

Certificate



This certifies that the company:

Sunniva GmbH
Honer Straße 49,
37269 Eschwege,
Germany

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 25 406749 - 259
Report no.: 492014062.001
File no.: PVP08159/25P-02

Valid from: 2025-10-30
Valid until: 2030-10-13

Essen, 2025-10-30

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.



Visit our database to
verify the validity of
this certificate.

Annex 1

to certificate registration no. 44 780 25 406749 - 259

Manufacturer:

Sunniva GmbH

Honer Straße 49, 37269 Eschwege, Germany

Factory inspection report no.:

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 25 406749 - 259

Description of product(s):

Module types:

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

132 cells: SLMDLxxxN-FB-BF-GG-132-210x210 (xxx = 700-740, in increment of 5)

120 cells: SLMDLxxxN-FB-BF-GG-120-210x210 (xxx = 635-670, in increment of 5)

110 cells: SLMDLxxxN-FB-BF-GG-110-210x210 (xxx = 585-615, in increment of 5)

Remark: xxx indicates rated output power generated from front side under STC

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 35A

Electrical protection class: Class II

Pollution degree: 1

98th percentile module operating temperature (T₉₈): 70°C

Design load (positive / negative): 3600Pa / 1600Pa

Safety factors: 1.5

Fire safety class: Class C according to UL790

Isc bifaciality coefficient (ϕ_{Isc}): 80% ± 5%



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Module types:	Double Glass PV Modules with Half-cut 182mm*199mm TOPCon Mono-crystalline Silicon Solar Cells: 144 cells: SLMDLxxxN-FB-BF-GG-144-182x199 (xxx =605-650, in increment of 5) 132 cells: SLMDLxxxN-FB-BF-GG-132-182x199 (xxx =555-595, in increment of 5) Remark: xxx indicates rated output power generated from front side under STC
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	35A
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 C according to UL790
Isc bifaciality coefficient (φ _{Isc}):	80% ± 5%

Module types:	Double Glass PV Modules with Half-cut 182mm*183mm TOPCon Mono-crystalline Silicon Solar Cells: 144 cells: SLMDLxxxN-FB-BF-GG-144-182x183 (xxx =560-600, in increment of 5) 120 cells: SLMDLxxxN-FB-BF-GG-120-182x183 (xxx =465-500, in increment of 5) 108 cells: SLMDLxxxN-FB-BF-GG-108-182x183 (xxx =420-450, in increment of 5) Remark: xxx indicates rated output power generated from front side under STC
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	35A
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 C according to UL790
Isc bifaciality coefficient (φ _{Isc}):	80% ± 5%

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Module types:

Double Glass PV Modules with Half-cut 182mm*210mm TOPCon Mono-crystalline Silicon Solar Cells:

132 cells: SLMDLxxxN-FB-BF-GG-132-182x210 (xxx =600-645, in increment of 5)

120 cells: SLMDLxxxN-FB-BF-GG-120-182x210 (xxx =545-580, in increment of 5)

108 cells: SLMDLxxxN-FB-BF-GG-108-182x210 (xxx =490-525, in increment of 5)

96 cells: SLMDLxxxN-FB-BF-GG-96-182x210 (xxx =435-470, in increment of 5)

Remark: xxx indicates rated output power generated from front side under STC

Maximum system voltage:	1500V
Maximum overcurrent protection rating:	35A
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 C according to UL790
Isc bifaciality coefficient (ϕIsc):	80% ± 5%

Remark:

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

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

The tolerance of Isc bifaciality coefficient (ϕIsc) is claimed by client.

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