

# CERTIFICATE

### **TÜV NORD CERT GmbH**

herewith declares that

### **ZNSHINE PV-TECH CO., LTD.**

No. 229 Tongda Avenue, Suqian Economic and Technological Development Zone

Suqian City, Jiangsu, 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: 2024-11-28 Valid until: 2029-11-27

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 / EN / IEC 61730-1: 2018; IEC 61730-2:2023 / EN / IEC 61730-2: 2018.

Registered No.:

44 780 24 406749 - 452

Manufacturer and factory(-ies):

See Annex 1

Test Report No.:

492013493.001

File No .:

PVP06050/24P-01

Ropen Milas

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Essen, 2024-11-28

Please also pay attention to the information stated overleaf.



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Aktenzeichen: / File reference: PVP06050/24P-01 2024-11-28

Manufacturer and factory(-ies):

Manufacturer: ZNSHINE PV-TECH CO., LTD.

No. 229 Tongda Avenue, Suqian Economic and Technological

Development Zone

Suqian City, Jiangsu, CHINA

Factory 1: Zhengxin photoelectric technology (Suqian) Co., Ltd.

No.1589 Guangzhou Road, Suqian Economic and Technological, Development Zone,223800 Suqian City, Jiangsu Province, PEOPLE'S

REPUBLIC OF CHINA

Factory inspection report no.: 862010370.006

Factory 2: ZNSHINE POWERTEK CHANGZHOU CO., LTD

No.1, South Zhenxing Road, Industrial Zone, Zhixi Town, Jintan District, 213251 Changzhou City, Jiangsu Province PEOPLE'S REPUBLIC OF

**CHINA** 

Factory inspection report no.: 862010525.005

Remark:

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

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Aktenzeichen: / File reference: PVP06050/24P-01 2024-11-28

#### Description of product(s):

Module types:

# Light Weight PV Modules with Half-cut 182mm TOPCon Monocrystalline Silicon Solar Cells:

144 cells: ZXM7-GHBX144-XXX/N (XXX=505-560, in steps of 5) 132 cells: ZXM7-GHBX132-XXX/N (XXX=465-510, in steps of 5) 120 cells: ZXM7-GHBX120-XXX/N (XXX=420-465, in steps of 5) 108 cells: ZXM7-GHBX108-XXX/N (XXX=380-420, in steps of 5) 72 cells: ZXM7-GHBX72-XXX/N (XXX=255-280, in steps of 5) 56 cells: ZXM7-GHBX56-XXX/N (XXX=195-215, in steps of 5) 54 cells: ZXM7-GHBX54-XXX/N (XXX=190-210, in steps of 5) 40 cells: ZXM7-GHBX40-XXX/N (XXX=140-155, in steps of 5) 32 cells: ZXM7-GHBX32-XXX/N (XXX=115-125, in steps of 5) 30 cells: ZXM7-GHBX30-XXX/N (XXX=105-115, in steps of 5) 24 cells: ZXM7-GHBX24-XXX/N (XXX=85-90, in steps of 5) 20 cells: ZXM7-GHBX20-XXX/N (XXX=70-75, in steps of 5) 16 cells: ZXM7-GHBX16-XXX/N (XXX=55-60, in steps of 5)

144 cells: ZXM7-UHBX144-XXX/N (XXX=505-560, in steps of 5) 132 cells: ZXM7-UHBX132-XXX/N (XXX=460-510, in steps of 5) 120 cells: ZXM7-UHBX120-XXX/N (XXX=420-465, in steps of 5) 108 cells: ZXM7-UHBX108-XXX/N (XXX=380-420, in steps of 5) 72 cells: ZXM7-UHBX72-XXX/N (XXX=255-280, in steps of 5) 56 cells: ZXM7-UHBX56-XXX/N (XXX=195-215, in steps of 5) 54 cells: ZXM7-UHBX54-XXX/N (XXX=190-210, in steps of 5) 40 cells: ZXM7-UHBX40-XXX/N (XXX=140-155, in steps of 5) 32 cells: ZXM7-UHBX32-XXX/N (XXX=115-125, in steps of 5) 30 cells: ZXM7-UHBX30-XXX/N (XXX=105-115, in steps of 5) 24 cells: ZXM7-UHBX24-XXX/N (XXX=85-90, in steps of 5) 20 cells: ZXM7-UHBX20-XXX/N (XXX=70-75, in steps of 5)

144 cells: ZXM7-EHBX144-XXX/N (XXX=505-560, in steps of 5) 132 cells: ZXM7-EHBX132-XXX/N (XXX=460-510, in steps of 5) 120 cells: ZXM7-EHBX120-XXX/N (XXX=420-465, in steps of 5) 108 cells: ZXM7-EHBX108-XXX/N (XXX=380-420, in steps of 5) 72 cells: ZXM7-EHBX72-XXX/N (XXX=255-280, in steps of 5) 56 cells: ZXM7-EHBX56-XXX/N (XXX=195-215, in steps of 5) 54 cells: ZXM7-EHBX54-XXX/N (XXX=190-210, in steps of 5) 40 cells: ZXM7-EHBX40-XXX/N (XXX=140-155, in steps of 5)

16 cells: ZXM7-UHBX16-XXX/N (XXX=55-60, in steps of 5)

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32 cells: ZXM7-EHBX32-XXX/N (XXX=115-125, in steps of 5) 30 cells: ZXM7-EHBX30-XXX/N (XXX=105-115, in steps of 5) 24 cells: ZXM7-EHBX24-XXX/N (XXX=85-90, in steps of 5) 20 cells: ZXM7-EHBX20-XXX/N (XXX=70-75, in steps of 5) 16 cells: ZXM7-EHBX16-XXX/N (XXX=55-60, in steps of 5)

144 cells: ZXM7-SHBX144-XXX/N (XXX=505-560, in steps of 5) 132 cells: ZXM7-SHBX132-XXX/N (XXX=460-510, in steps of 5) 120 cells: ZXM7-SHBX120-XXX/N (XXX=420-465, in steps of 5) 108 cells: ZXM7-SHBX108-XXX/N (XXX=380-420, in steps of 5) 72 cells: ZXM7-SHBX72-XXX/N (XXX=255-280, in steps of 5) 56 cells: ZXM7-SHBX56-XXX/N (XXX=195-215, in steps of 5) 54 cells: ZXM7-SHBX54-XXX/N (XXX=190-210, in steps of 5) 40 cells: ZXM7-SHBX40-XXX/N (XXX=140-155, in steps of 5) 32 cells: ZXM7-SHBX32-XXX/N (XXX=115-125, in steps of 5) 30 cells: ZXM7-SHBX30-XXX/N (XXX=105-115, in steps of 5) 24 cells: ZXM7-SHBX24-XXX/N (XXX=85-90, in steps of 5) 20 cells: ZXM7-SHBX20-XXX/N (XXX=70-75, in steps of 5) 16 cells: ZXM7-SHBX16-XXX/N (XXX=55-60, in steps of 5)

Maximum system voltage:

Maximum overcurrent protection

rating:

25A

Electrical protection class:

Class II

1500V

Pollution degree:

1

98th percentile module operating

temperature (T<sub>98</sub>)

70°C

Design load (positive / negative):

1600 / 1600 Pa

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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Aktenzeichen: / File reference: PVP06050/24P-01 2024-11-28

Module types:

# Light Weight PV Modules with Half-cut 182mm PERC Monocrystalline Silicon Solar Cells:

144 cells: ZXM7-UHBX144-XXX/M (XXX=485-530, in steps of 5) 132 cells: ZXM7-UHBX132-XXX/M (XXX=445-485, in steps of 5) 120 cells: ZXM7-UHBX120-XXX/M (XXX=405-440, in steps of 5) 108 cells: ZXM7-UHBX108-XXX/M (XXX=365-395, in steps of 5) 72 cells: ZXM7-UHBX72-XXX/M (XXX=245-265, in steps of 5) 56 cells: ZXM7-UHBX56-XXX/M (XXX=190-205, in steps of 5) 54 cells: ZXM7-UHBX54-XXX/M (XXX=180-195, in steps of 5) 40 cells: ZXM7-UHBX40-XXX/M (XXX=180-195, in steps of 5) 32 cells: ZXM7-UHBX32-XXX/M (XXX=110-115, in steps of 5) 30 cells: ZXM7-UHBX30-XXX/M (XXX=100-110, in steps of 5) 24 cells: ZXM7-UHBX24-XXX/M (XXX=80-85, in steps of 5) 20 cells: ZXM7-UHBX20-XXX/M (XXX=70, in steps of 5) 16 cells: ZXM7-UHBX16-XXX/M (XXX=60, in steps of 5)

144 cells: ZXM7-EHBX144-XXX/M (XXX=485-530, in steps of 5) 132 cells: ZXM7-EHBX132-XXX/M (XXX=445-485, in steps of 5) 120 cells: ZXM7-EHBX120-XXX/M (XXX=405-440, in steps of 5) 108 cells: ZXM7-EHBX108-XXX/M (XXX=365-395, in steps of 5) 72 cells: ZXM7-EHBX72-XXX/M (XXX=245-265, in steps of 5) 56 cells: ZXM7-EHBX56-XXX/M (XXX=190-205, in steps of 5) 54 cells: ZXM7-EHBX54-XXX/M (XXX=180-195, in steps of 5) 40 cells: ZXM7-EHBX40-XXX/M (XXX=135-145, in steps of 5) 32 cells: ZXM7-EHBX32-XXX/M (XXX=110-115, in steps of 5) 30 cells: ZXM7-EHBX30-XXX/M (XXX=100-110, in steps of 5) 24 cells: ZXM7-EHBX24-XXX/M (XXX=80-85, in steps of 5) 20 cells: ZXM7-EHBX20-XXX/M (XXX=70, in steps of 5) 16 cells: ZXM7-EHBX16-XXX/M (XXX=60, in steps of 5)

144 cells: ZXM7-SHBX144-XXX/M (XXX=485-530, in steps of 5) 132 cells: ZXM7-SHBX132-XXX/M (XXX=445-485, in steps of 5) 120 cells: ZXM7-SHBX120-XXX/M (XXX=405-440, in steps of 5) 108 cells: ZXM7-SHBX108-XXX/M (XXX=365-395, in steps of 5) 72 cells: ZXM7-SHBX72-XXX/M (XXX=245-265, in steps of 5) 56 cells: ZXM7-SHBX56-XXX/M (XXX=190-205, in steps of 5) 54 cells: ZXM7-SHBX54-XXX/M (XXX=180-195, in steps of 5) 40 cells: ZXM7-SHBX40-XXX/M (XXX=135-145, in steps of 5) 32 cells: ZXM7-SHBX32-XXX/M (XXX=110-115, in steps of 5) 30 cells: ZXM7-SHBX30-XXX/M (XXX=100-110, in steps of 5)





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24 cells: ZXM7-SHBX24-XXX/M (XXX=80-85, in steps of 5) 20 cells: ZXM7-SHBX20-XXX/M (XXX=70, in steps of 5) 16 cells: ZXM7-SHBX16-XXX/M (XXX=60, in steps of 5)

144 cells: ZXM7-NHBX144-XXX/M (XXX=485-530, in steps of 5) 132 cells: ZXM7-NHBX132-XXX/M (XXX=445-485, in steps of 5) 120 cells: ZXM7-NHBX120-XXX/M (XXX=405-440, in steps of 5) 108 cells: ZXM7-NHBX108-XXX/M (XXX=365-395, in steps of 5) 72 cells: ZXM7-NHBX72-XXX/M (XXX=245-265, in steps of 5) 56 cells: ZXM7-NHBX56-XXX/M (XXX=190-205, in steps of 5) 54 cells: ZXM7-NHBX54-XXX/M (XXX=180-195, in steps of 5) 40 cells: ZXM7-NHBX40-XXX/M (XXX=135-145, in steps of 5) 32 cells: ZXM7-NHBX32-XXX/M (XXX=110-115, in steps of 5) 30 cells: ZXM7-NHBX30-XXX/M (XXX=100-110, in steps of 5) 24 cells: ZXM7-NHBX24-XXX/M (XXX=80-85, in steps of 5) 20 cells: ZXM7-NHBX20-XXX/M (XXX=70, in steps of 5) 16 cells: ZXM7-NHBX16-XXX/M (XXX=60, in steps 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<sub>98</sub>)

70°C

Design load (positive / negative):

1600 / 1600 Pa

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.

