

# CERTIFICATE

**TÜV NORD CERT GmbH**  
herewith declares that

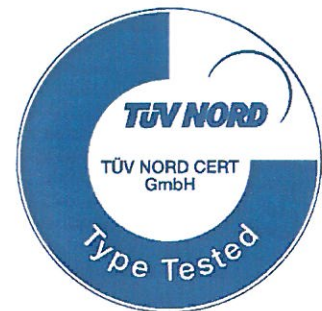
**Shanghai JA Solar Technology Co., Ltd.**  
No. 118, Lane 3111, West Huangcheng Road  
Fengxian District, Shanghai  
201401, P.R. China

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

**Description of product (details see Annex 2):**

**PV Modules with 6" Mono-crystalline Silicon Solar Cells**  
**PV Modules with 5" Mono-crystalline Silicon Solar Cells**  
**PV Modules with 6" Poly-crystalline Silicon Solar Cells**  
**PV Modules with half-cut 6" Mono-crystalline Silicon Solar Cells**  
**PV Modules with half-cut 6" Poly-crystalline Silicon Solar Cells**

Tested according to: P12.4-AA-04 Rev. 00  
(IEC 60068-2-68:1994 modified)  
Remark: Test Method Lc;  
Dust concentration:  $5 \pm 0.5 \text{g/m}^3$ ;  
Wind velocity:  $20 \pm 2 \text{m/s}$ ;  
Test duration: 4 hours;  
Registered No.: 44 780 19 406749 - 142  
Manufacturer: see Annex 1  
Test Report No.: 492010528.011  
File No.: SHV11077/18-03



Valid from: 2019-05-14  
Valid until: 2024-05-13



Essen, 2019-05-14



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Please also pay attention to the information stated overleaf.

**Manufacturer:**

Manufacturer 1: **Shanghai JA Solar Technology Co., Ltd.**  
No. 118, Lane 3111, West Huancheng Road, Fengxian District  
Shanghai 201401, P.R. China

Factory inspection report no.: 862010153.007

Manufacturer 2: **Hefei JA Solar Technology Co., Ltd.**  
No. 999, Chang Ning Road, Hi-tech Zone, Hefei  
230088, P.R. China

Factory inspection report no.: 862010241.005

Manufacturer 3: **JingAo Solar Co., Ltd.**  
5<sup>th</sup> Jinglong Industrial Park, No. 123 Xinxing Road  
Ningjin, Xingtai City, Hebei Province, 055550, P.R. China

Factory inspection report no.: 862010244.005

Manufacturer 4: **JA Solar (Xingtai) Co., Ltd.**  
No. 1688, Chang An Road, Xingtai Economic Development Area  
Xingtai City, Hebei Province, 054001, P.R. China

Factory inspection report no.: 862010290.003

Manufacturer 5: **Vina Solar Technology Co., Ltd.**  
E12 factory, lot CN-03, Van Trung Industrial park,  
21000 Bac Giang Province, Vietnam

Factory inspection report no.: 862010302.003



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Manufacturer 6: **Philadelphia Solar LTD. CO**  
Al Qastal Industrial Area, Air freight Road, 11814 Amman, Jordan

Factory inspection report no.: 862010431.001

Remark:

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

A handwritten signature in blue ink, appearing to read "Rafaelia".

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**Description of product(s):**

Module types:

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

72 cells: JAM6(L)-72- xxx (xxx=295-335, in steps of 5)

72 cells: JAM6-72- xxx/SI (xxx=285-325, in steps of 5)

72 cells: JAM6(R)-72-xxx (xxx=295-340, in steps of 5)

72 cells: JAM6(R)-72-xxx/PR (xxx=330-350, in steps of 5)

72 cells: JAM6-72-xxx/PR (xxx=325-345, in steps of 5)

72 cells: JAM6(L)-72-xxx/PR (xxx=325-345, in steps of 5)

72 cells: JAM6(K)-72-xxx/4BB (xxx=320-340, in steps of 5)

72 cells: JAM6(K)-72-xxx/PR (xxx=325-360, in steps of 5)

72 cells: JAM72S01-xxx/SC (xxx=320-365, in steps of 5)

72 cells: JAM72S02-xxx/SC (xxx=320-365, in steps of 5)

72 cells: JAM72S01-xxx/PR (xxx=325-390, in steps of 5)

72 cells: JAM72S02-xxx/PR (xxx=325-390, in steps of 5)

72 cells: JAM72S01-xxx/MR (xxx=360-390, in steps of 5)

72 cells: JAM72S02-xxx/MR (xxx=365-385, in steps of 5)

72 cells: JAM72S09-xxx/PR (xxx=370-390, in steps of 5)

60 cells: JAM6(L)-60-xxx (xxx=255-280, in steps of 5)

60 cells: JAM6-60-xxx/SI (xxx=235-280, in steps of 5)

60 cells: JAM6(FA)-60-xxx/SI (xxx=255-275, in steps of 5)

60 cells: JAM6(R)(FA)-60-xxx (xxx=260-280, in steps of 5)

60 cells: JAM6(R)-60-xxx (xxx=255-280, in steps of 5)

60 cells: JAM6(R)-60-xxx/PR (xxx=280-300, in steps of 5)

60 cells: JAM6-60-xxx/PR (xxx=275-295, in steps of 5)

60 cells: JAM6(L)-60-xxx/PR (xxx=270-295, in steps of 5)

60 cells: JAM6(K)-60-xxx/4BB (xxx=265-290, in steps of 5)

60 cells: JAM6(K)-60-xxx/PR (xxx=275-305, in steps of 5)

60 cells: JAM60S01-xxx/SC (xxx=265-305, in steps of 5)

60 cells: JAM60S02-xxx/SC (xxx=265-305, in steps of 5)

60 cells: JAM60S01-xxx/PR (xxx=280-325, in steps of 5)

60 cells: JAM60S02-xxx/PR (xxx=280-325, in steps of 5)

60 cells: JAM60S01-xxx/MR (xxx=300-330, in steps of 5)

60 cells: JAM60S02-xxx/MR (xxx=305-320, in steps of 5)



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60 cells: JAM60S09-xxx/PR (xxx=310-325, in steps of 5)  
48 cells: JAM6(FA)-48-xxx/SI (xxx=205-220, in steps of 5)  
48 cells: JAM6(R)(FA)-48-xxx (xxx=210-225, in steps of 5)  
48 cells: JAM6(R)-48-xxx/PR (xxx=220-235, in steps of 5)  
48 cells: JAM6-48-xxx/PR (xxx=215-235, in steps of 5)  
48 cells: JAM6(L)-48-xxx/PR (xxx=215-235, in steps of 5)  
48 cells: JAM6(K)-48xxx/4BB (xxx=210-225, in steps of 5)  
48 cells: JAM6(K)-48-xxx/PR (xxx=220-235, in steps of 5)

Maximum system voltage: 1000V  
Fuse rating: 20A  
Application class: Class A  
Electrical protection class: Class II

Module types:

**PV Modules with half-cut 6" Mono-crystalline Silicon Solar Cells:**

72 cells: JAM72S03-xxx/PR (xxx=355-400, in steps of 5)  
72 cells: JAM72S10-xxx/PR (xxx=380-415, in steps of 5)  
60 cells: JAM60S03-xxx/PR (xxx=295-335, in steps of 5)  
60 cells: JAM60S10-xxx/PR (xxx=315-345, in steps of 5)

Maximum system voltage: 1000V  
Fuse rating: 20A  
Application class: Class A  
Electrical protection class: Class II

Module types:

**PV Modules with 5" Mono-crystalline Silicon Solar Cells:**

72 cells: JAM5-72-xxx/SI (xxx=180-210, in steps of 5)  
72 cells: JAM5(L)-72-xxx/SI (xxx=180-220, in steps of 5)  
72 cells: JAM5(R)-72-xxx (xxx=195-220, in steps of 5)

Maximum system voltage: 1000V  
Fuse rating: 10A  
Application class: Class A  
Electrical protection class: Class II



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Module types:

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

72 cells: JAP6-72-xxx/3BB (xxx=250-330, in steps of 5)  
72 cells: JAP6-72-xxx/4BB (xxx=305-330, in steps of 5)  
72 cells: JAP6-72-xxx/RE (xxx=305-330, in steps of 5)  
72 cells: JAP6-72-xxx/4BB/RE (xxx=305-330, in steps of 5)  
72 cells: JAP6(K)-72-xxx/4BB (xxx=305-330, in steps of 5)  
72 cells: JAP72S01-xxx/SC (xxx=305-345, in steps of 5)  
72 cells: JAP72S02-xxx/SC (xxx=305-345, in steps of 5)  
72 cells: JAP72S01-xxx/PR (xxx=330-345, in steps of 5)  
72 cells: JAP72S09-xxx/SC (xxx=320-340, in steps of 5)  
60 cells: JAP6-60-xxx/3BB (xxx=240-275, in steps of 5)  
60 cells: JAP6(FA)-60-xxx/3BB (xxx=250-270, in steps of 5)  
60 cells: JAP6-60-xxx/4BB (xxx=250-275, in steps of 5)  
60 cells: JAP6-60-xxx/RE (xxx=255-280, in steps of 5)  
60 cells: JAP6-60-xxx/4BB/RE (xxx=255-280, in steps of 5)  
60 cells: JAP6(K)-60-xxx/4BB (xxx=255-275, in steps of 5)  
60 cells: JAP60S01-xxx/SC (xxx=250-290, in steps of 5)  
60 cells: JAP60S02-xxx/SC (xxx=250-290, in steps of 5)  
60 cells: JAP60S01-xxx/PR (xxx=275-285, in steps of 5)  
60 cells: JAP60S09-xxx/SC (xxx=265-280, in steps of 5)  
54 cells: JAP54S01-xxx/SC (xxx=245-255, in steps of 5)  
48 cells: JAP6(FA)-48-xxx/3BB (xxx=200-220, in steps of 5)  
48 cells: JAP6-48-xxx/3BB (xxx=200-220, in steps of 5)

Maximum system voltage:

1000V

Fuse rating:

20A

Application class:

Class A

Electrical protection class:

Class II



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|                              |  |
|------------------------------|--|
| Module types:                | <b>PV Modules with half-cut 6" Poly-crystalline Silicon Solar Cells:</b><br>72 cells: JAP72S03-xxx/PR (xxx=335-380, in steps of 5)<br>72 cells: JAP72S03-xxx/SC (xxx=320-350, in steps of 5)<br>72 cells: JAP72S10-xxx/SC (xxx=335-350, in steps of 5)<br>60 cells: JAP60S03-xxx/PR (xxx=280-315, in steps of 5)<br>60 cells: JAP60S03-xxx/SC (xxx=270-300, in steps of 5)<br>60 cells: JAP60S10-xxx/SC (xxx=275-290, in steps of 5) |
| Maximum system voltage:      | 1000V  |
| Fuse rating:                 | 20A  |
| Application class:           | Class A  |
| Electrical protection class: | Class II   |

|                              |   |
|------------------------------|---|
| Module types:                | <b>PV Modules with 6" Mono-crystalline Silicon Solar Cells:</b><br>72 cells: JAM6(K)-72-xxx/PR/1500V (xxx=345-365, in steps of 5)<br>72 cells: JAM6(K)-72-xxx/4BB/1500V (xxx=320-340, in steps of 5)<br>72 cells: JAM72S01-xxx/PR (xxx=325-390, in steps of 5)<br>72 cells: JAM72S01-xxx/MR (xxx=360-390, in steps of 5)<br>72 cells: JAM72S01-xxx/SC (xxx=320-365, in steps of 5)<br>72 cells: JAM72S09-xxx/PR (xxx=370-390, in steps of 5)<br>60 cells: JAM6(K)-60-xxx/PR/1500V (xxx=285-305, in steps of 5)<br>60 cells: JAM6(K)-60-xxx/4BB/1500V (xxx=265-290, in steps of 5)<br>60 cells: JAM60S01-xxx/PR (xxx=280-325, in steps of 5)<br>60 cells: JAM60S01-xxx/MR (xxx=300-330, in steps of 5)<br>60 cells: JAM60S01-xxx/SC (xxx=265-305, in steps of 5)<br>60 cells: JAM60S09-xxx/PR (xxx=310-325, in steps of 5) |
| Maximum system voltage:      | 1500V   |
| Fuse rating:                 | 20A   |
| Application class:           | Class A   |
| Electrical protection class: | Class II  |



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Module types:

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

72 cells: JAP6(K)-72-xxx/4BB/1500V (xxx=305-330, in steps of 5)  
72 cells: JAP72S01-xxx/SC (xxx=305-345, in steps of 5)  
72 cells: JAP72S01-xxx/PR (xxx=330-345, in steps of 5)  
72 cells: JAP72S09-xxx/SC (xxx=320-340, in steps of 5)  
60 cells: JAP6(K)-60-xxx/4BB/1500V (xxx=255-275, in steps of 5)  
60 cells: JAP60S01-xxx/SC (xxx=255-290, in steps of 5)  
60 cells: JAP60S01-xxx/PR (xxx=275-285, in steps of 5)  
60 cells: JAP60S09-xxx/SC (xxx=265-280, in steps of 5)  
54 cells: JAP54S01-xxx/SC (xxx=245-255, in steps of 5)

Maximum system voltage:

1500V

Fuse rating:

20A

Application class:

Class A

Electrical protection class:

Class II

Module types:

**PV Modules with half-cut 6" Mono-crystalline Silicon Solar Cells:**

72 cells: JAM72S03-xxx/PR (xxx=335-400, in steps of 5)  
72 cells: JAM72S10-xxx/PR (xxx=380-415, in steps of 5)  
60 cells: JAM60S03-xxx/PR (xxx=295-335, in steps of 5)  
60 cells: JAM60S10-xxx/PR (xxx=315-345, in steps of 5)

Maximum system voltage:

1500V

Fuse rating:

20A

Application class:

Class A

Electrical protection class:

Class II



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Module types:

**PV Modules with half-cut 6" Poly-crystalline Silicon Solar Cells:**

72 cells: JAP72S03-xxx/PR (xxx=335-380, in steps of 5)

72 cells: JAP72S03-xxx/SC (xxx=320-350, in steps of 5)

72 cells: JAP72S10-xxx/SC (xxx=335-350, in steps of 5)

60 cells: JAP60S03-xxx/PR (xxx=280-315, in steps of 5)

60 cells: JAP60S03-xxx/SC (xxx=270-300, in steps of 5)

60 cells: JAP60S10-xxx/SC (xxx=275-290, in steps of 5)

Maximum system voltage:

1500V

Fuse rating:

20A

Application class:

Class A

Electrical protection class:

Class II

Remark:

For detailed product information, please refer to CDF (Constructional Data Form) in Annex 1 of test report.



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