

CERTIFICATE

TÜV NORD CERT GmbH
herewith declares that

Heinrich Kopp GmbH
Alzenauer Str. 68, 63796 Kahl am Main
Germany

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: 2022-03-18

Valid until: 2024-01-02

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	IEC / EN 61215-1:2016; IEC / EN 61215-1-1:2016; IEC 61215-2:2016 / EN 61215-2:2017 + AC:2017 + AC:2018; IEC 61730-1:2016 / EN IEC 61730-1:2018 + AC:2018; IEC 61730-2:2016 / EN IEC 61730-2:2018 + AC:2018.
Registered No.:	44 780 22 406749 - 058
Manufacturer:	see Annex 1
Test Report No.:	492011971.001
File No.:	PVP02062/22P



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Essen, 2022-03-18

Please also pay attention to the information stated overleaf.

Manufacturer:

Manufacturer 1: **ZNShine PV-tech Co., Ltd.**
No.1, South Zhenxing Road, Industrial Zone, Zhixi Town
Jintan District, Changzhou City, Jiangsu Province, China

Factory inspection report no.: 862010370.004

Manufacturer 2: **Zhengxin photoelectric technology (Suqian) Co., Ltd.**
No. 1589 Guangzhou road, Suqian Economic and Technological
Development Zone
Suqian City, Jiangsu Province, China

Factory inspection report no.: 862010525.002

Remark:

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



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Description of product(s):

Module types:	PV Modules with 6" Mono-crystalline Silicon Solar Cells: 78 cells: KOPP-78-xxx/M (xxx = 400 - 430, in increment of 5) 72 cells: KOPP-72-xxx/M (xxx = 340 - 395, in increment of 5) 66 cells: KOPP-66-xxx/M (xxx = 310 - 360, in increment of 5) 60 cells: KOPP-60-xxx/M (xxx = 280 - 330, in increment of 5) 72 cells: KOPP-T72-xxx/M (xxx = 360 - 380, in increment of 5) 60 cells: KOPP-T60-xxx/M (xxx = 300 - 315, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	20A
Electrical protection class:	Class II
Pollution degree:	1
Material group:	I
Design load (positive / negative)*:	3600Pa / 1600Pa or 2400Pa / 2400Pa
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 6" Half-cut Mono-crystalline Silicon Solar Cells: 156 cells: KOPP-H156-xxx/M (xxx = 415 - 435, in increment of 5) 156 cells: KOPP-P156-xxx/M (xxx = 415 - 435, in increment of 5) 144 cells: KOPP-H144-xxx/M (xxx = 335 - 405, in increment of 5) 144 cells: KOPP-P144-xxx/M (xxx = 335 - 405, in increment of 5) 132 cells: KOPP-H132-xxx/M (xxx = 310 - 370, in increment of 5) 132 cells: KOPP-P132-xxx/M (xxx = 310 - 370, in increment of 5) 120 cells: KOPP-H120-xxx/M (xxx = 280 - 335, in increment of 5) 120 cells: KOPP-P120-xxx/M (xxx = 280 - 335, in increment of 5) 156 cells: KOPP-NH156-xxx/M (xxx = 420 - 495, in increment of 5) 156 cells: KOPP-NP156-xxx/M (xxx = 420 - 440, 445 - 495 in increment of 5) 156 cells: KOPP-NO156-xxx/M (xxx = 420 - 440, 445 - 495 in increment of 5) 144 cells: KOPP-NH144-xxx/M (xxx = 390 - 445, in increment of 5) 144 cells: KOPP-NP144-xxx/M (xxx = 390 - 405, 420 - 455 in increment of 5) 144 cells: KOPP-NO144-xxx/M (xxx = 390 - 405, 420 - 455 in increment of 5) 132 cells: KOPP-NH132-xxx/M (xxx = 355 - 415, in increment of 5)
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132 cells: KOPP-NP132-xxx/M (xxx = 355 - 370, 385 - 415 in increment of 5)

132 cells: KOPP-NO132-xxx/M (xxx = 355 - 370, 385 - 415 in increment of 5)

120 cells: KOPP-NH120-xxx/M (xxx = 325 - 380, in increment of 5)

120 cells: KOPP-NP120-xxx/M (xxx = 325 - 335, 350 - 380 in increment of 5)

120 cells: KOPP-NO120-xxx/M (xxx = 325 - 335, 350 - 380 in increment of 5)

Maximum system voltage:	1500V
Fuse rating:	20A
Electrical protection class:	Class II
Pollution degree:	1
Material group:	I
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 7" Half-cut Mono-crystalline Silicon Solar Cells:

156 cells: KOPP-SH156-xxx/M (xxx = 565 - 600, in increment of 5)

144 cells: KOPP-SH144-xxx/M (xxx = 520 - 550, in increment of 5)

132 cells: KOPP-SH132-xxx/M (xxx = 480 - 505, in increment of 5)

120 cells: KOPP-SH120-xxx/M (xxx = 435 - 460, in increment of 5)

108 cells: KOPP-SH108-xxx/M (xxx = 390 - 415, in increment of 5)

Maximum system voltage:	1500V
Fuse rating:	25A
Electrical protection class:	Class II
Pollution degree:	1
Material group:	I
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 8" Half-cut Mono-crystalline Silicon Solar Cells: 150 cells: KOPP-SP150-xxx/M (xxx = 480 - 515, in increment of 5) 140 cells: KOPP-SP140-xxx/M (xxx = 450 - 480, in increment of 5) 130 cells: KOPP-SP130-xxx/M (xxx = 415 - 445, in increment of 5) 120 cells: KOPP-SP120-xxx/M (xxx = 385 - 410, in increment of 5) 90 cells: KOPP-SP90-xxx/M (xxx = 290 - 310, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	20A
Electrical protection class:	Class II
Pollution degree:	1
Material group:	I
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 8" Half-cut Mono-crystalline Silicon Solar Cells: 150 cells: KOPP-SPDB150-xxx/M (xxx = 480 - 515, in increment of 5) 140 cells: KOPP-SPDB140-xxx/M (xxx = 450 - 480, in increment of 5) 130 cells: KOPP-SPDB130-xxx/M (xxx = 415 - 445, in increment of 5) 120 cells: KOPP-SPDB120-xxx/M (xxx = 385 - 410, in increment of 5) 90 cells: KOPP-SPDB90-xxx/M (xxx = 290 - 310, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	25A
Electrical protection class:	Class II
Pollution degree:	1
Material group:	I
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) in Annex 1 of test report.

* For detailed design load of the products, please refer to CDF (Constructional Data Form) in Annex 1 of test report.



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