発事故等による偶然かつ外来の事故により不具合が生じた場合。

保証の有効期限を超えた場合は、全てに於いて無効となり、リープтонエネルギー株式会社への賠償要求には適用致しません。また、いかなる状況下での発生に於いても、リープтонエネルギー株式会社は製品自体に対してのみ責任を負担し、賠償を致します。

本保証書は弊社からリープтонエネルギー製架台をご購入されたお客様のみに対し有効です。

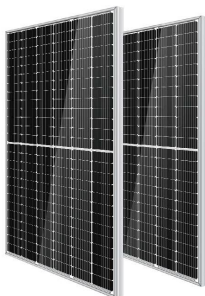
※ 本品質保証は日本国内においてのみ有効です。

※ 屋根材、雨樋、掴み金具は本品質保証の対象外です。

※基礎杭においては、原則、引渡しより 10 年間の保証となります。その他においては、当社のカタログまたは製品の施工説明書等に従うものとします。

リープтонエネルギー株式会社

太陽電池モジュール

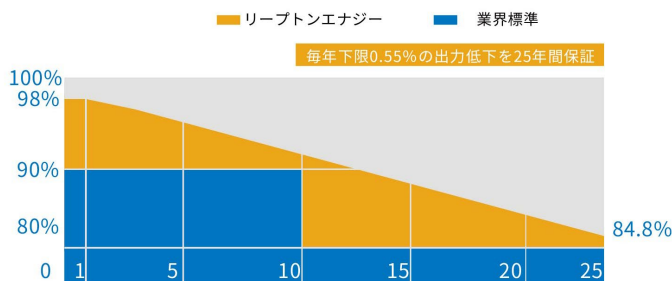


・製品保証15年 (P-type、N-type片面) 製品保証25年 (N-type両面)

リープтонエナジー製の太陽電池モジュールについて、取扱説明書に基づき適切な設置、通常の使用環境で正規の保守をすることを前提に、材料及び工場出荷品質に起因する欠陥に対して補償します。

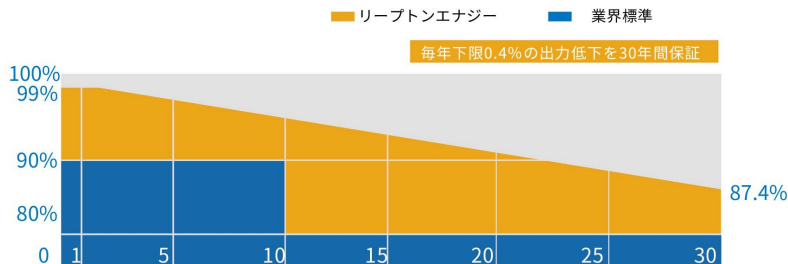
・出力保証25年 (P-type)

納入初年度は2.0%までの出力低下となり、2年目以降は毎年0.55%までの出力低下となります。保証期間終了時の最大出力は、84.8%以上を保証いたします。



・出力保証30年 (N-type)

納入初年度は1.0%までの出力低下となり、2年目以降は毎年0.4%までの出力低下となります。保証期間終了時の最大出力は、87.4%以上を保証いたします。



・アルミ架台：製品保証15年 ・リープтонエナジー製パワーコンディショナ：製品保証15年

上記保証及び補償内容は、販売店向けの内容になります。
そのため、販売店の示す内容・条件と異なる場合があります。詳しくは販売店にお問い合わせください。

お問い合わせ ☎ 0120-850-800 ✉ hosho@leaptonenergy.jp

リープтонエナジー株式会社

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Ver.2024.3



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