

# CERTIFICATE

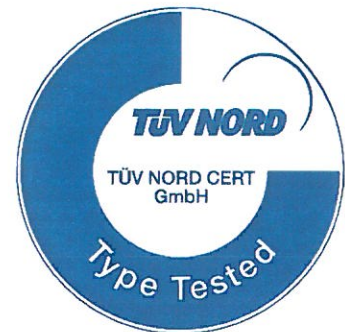
**TÜV NORD CERT GmbH**  
herewith declares that

**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**



Valid from: 2019-09-05

Valid until: 2024-05-13

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 each side.  
Registered No.: 44 780 19 406749 - 298  
Manufacturer: see Annex 1  
Test Report No.: 492010528.012  
File No.: SHV04091/19-03



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Essen, 2019-09-05

Please also pay attention to the information stated overleaf.

**Manufacturer:**

Manufacturer 1:	<b>Shanghai JA Solar Technology Co., Ltd.</b> No. 118, Lane 3111, West Huancheng Road, Fengxian District Shanghai 201401, P.R. China
Factory inspection report no.:	862010153.007
Manufacturer 2:	<b>Hefei JA Solar Technology Co., Ltd.</b> No. 999, Chang Ning Road, Hi-tech Zone, Hefei 230088, P.R. China
Factory inspection report no.:	862010241.006
Manufacturer 3:	<b>JA Solar Co., Ltd.</b> 5 <sup>th</sup> Jinglong Industrial Park, No. 123 Xinxing Road Ningjin, Xingtai City, Hebei Province, 055550, P.R. China
Factory inspection report no.:	862010244.006
Manufacturer 4:	<b>JA Solar (Xingtai) Co., Ltd.</b> No. 1688, Chang An Road, Xingtai Economic Development Area Xingtai City, Hebei Province, 054001, P.R. China
Factory inspection report no.:	862010290.004
Manufacturer 5:	<b>Vina Solar Technology Co., Ltd.</b> E12 factory, lot CN-03, Van Trung Industrial park, 21000 Bac Giang Province, Vietnam
Factory inspection report no.:	862010302.003
Manufacturer 6:	<b>Philadelphia Solar LTD. CO</b> 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.



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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=360-390, in steps of 5)  
72 cells: JAM72S09-xxx/PR (xxx=365-405, in steps of 5)  
72 cells: JAM72S12-xxx/PR (xxx=365-390, 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=300-330, in steps of 5)  
60 cells: JAM60S09-xxx/PR (xxx=305-335, in steps of 5)  
60 cells: JAM60S12-xxx/PR (xxx=305-325, 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)



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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:**

78 cells: JAM78S10-xxx/MR (xxx=410-440, in steps of 5)  
72 cells: JAM72S03-xxx/PR (xxx=355-400, in steps of 5)  
72 cells: JAM72S10-xxx/PR (xxx=365-415, in steps of 5)  
72 cells: JAM72S17-xxx/PR (xxx=380-415, in steps of 5)  
72 cells: JAM72S10-xxx/MR (xxx=390-420, in steps of 5)  
72 cells: JAM72S17-xxx/MR (xxx=390-410, in steps of 5)  
66 cells: JAM66S10-xxx/MR (xxx=345-380, in steps of 5)  
60 cells: JAM60S03-xxx/PR (xxx=295-335, in steps of 5)  
60 cells: JAM60S10-xxx/PR (xxx=305-345, in steps of 5)  
60 cells: JAM60S17-xxx/PR (xxx=315-345, in steps of 5)  
60 cells: JAM60S10-xxx/MR (xxx=320-345, in steps of 5)  
60 cells: JAM60S17-xxx/MR (xxx=320-340, 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)  
72 cells: JAP72S01-xxx/MS (xxx=325-345, 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)  
60 cells: JAP60S01-xxx/MS (xxx=270-290, 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

## 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)  
72 cells: JAP72S03-xxx/MS (xxx=320-355, 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)



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60 cells: JAP60S03-xxx/MS (xxx=265-305, 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 6" Mono-crystalline Silicon Solar Cells:**

72 cells: JAM6(K)-72-xxx/PR/1500V (xxx=345-365, in steps of 5)  
72 cells: JAM6(K)-72-xxx/4BB/1500V (xxx=320-340, in steps of 5)  
72 cells: JAM72S01-xxx/PR (xxx=325-390, in steps of 5)  
72 cells: JAM72S01-xxx/MR (xxx=360-390, in steps of 5)  
72 cells: JAM72S01-xxx/SC (xxx=320-365, in steps of 5)  
72 cells: JAM72S09-xxx/PR (xxx=365-405, in steps of 5)  
60 cells: JAM6(K)-60-xxx/PR/1500V (xxx=285-305, in steps of 5)  
60 cells: JAM6(K)-60-xxx/4BB/1500V (xxx=265-290, in steps of 5)  
60 cells: JAM60S01-xxx/PR (xxx=280-325, in steps of 5)  
60 cells: JAM60S01-xxx/MR (xxx=300-330, in steps of 5)  
60 cells: JAM60S01-xxx/SC (xxx=265-305, in steps of 5)  
60 cells: JAM60S09-xxx/PR (xxx=305-335, 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 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)  
72 cells: JAP72S01-xxx/MS (xxx=325-345, 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)  
60 cells: JAP60S01-xxx/MS (xxx=270-290, in steps of 5)  
54 cells: JAP54S01-xxx/SC (xxx=245-255, in steps of 5)

Maximum system voltage: 1500V



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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:**

78 cells: JAM78S10-xxx/MR (xxx=410-440, in steps of 5)  
72 cells: JAM72S03-xxx/PR (xxx=355-400, in steps of 5)  
72 cells: JAM72S10-xxx/PR (xxx=365-415, in steps of 5)  
72 cells: JAM72S10-xxx/MR (xxx=390-420, in steps of 5)  
66 cells: JAM66S10-xxx/MR (xxx=345-380, in steps of 5)  
60 cells: JAM60S03-xxx/PR (xxx=295-335, in steps of 5)  
60 cells: JAM60S10-xxx/PR (xxx=305-345, in steps of 5)  
60 cells: JAM60S10-xxx/MR (xxx=320-345, 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" 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)  
72 cells: JAP72S03-xxx/MS (xxx=320-355, 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)  
60 cells: JAP60S03-xxx/MS (xxx=265-305, 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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