

CERTIFICATE OF AUTHORIZED DISTRIBUTOR

To Whom it May Concern

Whereas

We, **JA SOLAR INTERNATIONAL LIMITED** do officially hereby authorize **HUNG VIET GREEN TECHNOLOGY JOINT STOCK COMPANY (Tax ID 0108801830)**, address 21TT7 Tasco Xuan Phuong, Xuan Phuong ward, Nam Tu Liem District, Ha Noi capital, Vietnam to be **JA Solar's Non-Exclusive distributor** of Solar Panel and JA PV kits in Vietnam.

The time is from [01/08/2023] to [01/08/2024] in Vietnam.

Sincerely yours,

[**JA SOLAR INTERNATIONAL LIMITED**]

Stamp:



Country Director: *Daniel Li*

Dated: 01st August 2023

CERTIFICATE

TÜV NORD CERT GmbH
herewith declares that

Shanghai JA Solar Technology Co., Ltd.
No. 118, Lane 3111, West Huancheng 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):

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules



Valid from: 2024-12-13

Valid until: 2026-09-29

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	IEC 62716:2013 / EN 62716:2013.
Registered No.:	44 780 23 406749 - 192R11A6M12
Manufacturer and factory(-ies):	See Annex 1
Test Report No.:	492012552.013
File No.:	PVP09104/24P-02



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Essen, 2024-12-13

Please also pay attention to the information stated overleaf.

Manufacturer and factory(-ies):

Manufacturer:	Shanghai JA Solar Technology Co., Ltd. No. 118, Lane 3111, West Huancheng Road, Fengxian District Shanghai 201401, P.R. China
Factory 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.:	862010153.012
Factory 2:	Hefei JA Solar Technology Co., Ltd. No. 999, Chang Ning Road, Hi-tech Zone, Hefei 230088, P.R. China
Factory inspection report no.:	862010241.011
Factory 3:	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.:	862010290.009
Factory 4:	JA Solar New Energy Yangzhou Co., Ltd. No.1, Jinhui Road, Economic Development Zone Yangzhou, Jiangsu Province, 225131, P.R. China.
Factory inspection report no.:	862010496.005
Factory 5:	Yiwu JA Solar Technology Co., Ltd. No. 165, Tongze Road, Yiting Town, Yiwu City, Zhejiang Province, 322000, P.R. China.
Factory inspection report no.:	862010513.005
Factory 6:	JA Solar Viet Nam Company Limited Lot G, Quang Chau Industiral Park, Quang Chau Ward, Viet Yen Town, 236110 Bac Giang Province, VIETNAM.
Factory inspection report no.:	862010560.004



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Factory 7:	JA Solar New Energy Yangzhou Co., Ltd. (Jingshan Park) No.123, Jinshan Road, Economic Development Zone, Yangzhou, Jiangsu Province, 225131, P.R. China.
Factory inspection report no.:	862010584.004
Factory 8:	HSA ENERJI A.S. OSB III. Kisim Keciliköy OSB Mah., Mustafa Kemal Bulvari No:15/1., 45030 Yunusemre – Manisa, TURKEY
Factory inspection report no.:	862010735.002
Factory 9:	Dongtai JA Solar Technology Co., Ltd. No.8 Zaofeng North Road, Dongtai High-tech Zone, Dongtai City, 224248 Yancheng City, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA
Factory inspection report no.:	862010802.002
Factory 10:	QuJing JA Solar Technology Co., Ltd. North of Nanhai Avenue and East of Shaoxi Road, Qujing Economic and Technological Development Zone, 655000 Qujing City, Yunnan Province, PEOPLE'S REPUBLIC OF CHINA
Factory inspection report no.:	862010866.002
Factory 11:	Inner Mongolia JA Solar PV Technology Co., Ltd. No.21, Zhuangbei Avenue, Xin Guihua Area, Equipment park, Qingshan District, 014000 Baotou, Inner Mogolia Autonomous Region, PEOPLE'S REPUBLIC OF CHINA
Factory inspection report no.:	862010874.002
Factory 12:	Ordos JA Solar Technology Co., Ltd. Room 2007, Office Building, High-tech Industrial Development Zone, Dongsheng District Equipment Manufacturing Base, 017000 Ordos City, Inner Mongolia, PEOPLE'S REPUBLIC OF CHINA
Factory inspection report no.:	862011003.001



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Factory 13: **Inner Mongolia JA Naoer New Energy Co., Ltd.**
Room 620, Office Building of the Management Committee, No.1 Fuyuan
Road, North Economic and Technological Development Zone, Bayannur
City 015000, Inner Mongolia Autonomous Region, PEOPLE'S REPUBLIC
OF CHINA

Factory inspection report no.: 862011027.001

Factory 14: **MEM PANEL SOLAR ENERJI SANAYI VETICARET A.S**
Organized Industrial Site 3, Street No: 4 Onikisubat, 46050
Kahramanmaras, TURKIYE

Factory inspection report no.: 862011040.001

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 Mono-crystalline Silicon Solar Cells (156mm to 158.75mm):

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=320-345, in steps of 5)
72 cells: JAM6(K)-72-xxx/PR (xxx=325-370, in steps of 5)
72 cells: JAM72S02-xxx/PR (xxx=325-390, in steps of 5)
72 cells: JAM72S01-xxx/PR/1000V (xxx=345-390, in steps of 5)
72 cells: JAM72S01-xxx/SC/1000V (xxx=320-365, in steps of 5)
72 cells: JAM72S01-xxx/MR/1000V (xxx=365-385, in steps of 5)
72 cells: JAM72S09-xxx/PR/1000V (xxx=370-405, in steps of 5)
72 cells: JAM72S09-xxx/BP/1000V (xxx=375-385, in steps of 5)
72 cells: JAM72S02-xxx/PR/1000V (xxx=345-390, in steps of 5)
72 cells: JAM72S02-xxx/SC/1000V (xxx=320-365, in steps of 5)
72 cells: JAM72S02-xxx/MR/1000V (xxx=365-385, in steps of 5)
72 cells: JAM72S12-xxx/PR/1000V (xxx=365-385, 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=265-285, in steps of 5)
60 cells: JAM6(K)-60-xxx/PR (xxx=275-310, in steps of 5)
60 cells: JAM60S02-xxx/PR (xxx=280-325, in steps of 5)
60 cells: JAM60S01-xxx/PR/1000V (xxx=285-325, in steps of 5)
60 cells: JAM60S01-xxx/SC/1000V (xxx=265-305, in steps of 5)
60 cells: JAM60S01-xxx/MR/1000V (xxx=305-320, in steps of 5)
60 cells: JAM60S09-xxx/PR/1000V (xxx=310-335, in steps of 5)
60 cells: JAM60S09-xxx/BP/1000V (xxx=315-320, in steps of 5)
60 cells: JAM60S02-xxx/PR/1000V (xxx=285-325, in steps of 5)
60 cells: JAM60S02-xxx/SC/1000V (xxx=265-305, in steps of 5)



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60 cells: JAM60S02-xxx/MR/1000V (xxx=305-320, in steps of 5)
60 cells: JAM60S12-xxx/PR/1000V (xxx=305-330, 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
Maximum overcurrent protection rating: 20A
Electrical protection class: Class II

Module types: **PV Modules with 125mm 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
Maximum overcurrent protection rating: 10A
Electrical protection class: Class II

Module types: **PV Modules with Mono-crystalline Silicon half-cut Solar Cells (156mm to 158.75mm):**

72 cells: JAM72S03-xxx/PR/1000V (xxx=360-395, in steps of 5)
72 cells: JAM72S10-xxx/PR/1000V (xxx=380-410, in steps of 5)
72 cells: JAM72S10-xxx/BP/1000V (xxx=385-400, in steps of 5)
72 cells: JAM72S10-xxx/MR/1000V (xxx=390-430, in steps of 5)
72 cells: JAM72S10-xxx/MB/1000V (xxx=395-415, in steps of 5)
72 cells: JAM72S08-xxx/PR/1000V (xxx=360-395, in steps of 5)
72 cells: JAM72S17-xxx/PR/1000V (xxx=380-390, in steps of 5)
72 cells: JAM72S17-xxx/MR/1000V (xxx=390-430, in steps of 5)
72 cells: JAM72S17-xxx/GR/1000V (xxx=385-400, in steps of 5)
60 cells: JAM60S03-xxx/PR/1000V (xxx=300-330, in steps of 5)
60 cells: JAM60S10-xxx/PR/1000V (xxx=315-345, in steps of 5)
60 cells: JAM60S10-xxx/BP/1000V (xxx=320-330, in steps of 5)
60 cells: JAM60S10-xxx/MR/1000V (xxx=325-355, in steps of 5)



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	60 cells: JAM60S10-xxx/MB/1000V (xxx=330-345, in steps of 5)
	60 cells: JAM60S08-xxx/PR/1000V (xxx=300-330, in steps of 5)
	60 cells: JAM60S17-xxx/PR/1000V (xxx=315-325, in steps of 5)
	60 cells: JAM60S17-xxx/MR/1000V (xxx=315-355, in steps of 5)
	78 cells: JAM78S10-xxx/MR/1000V (xxx=435-465, in steps of 5)
	66 cells: JAM66S10-xxx/MR/1000V (xxx=345-390, in steps of 5)
Maximum system voltage:	1000V
Maximum overcurrent protection rating:	20A
Electrical protection class:	Class II

Module types:	PV Modules with Mono-crystalline Silicon half-cut Solar Cells (166mm to 168mm):
	72 cells: JAM72S20-xxx/MR/1000V (xxx=430-470, in steps of 5)
	72 cells: JAM72S20-xxx/MB/1000V (xxx=450-465, in steps of 5)
	60 cells: JAM60S20-xxx/MR/1000V (xxx=355-390, in steps of 5)
	60 cells: JAM60S21-xxx/MR/1000V (xxx=355-390, in steps of 5)
	60 cells: JAM60S20-xxx/MB/1000V (xxx=375-390, in steps of 5)

Maximum system voltage:	1000V
Maximum overcurrent protection rating:	25A
Electrical protection class:	Class II

Module types:	PV Modules with 182mm Mono-crystalline Silicon half-cut Solar Cells:
	60 cells: JAM60S30-xxx/MR/1000V (xxx=435-460, in steps of 5)
	66 cells: JAM66S30-xxx/MR/1000V (xxx=470-510, in steps of 5)
	72 cells: JAM72S30-xxx/MR/1000V (xxx=510-560, in steps of 5)
	78 cells: JAM78S30-xxx/MR/1000V (xxx=580-605, in steps of 5)
	54 cells: JAM54S30-xxx/MR/1000V (xxx=390-425, in steps of 5)
	78 cells: JAM78S30-xxx/GR/1000V (xxx=575-610, in steps of 5)
	72 cells: JAM72S30-xxx/GR/1000V (xxx=510-560, in steps of 5)
	66 cells: JAM66S30-xxx/GR/1000V (xxx=500-510, in steps of 5)
	60 cells: JAM60S30-xxx/GR/1000V (xxx=445-470, in steps of 5)
	54 cells: JAM54S30-xxx/GR/1000V (xxx=400-420, in steps of 5)
	72 cells: JAM72S31-xxx/MR/1000V (xxx=510-545, in steps of 5)
	66 cells: JAM66S31-xxx/MR/1000V (xxx=470-500, in steps of 5)
	60 cells: JAM60S31-xxx/MR/1000V (xxx=425-450, in steps of 5)
	54 cells: JAM54S31-xxx/MR/1000V (xxx=385-415, in steps of 5)



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78 cells: JAM78S31-xxx/GR/1000V (xxx=570-590, in steps of 5)
 72 cells: JAM72S31-xxx/GR/1000V (xxx=510-545, in steps of 5)
 66 cells: JAM66S31-xxx/GR/1000V (xxx=480-500, in steps of 5)
 60 cells: JAM60S31-xxx/GR/1000V (xxx=435-450, in steps of 5)
 54 cells: JAM54S31-xxx/GR/1000V (xxx=395-415, in steps of 5)
 72 cells: JAM72S40-xxx/GR/1000V (xxx=540-575, in steps of 5)
 66 cells: JAM66S40-xxx/GR/1000V (xxx=495-525, in steps of 5)
 60 cells: JAM60S40-xxx/GR/1000V (xxx=450-480, in steps of 5)
 54 cells: JAM54S40-xxx/GR/1000V (xxx=405-430, in steps of 5)
 72 cells: JAM72S41-xxx/GR/1000V (xxx=540-570, in steps of 5)
 66 cells: JAM66S41-xxx/GR/1000V (xxx=495-525, in steps of 5)
 60 cells: JAM60S41-xxx/GR/1000V (xxx=450-475, in steps of 5)
 54 cells: JAM54S41-xxx/GR/1000V (xxx=405-430, in steps of 5)
 72 cells: JAM72S30-xxx/LR/1000V (xxx=555-580, in steps of 5)
 54 cells: JAM54S30-xxx/LR/1000V (xxx=415-435, in steps of 5)
 54 cells: JAM54S31-xxx/LR/1000V (xxx=415-425, in steps of 5)
 72 cells: JAM72S30-xxx/MB/1000V (xxx=535-550, in steps of 5)
 72 cells: JAM72S31-xxx/MB/1000V (xxx=525-540, in steps of 5)
 54 cells: JAM54S30-xxx/MB/1000V (xxx=385-410, in steps of 5)
 54 cells: JAM54S31-xxx/MB/1000V (xxx=385-405, in steps of 5)
 54 cells: JAM54S30-xxx/LB/1000V (xxx=410-425, in steps of 5)
 54 cells: JAM54S31-xxx/LB/1000V (xxx=410-415, in steps of 5)
 72 cells: JAM72S40-xxx/MR/1000V (xxx=560-590, in steps of 5)

Maximum system voltage: 1000V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

Module types: **PV Modules with 210mm Mono-crystalline Silicon 1/3-cut Solar Cells:**

50 cells: JAM50S40-xxx/MR/1000V (xxx=490-500, in steps of 5)
 66 cells: JAM66S35-xxx/MR/1000V (xxx=650-670, in steps of 5)
 60 cells: JAM60S35-xxx/MR/1000V (xxx=590-610, in steps of 5)

Maximum system voltage: 1000V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II



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Module types:	PV Modules with 182mm Mono-crystalline Silicon 1/5-cut Solar Cells:
	76 cells: JAM76S11-xxx/PR(B)/1000V (xxx=395-415, in steps of 5)
Maximum system voltage:	1000V
Maximum overcurrent protection rating:	25A
Electrical protection class:	Class II

Module types:	PV Modules with Poly-crystalline Silicon Solar Cells (156mm to 158.75mm):
	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=310-330, in steps of 5)
	72 cells: JAP72S01-xxx/SC/1000V (xxx=310-345, in steps of 5)
	72 cells: JAP72S01-xxx/PR/1000V (xxx=330-345, in steps of 5)
	72 cells: JAP72S09-xxx/SC/1000V (xxx=320-345, in steps of 5)
	72 cells: JAP72S01-xxx/MS/1000V (xxx=325-340, in steps of 5)
	72 cells: JAP72S02-xxx/SC/1000V (xxx=310-345, in steps of 5)
	72 cells: JAP72S02-xxx/PR/1000V (xxx=330-345, 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/1000V (xxx=255-290, in steps of 5)
	60 cells: JAP60S01-xxx/PR/1000V (xxx=275-285, in steps of 5)
	60 cells: JAP60S09-xxx/SC/1000V (xxx=265-290, in steps of 5)
	60 cells: JAP60S01-xxx/MS/1000V (xxx=270-280, in steps of 5)
	60 cells: JAP60S02-xxx/SC/1000V (xxx=255-290, in steps of 5)
	60 cells: JAP60S02-xxx/PR/1000V (xxx=275-285, 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
Maximum overcurrent protection rating:	20A



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Electrical protection class: Class II

Module types:

PV Modules with Poly-crystalline Silicon half-cut Solar Cells (156mm to 158.75mm):

72 cells: JAP72S03-xxx/SC/1000V (xxx=320-345, in steps of 5)
 72 cells: JAP72S03-xxx/PR/1000V (xxx=335-355, in steps of 5)
 72 cells: JAP72S10-xxx/SC/1000V (xxx=335-350, in steps of 5)
 72 cells: JAP72S03-xxx/MS/1000V (xxx=320-345, in steps of 5)
 72 cells: JAP72S08-xxx/SC/1000V (xxx=320-345, in steps of 5)
 72 cells: JAP72S08-xxx/PR/1000V (xxx=335-355, in steps of 5)
 60 cells: JAP60S03-xxx/SC/1000V (xxx=270-290, in steps of 5)
 60 cells: JAP60S03-xxx/PR/1000V (xxx=280-295, in steps of 5)
 60 cells: JAP60S10-xxx/SC/1000V (xxx=275-290, in steps of 5)
 60 cells: JAP60S03-xxx/MS/1000V (xxx=270-285, in steps of 5)
 60 cells: JAP60S08-xxx/SC/1000V (xxx=270-290, in steps of 5)
 60 cells: JAP60S08-xxx/PR/1000V (xxx=280-295, in steps of 5)

Maximum system voltage: 1000V

Maximum overcurrent protection rating: 20A

Electrical protection class: Class II

Module types:

PV Modules with Mono-crystalline Silicon Solar Cells (156mm to 158.75mm):

72 cells: JAM6(K)-72-xxx/PR/1500V (xxx=345-370, in steps of 5)
 72 cells: JAM6(K)-72-xxx/4BB/1500V (xxx=320-345, in steps of 5)
 72 cells: JAM72S01-xxx/PR (xxx=345-390, in steps of 5)
 72 cells: JAM72S01-xxx/SC/1500V (xxx=320-365, in steps of 5)
 72 cells: JAM72S01-xxx/MR/1500V (xxx=365-385, in steps of 5)
 72 cells: JAM72S09-xxx/PR/1500V (xxx=370-405, in steps of 5)
 72 cells: JAM72S09-xxx/BP/1500V (xxx=375-385, in steps of 5)
 72 cells: JAM72S02-xxx/PR/1500V (xxx=345-390, in steps of 5)
 72 cells: JAM72S02-xxx/SC/1500V (xxx=320-365, in steps of 5)
 72 cells: JAM72S02-xxx/MR/1500V (xxx=365-385, in steps of 5)
 72 cells: JAM72S12-xxx/PR/1500V (xxx=365-385, in steps of 5)
 60 cells: JAM6(K)-60-xxx/PR/1500V (xxx=285-310, in steps of 5)
 60 cells: JAM6(K)-60-xxx/4BB/1500V (xxx=265-285, in steps of 5)
 60 cells: JAM60S01-xxx/PR/1500V (xxx=285-325, in steps of 5)
 60 cells: JAM60S01-xxx/SC/1500V (xxx=265-305, in steps of 5)
 60 cells: JAM60S01-xxx/MR/1500V (xxx=305-320, in steps of 5)



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60 cells: JAM60S09-xxx/PR/1500V (xxx=310-335, in steps of 5)
60 cells: JAM60S09-xxx/BP/1500V (xxx=315-320, in steps of 5)
60 cells: JAM60S02-xxx/PR/1500V (xxx=285-325, in steps of 5)
60 cells: JAM60S02-xxx/SC/1500V (xxx=265-305, in steps of 5)
60 cells: JAM60S02-xxx/MR/1500V (xxx=305-320, in steps of 5)
60 cells: JAM60S12-xxx/PR/1500V (xxx=305-330, in steps of 5)
72 cells: JAM6(K)(DG)-72-xxx/PR/1500V (xxx=330-365, in steps of 5)
72 cells: JAM6(K)(DG)-72-xxx/4BB/1500V (xxx=320-340, in steps of 5)
72 cells: JAM72D00-xxx/PR (xxx=340-385, in steps of 5)
72 cells: JAM72D00-xxx/PR/1500V (xxx=340-385, in steps of 5)
72 cells: JAM72D00-xxx/SC (xxx=320-340, in steps of 5)
72 cells: JAM72D00-xxx/BP (xxx=330-385, in steps of 5)
72 cells: JAM72D00-xxx/BP/1500V (xxx=330-385, in steps of 5)
72 cells: JAM72D00-xxx/MB (xxx=370-380, in steps of 5)
72 cells: JAM72D00-xxx/MB/1500V (xxx=370-380, in steps of 5)
72 cells: JAM72D09-xxx/BP (xxx=360-400, in steps of 5)
72 cells: JAM72D09-xxx/BP/1500V (xxx=360-400, in steps of 5)
60 cells: JAM6(DG)-60-xxx/1500V (xxx=250-270, in steps of 5)
60 cells: JAM6(K)(DG)-60-xxx/4BB/1500V (xxx=260-285, in steps of 5)
60 cells: JAM6(K)(DG)-60-xxx/PR/1500V (xxx=270-305, in steps of 5)
60 cells: JAM6(DG)-60-xxx/4BB/1500V (xxx=260-280, in steps of 5)
60 cells: JAM60D00-xxx/PR (xxx=285-320, in steps of 5)
60 cells: JAM60D00-xxx/PR/1500V (xxx=285-320, in steps of 5)
60 cells: JAM60D00-xxx/SC (xxx=260-285, in steps of 5)
60 cells: JAM60D00-xxx/BP (xxx=275-320, in steps of 5)
60 cells: JAM60D00-xxx/BP/1500V (xxx=275-320, in steps of 5)
60 cells: JAM60D00-xxx/MB (xxx=310-315, in steps of 5)
60 cells: JAM60D00-xxx/MB/1500V (xxx=310-315, in steps of 5)
60 cells: JAM60D09-xxx/BP (xxx=300-340, in steps of 5)
60 cells: JAM60D09-xxx/BP/1500V (xxx=300-340, in steps of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 20A

Electrical protection class: Class II



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Module types:

PV Modules with Mono-crystalline Silicon half-cut Solar Cells (156mm to 158.75mm):

72 cells: JAM72S03-xxx/PR/1500V (xxx=360-395, in steps of 5)
72 cells: JAM72S10-xxx/PR/1500V (xxx=380-410, in steps of 5)
72 cells: JAM72S10-xxx/BP/1500V (xxx=385-400, in steps of 5)
72 cells: JAM72S10-xxx/MR/1500V (xxx=390-430, in steps of 5)
72 cells: JAM72S10-xxx/MB/1500V (xxx=395-415, in steps of 5)
72 cells: JAM72S08-xxx/PR/1500V (xxx=360-395, in steps of 5)
72 cells: JAM72S17-xxx/PR/1500V (xxx=380-390, in steps of 5)
72 cells: JAM72S17-xxx/MR/1500V (xxx=390-430, in steps of 5)
72 cells: JAM72S17-xxx/GR/1500V (xxx=385-400, in steps of 5)
60 cells: JAM60S03-xxx/PR/1500V (xxx=300-330, in steps of 5)
60 cells: JAM60S10-xxx/PR/1500V (xxx=315-345, in steps of 5)
60 cells: JAM60S10-xxx/BP/1500V (xxx=320-330, in steps of 5)
60 cells: JAM60S10-xxx/MR/1500V (xxx=325-355, in steps of 5)
60 cells: JAM60S10-xxx/MB/1500V (xxx=330-345, in steps of 5)
60 cells: JAM60S20-xxx/MR/1500V (xxx=355-390, in steps of 5)
60 cells: JAM60S21-xxx/MR/1500V (xxx=355-390, in steps of 5)
60 cells: JAM60S08-xxx/PR/1500V (xxx=300-330, in steps of 5)
60 cells: JAM60S17-xxx/PR/1500V (xxx=315-325, in steps of 5)
60 cells: JAM60S17-xxx/MR/1500V (xxx=315-355, in steps of 5)
78 cells: JAM78S10-xxx/MR/1500V (xxx=435-465, in steps of 5)
66 cells: JAM66S10-xxx/MR/1500V (xxx=345-390, in steps of 5)
72 cells: JAM72D10-xxx/MB (xxx=385-430, in steps of 5)
72 cells: JAM72D10-xxx/MB/1500V (xxx=385-430, in steps of 5)
60 cells: JAM60D10-xxx/MB (xxx=320-355, in steps of 5)
60 cells: JAM60D10-xxx/MB/1500V (xxx=320-355, in steps of 5)
72 cells: JAM72D10-xxx/BP (xxx=385-415, in steps of 5)
72 cells: JAM72D10-xxx/BP/1500V (xxx=385-415, in steps of 5)
60 cells: JAM60D10-xxx/BP (xxx=320-345, in steps of 5)
60 cells: JAM60D10-xxx/BP/1500V (xxx=320-345, in steps of 5)
78 cells: JAM78D10-xxx/MB (xxx=435-455, in steps of 5)
78 cells: JAM78D10-xxx/MB/1500V (xxx=435-455, in steps of 5)
66 cells: JAM66D10-xxx/MB (xxx=360-380, in steps of 5)
66 cells: JAM66D10-xxx/MB/1500V (xxx=360-380, in steps of 5)
72 cells: JAM72D20-xxx/MB (xxx=430-465, in steps of 5)
72 cells: JAM72D20-xxx/MB/1500V (xxx=430-465, in steps of 5)
60 cells: JAM60D20-xxx/MB (xxx=355-385, in steps of 5)
60 cells: JAM60D20-xxx/MB/1500V (xxx=355-385, in steps of 5)
72 cells: JAM72D10-xxx/TB (xxx=400-420, in steps of 5)



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72 cells: JAM72D10-xxx/TB/1500V (xxx=400-420, in steps of 5)
 60 cells: JAM60D10-xxx/TB (xxx=335-350, in steps of 5)
 60 cells: JAM60D10-xxx/TB/1500V (xxx=335-350, in steps of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 20A

Electrical protection class: Class II

Module types: **PV Modules with Mono-crystalline Silicon half-cut Solar Cells (166mm to 168mm):**

72 cells: JAM72S20-xxx/MR/1500V (xxx=430-470, in steps of 5)
 72 cells: JAM72S20-xxx/MB/1500V (xxx=450-465, in steps of 5)
 60 cells: JAM60S20-xxx/MB/1500V (xxx=375-390, in steps of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

Module types: **PV Modules with 182mm Mono-crystalline Silicon half-cut Solar Cells:**

78 cells: JAM78S30-xxx/MR/1500V (xxx=580-605, in steps of 5)
 72 cells: JAM72S30-xxx/MR/1500V (xxx=510-560, in steps of 5)
 66 cells: JAM66S30-xxx/MR/1500V (xxx=470-510, in steps of 5)
 60 cells: JAM60S30-xxx/MR/1500V (xxx=435-460, in steps of 5)
 54 cells: JAM54S30-xxx/MR/1500V (xxx=390-425, in steps of 5)
 78 cells: JAM78S30-xxx/GR/1500V (xxx=575-610, in steps of 5)
 72 cells: JAM72S30-xxx/GR/1500V (xxx=510-560, in steps of 5)
 66 cells: JAM66S30-xxx/GR/1500V (xxx=500-510, in steps of 5)
 60 cells: JAM60S30-xxx/GR/1500V (xxx=445-470, in steps of 5)
 54 cells: JAM54S30-xxx/GR/1500V (xxx=400-420, in steps of 5)
 72 cells: JAM72S31-xxx/MR/1500V (xxx=510-545, in steps of 5)
 66 cells: JAM66S31-xxx/MR/1500V (xxx=470-500, in steps of 5)
 60 cells: JAM60S31-xxx/MR/1500V (xxx=425-450, in steps of 5)
 54 cells: JAM54S31-xxx/MR/1500V (xxx=385-415, in steps of 5)
 78 cells: JAM78S31-xxx/GR/1500V (xxx=570-590, in steps of 5)
 72 cells: JAM72S31-xxx/GR/1500V (xxx=510-545, in steps of 5)
 66 cells: JAM66S31-xxx/GR/1500V (xxx=480-500, in steps of 5)
 60 cells: JAM60S31-xxx/GR/1500V (xxx=435-450, in steps of 5)
 54 cells: JAM54S31-xxx/GR/1500V (xxx=395-415, in steps of 5)



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72 cells: JAM72S40-xxx/GR/1500V (xxx=540-575, in steps of 5)
66 cells: JAM66S40-xxx/GR/1500V (xxx=495-525, in steps of 5)
60 cells: JAM60S40-xxx/GR/1500V (xxx=450-480, in steps of 5)
54 cells: JAM54S40-xxx/GR/1500V (xxx=405-430, in steps of 5)
72 cells: JAM72S41-xxx/GR/1500V (xxx=540-570, in steps of 5)
66 cells: JAM66S41-xxx/GR/1500V (xxx=495-525, in steps of 5)
60 cells: JAM60S41-xxx/GR/1500V (xxx=450-475, in steps of 5)
54 cells: JAM54S41-xxx/GR/1500V (xxx=405-430, in steps of 5)
72 cells: JAM72S30-xxx/LR/1500V (xxx=555-580, in steps of 5)
54 cells: JAM54S30-xxx/LR/1500V (xxx=415-435, in steps of 5)
54 cells: JAM54S31-xxx/LR/1500V (xxx=415-425, in steps of 5)
72 cells: JAM72S30-xxx/MB/1500V (xxx=535-550, in steps of 5)
72 cells: JAM72S31-xxx/MB/1500V (xxx=525-540, in steps of 5)
54 cells: JAM54S30-xxx/MB/1500V (xxx=385-410, in steps of 5)
54 cells: JAM54S31-xxx/MB/1500V (xxx=385-405, in steps of 5)
54 cells: JAM54S30-xxx/LB/1500V (xxx=410-425, in steps of 5)
54 cells: JAM54S31-xxx/LB/1500V (xxx=410-415, in steps of 5)
72 cells: JAM72S40-xxx/MR/1500V (xxx=560-590, in steps of 5)
78 cells: JAM78D30-xxx/MB (xxx=580-605, in steps of 5)
78 cells: JAM78D30-xxx/MB/1500V (xxx=580-605, in steps of 5)
72 cells: JAM72D30-xxx/MB (xxx=505-560, in steps of 5)
72 cells: JAM72D30-xxx/MB/1500V (xxx=505-560, in steps of 5)
72 cells: JAM72D30-xxx/MB/F (xxx=505-560, in steps of 5)
72 cells: JAM72D30-xxx/MB/F/1500V (xxx=505-560, in steps of 5)
66 cells: JAM66D30-xxx/MB (xxx=465-505, in steps of 5)
66 cells: JAM66D30-xxx/MB/1500V (xxx=465-505, in steps of 5)
66 cells: JAM66D30-xxx/MB/F (xxx=465-505, in steps of 5)
66 cells: JAM66D30-xxx/MB/F/1500V (xxx=465-505, in steps of 5)
60 cells: JAM60D30-xxx/MB (xxx=435-460, in steps of 5)
60 cells: JAM60D30-xxx/MB/1500V (xxx=435-460, in steps of 5)
54 cells: JAM54D30-xxx/MB (xxx=390-415, in steps of 5)
54 cells: JAM54D30-xxx/MB/1500V (xxx=390-415, in steps of 5)
54 cells: JAM54D31-xxx/MB (xxx=395-400, in steps of 5)
54 cells: JAM54D31-xxx/MB/1500V (xxx=395-400, in steps of 5)
78 cells: JAM78D30-xxx/GB (xxx=585-610, in steps of 5)
78 cells: JAM78D30-xxx/GB/1500V (xxx=585-610, in steps of 5)
72 cells: JAM72D30-xxx/GB (xxx=505-560, in steps of 5)
72 cells: JAM72D30-xxx/GB/1500V (xxx=505-560, in steps of 5)
66 cells: JAM66D30-xxx/GB (xxx=495-510, in steps of 5)
66 cells: JAM66D30-xxx/GB/1500V (xxx=495-510, in steps of 5)

60 cells: JAM60D30-xxx/GB (xxx=450-470, in steps of 5)
60 cells: JAM60D30-xxx/GB/1500V (xxx=450-470, in steps of 5)
54 cells: JAM54D30-xxx/GB (xxx=405-420, in steps of 5)
54 cells: JAM54D30-xxx/GB/1500V (xxx=405-420, in steps of 5)
54 cells: JAM54D31-xxx/GB (xxx=410-420, in steps of 5)
54 cells: JAM54D31-xxx/GB/1500V (xxx=410-420, in steps of 5)
72 cells: JAM72D30-xxx/HB (xxx=530-560, in steps of 5)
72 cells: JAM72D30-xxx/HB/1500V (xxx=530-560, in steps of 5)
78 cells: JAM78D30-xxx/TB (xxx=580-630, in steps of 5)
78 cells: JAM78D30-xxx/TB/1500V (xxx=580-630, in steps of 5)
72 cells: JAM72D30-xxx/TB (xxx=540-580, in steps of 5)
72 cells: JAM72D30-xxx/TB/1500V (xxx=540-580, in steps of 5)
78 cells: JAM78D40-xxx/MB (xxx=580-655, in steps of 5)
78 cells: JAM78D40-xxx/MB/1500V (xxx=580-655, in steps of 5)
72 cells: JAM72D40-xxx/MB (xxx=540-610, in steps of 5)
72 cells: JAM72D40-xxx/MB/1500V (xxx=540-610, in steps of 5)
72 cells: JAM72D40-xxx/MB-US (xxx=585-600, in steps of 5)
72 cells: JAM72D40-xxx/MB-US/1500V (xxx=585-600, in steps of 5)
66 cells: JAM66D40-xxx/MB (xxx=500-545, in steps of 5)
66 cells: JAM66D40-xxx/MB/1500V (xxx=500-545, in steps of 5)
60 cells: JAM60D40-xxx/MB (xxx=455-495, in steps of 5)
60 cells: JAM60D40-xxx/MB/1500V (xxx=455-495, in steps of 5)
54 cells: JAM54D40-xxx/MB (xxx=405-455, in steps of 5)
54 cells: JAM54D40-xxx/MB/1500V (xxx=405-455, in steps of 5)
72 cells: JAM72D41-xxx/MB (xxx=575-590, in steps of 5)
72 cells: JAM72D41-xxx/MB/1500V (xxx=575-590, in steps of 5)
54 cells: JAM54D41-xxx/MB (xxx=405-440, in steps of 5)
54 cells: JAM54D41-xxx/MB/1500V (xxx=405-440, in steps of 5)
54 cells: JAM54D40-xxx/MR (xxx=405-455, in steps of 5)
54 cells: JAM54D40-xxx/MR/1500V (xxx=405-455, in steps of 5)
78 cells: JAM78D40-xxx/GB (xxx=580-655, in steps of 5)
78 cells: JAM78D40-xxx/GB/1500V (xxx=580-655, in steps of 5)
72 cells: JAM72D40-xxx/GB (xxx=540-610, in steps of 5)
72 cells: JAM72D40-xxx/GB/1500V (xxx=540-610, in steps of 5)
66 cells: JAM66D40-xxx/GB (xxx=500-560, in steps of 5)
66 cells: JAM66D40-xxx/GB/1500V (xxx=500-560, in steps of 5)
60 cells: JAM60D40-xxx/GB (xxx=455-505, in steps of 5)
60 cells: JAM60D40-xxx/GB/1500V (xxx=455-505, in steps of 5)
54 cells: JAM54D40-xxx/GB (xxx=405-455, in steps of 5)
54 cells: JAM54D40-xxx/GB/1500V (xxx=405-455, in steps of 5)



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72 cells: JAM72D41-xxx/GB (xxx=575-590, in steps of 5)
 72 cells: JAM72D41-xxx/GB/1500V (xxx=575-590, in steps of 5)
 54 cells: JAM54D41-xxx/GB (xxx=415-435, in steps of 5)
 54 cells: JAM54D41-xxx/GB/1500V (xxx=415-435, in steps of 5)
 72 cells: JAM72D30-xxx/LB (xxx=555-575, in steps of 5)
 72 cells: JAM72D30-xxx/LB/1500V (xxx=555-575, in steps of 5)
 54 cells: JAM54D30-xxx/LB (xxx=420-430, in steps of 5)
 54 cells: JAM54D30-xxx/LB/1500V (xxx=420-430, in steps of 5)
 66 cells: JAM66D42-xxx/MB (xxx=540-600, in steps of 5)
 66 cells: JAM66D42-xxx/MB/1500V (xxx=540-600, in steps of 5)
 66 cells: JAM66D42-xxx/MR (xxx=540-600, in steps of 5)
 66 cells: JAM66D42-xxx/MR/1500V (xxx=540-600, in steps of 5)
 66 cells: JAM66D43-xxx/MB (xxx=565-580, in steps of 5)
 66 cells: JAM66D43-xxx/MB/1500V (xxx=565-580, in steps of 5)

Maximum system voltage: 1500V
 Maximum overcurrent protection rating: 25A or 30A
 Electrical protection class: Class II

Module types:

PV Modules with 182mm Mono-crystalline Silicon half-cut or Asymmetric cut Solar Cells:

72 cells: JAM72D40-xxx/LB (xxx=560-620, in steps of 5)
 72 cells: JAM72D40-xxx/LB/1500V (xxx=560-620, in steps of 5)
 60 cells: JAM60D40-xxx/LB (xxx=485-515, in steps of 5)
 60 cells: JAM60D40-xxx/LB/1500V (xxx=485-515, in steps of 5)
 54 cells: JAM54D40-xxx/LB (xxx=420-465, in steps of 5)
 54 cells: JAM54D40-xxx/LB/1500V (xxx=420-465, in steps of 5)
 54 cells: JAM54D40-xxx/LR (xxx=420-465, in steps of 5)
 54 cells: JAM54D40-xxx/LR/1500V (xxx=420-465, in steps of 5)
 60 cells: JAM60D41-xxx/LB (xxx=485-500, in steps of 5)
 60 cells: JAM60D41-xxx/LB/1500V (xxx=485-500, in steps of 5)
 54 cells: JAM54D41-xxx/LB (xxx=420-455, in steps of 5)
 54 cells: JAM54D41-xxx/LB/1500V (xxx=420-455, in steps of 5)
 72 cells: JAM72D42-xxx/LB (xxx=590-655, in steps of 5)
 72 cells: JAM72D42-xxx/LB/1500V (xxx=590-655, in steps of 5)
 60 cells: JAM60D42-xxx/LB (xxx=500-545, in steps of 5)
 60 cells: JAM60D42-xxx/LB/1500V (xxx=500-545, in steps of 5)
 54 cells: JAM54D42-xxx/LB (xxx=455-485, in steps of 5)
 54 cells: JAM54D42-xxx/LB/1500V (xxx=455-485, in steps of 5)



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78 cells: JAM78D49-xxx/LB (xxx=585-610, in steps of 5)
78 cells: JAM78D49-xxx/LB /1500V (xxx=585-610, in steps of 5)
66 cells: JAM66D45-xxx/LB (xxx=580-630, in steps of 5)
66 cells: JAM66D45-xxx/LB /1500V (xxx=580-630, in steps of 5)
66 cells: JAM66D45-xxx/LR (xxx=580-630, in steps of 5)
66 cells: JAM66D45-xxx/LR /1500V (xxx=580-630, in steps of 5)
72 cells: JAM72D40-xxx/HB (xxx=585-605, in steps of 5)
72 cells: JAM72D40-xxx/HB /1500V (xxx=585-605, in steps of 5)
54 cells: JAM54D40-xxx/HB (xxx=440-450, in steps of 5)
54 cells: JAM54D40-xxx/HB /1500V (xxx=440-450, in steps of 5)
54 cells: JAM54D41-xxx/HB (xxx=430-445, in steps of 5)
54 cells: JAM54D41-xxx/HB /1500V (xxx=430-445, in steps of 5)

Maximum system voltage: 1500V
Maximum overcurrent protection rating: 25A or 30A
Electrical protection class: Class II

Module types: **PV Modules with 210mm Mono-crystalline Silicon 1/3-cut Solar Cells:**

50 cells: JAM50S40-xxx/MR/1500V (xxx=490-500, in steps of 5)
50 cells: JAM50D40-xxx/MB (xxx=485-500, in steps of 5)
50 cells: JAM50D40-xxx/MB/1500V (xxx=485-500, in steps of 5)

Maximum system voltage: 1500V
Maximum overcurrent protection rating: 25A
Electrical protection class: Class II

Module types: **PV Modules with 210mm Mono-crystalline Silicon 1/2-cut Solar Cells:**

66 cells: JAM66S35-xxx/MR/1500V (xxx=650-670, in steps of 5)
60 cells: JAM60S35-xxx/MR/1500V (xxx=590-610, in steps of 5)
66 cells: JAM66D35-xxx/MB (xxx=650-665, in steps of 5)
66 cells: JAM66D35-xxx/MB/1500V (xxx=650-665, in steps of 5)
60 cells: JAM60D35-xxx/MB (xxx=590-605, in steps of 5)
60 cells: JAM60D35-xxx/MB/1500V (xxx=590-605, in steps of 5)
66 cells: JAM66D46-xxx/LB (xxx=685-730, in steps of 5)
66 cells: JAM66D46-xxx/LB /1500V (xxx=685-730, in steps of 5)

Maximum system voltage: 1500V



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Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

Module types: **PV Modules with 182mm PERC Mono-crystalline Silicon 1/2-cut Solar Cells:**

72 cells: JAM72S30-xxx/MR (xxx=525-560, in steps of 5)

66 cells: JAM66S30-xxx/MR (xxx=480-510, in steps of 5)

54 cells: JAM54S30-xxx/MR (xxx=395-420, in steps of 5)

72 cells: JAM72S30-xxx/LR (xxx=560-580, in steps of 5)

54 cells: JAM54S30-xxx/LR (xxx=415-435, in steps of 5)

72 cells: JAM72S30-xxx/GR (xxx=530-570, in steps of 5)

54 cells: JAM54S30-xxx/GR (xxx=400-425, in steps of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

Module types: **PV Modules with 182mm TOPCon Mono-crystalline Silicon 1/2-cut Solar Cells:**

72 cells: JAM72S40-xxx/LR (xxx=560-615, in steps of 5)

60 cells: JAM60S40-xxx/LR (xxx=475-510, in steps of 5)

54 cells: JAM54S40-xxx/LR (xxx=420-460, in steps of 5)

72 cells: JAM72S41-xxx/LR (xxx=560-595, in steps of 5)

60 cells: JAM60S41-xxx/LR (xxx=475-495, in steps of 5)

54 cells: JAM54S41-xxx/LR (xxx=420-445, in steps of 5)

72 cells: JAM72S42-xxx/LR (xxx=600-655, in steps of 5)

66 cells: JAM66S42-xxx/MR (xxx=550-600, in steps of 5)

60 cells: JAM60S42-xxx/LR (xxx=500-545, in steps of 5)

54 cells: JAM54S42-xxx/LR (xxx=450-490, in steps of 5)

72 cells: JAM72S43-xxx/LR (xxx=595-635, in steps of 5)

66 cells: JAM66S43-xxx/MR (xxx=545-585, in steps of 5)

60 cells: JAM60S43-xxx/LR (xxx=495-530, in steps of 5)

54 cells: JAM54S43-xxx/LR (xxx=445-475, in steps of 5)

72 cells: JAM72S40-xxx/MR (xxx=580-605, in steps of 5)

54 cells: JAM54S40-xxx/MR (xxx=435-450, in steps of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 25A



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Electrical protection class: Class II

Module types: **PV Modules with 210mm TOPCon Mono-crystalline Silicon 1/2-cut Solar Cells:**

66 cells: JAM66S45-xxx/LR (xxx=600-635, in steps of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 30A

Electrical protection class: Class II

Module types: **PV Modules with 182mm Mono-crystalline Silicon 1/5-cut Solar Cells:**

76 cells: JAM76S11-xxx/PR(B)/1500V (xxx=395-415, in steps of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

Module types: **PV Modules with Poly-crystalline Silicon Solar Cells (156mm to 158.75mm):**

72 cells: JAP6(K)-72-xxx/4BB/1500V (xxx=310-330, in steps of 5)

72 cells: JAP72S01-xxx/SC/1500V (xxx=310-345, in steps of 5)

72 cells: JAP72S01-xxx/PR/1500V (xxx=330-345, in steps of 5)

72 cells: JAP72S09-xxx/SC/1500V (xxx=320-345, in steps of 5)

72 cells: JAP72S01-xxx/MS/1500V (xxx=325-340, in steps of 5)

72 cells: JAP72S02-xxx/SC/1500V (xxx=310-345, in steps of 5)

72 cells: JAP72S02-xxx/PR/1500V (xxx=330-345, in steps of 5)

60 cells: JAP6(K)-60-xxx/4BB/1500V (xxx=255-275, in steps of 5)

60 cells: JAP60S01-xxx/SC/1500V (xxx=255-290, in steps of 5)

60 cells: JAP60S01-xxx/PR/1500V (xxx=275-285, in steps of 5)

60 cells: JAP60S09-xxx/SC/1500V (xxx=265-290, in steps of 5)

60 cells: JAP60S01-xxx/MS/1500V (xxx=270-280, in steps of 5)

60 cells: JAP60S02-xxx/SC/1500V (xxx=255-290, in steps of 5)

60 cells: JAP60S02-xxx/PR/1500V (xxx=275-285, in steps of 5)

72 cells: JAP6(DG)-72-xxx/4BB/1500V (xxx=305-325, in steps of 5)

72 cells: JAP6(DG)-72-xxx/3BB/1500V (xxx=305-315, in steps of 5)

72 cells: JAP6(DG)-72-xxx/4BB/RE/1500V (xxx=310-335, in steps of 5)

72 cells: JAP6(K)(DG)-72-xxx/4BB/1500V (xxx=310-335, in steps of 5)

72 cells: JAP72D00-xxx/SC (xxx=305-345, in steps of 5)



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72 cells: JAP72D00-xxx/SC/1500V (xxx=310-340, in steps of 5)
 72 cells: JAP72D00-xxx/PR (xxx=330-350, in steps of 5)
 72 cells: JAP72D00-xxx/PR/1500V (xxx=330-345, in steps of 5)
 72 cells: JAP72D09-xxx/SC (xxx=325-345, in steps of 5)
 72 cells: JAP72D09-xxx/SC/1500V (xxx=330-345, in steps of 5)
 60 cells: JAP6(DG)-60-xxx/4BB/1500V (xxx=250-275, in steps of 5)
 60 cells: JAP6(DG)-60-xxx/3BB/1500V (xxx=245-265, in steps of 5)
 60 cells: JAP6(DG)-60-xxx/4BB/RE/1500V (xxx=255-280, in steps of 5)
 60 cells: JAP6(K)(DG)-60-xxx/4BB/1500V (xxx=255-280, in steps of 5)
 60 cells: JAP60D00-xxx/SC (xxx=255-290, in steps of 5)
 60 cells: JAP60D00-xxx/SC/1500V (xxx=260-285, in steps of 5)
 60 cells: JAP60D00-xxx/PR (xxx=275-290, in steps of 5)
 60 cells: JAP60D00-xxx/PR/1500V (xxx=275-290, in steps of 5)
 60 cells: JAP60D09-xxx/SC (xxx=270-290, in steps of 5)
 60 cells: JAP60D09-xxx/SC/1500V (xxx=275-290, in steps of 5)

Maximum system voltage: 1500V
 Maximum overcurrent protection rating: 20A
 Electrical protection class: Class II

Module types:

PV Modules with Poly-crystalline Silicon half-cut Solar Cells (156mm to 158.75mm):

72 cells: JAP72S03-xxx/SC/1500V (xxx=320-345, in steps of 5)
 72 cells: JAP72S03-xxx/PR/1500V (xxx=335-355, in steps of 5)
 72 cells: JAP72S10-xxx/SC/1500V (xxx=335-350, in steps of 5)
 72 cells: JAP72S03-xxx/MS/1500V (xxx=320-345, in steps of 5)
 72 cells: JAP72S08-xxx/SC/1500V (xxx=320-345, in steps of 5)
 72 cells: JAP72S08-xxx/PR/1500V (xxx=335-355, in steps of 5)
 60 cells: JAP60S03-xxx/SC/1500V (xxx=270-290, in steps of 5)
 60 cells: JAP60S03-xxx/PR/1500V (xxx=280-295, in steps of 5)
 60 cells: JAP60S10-xxx/SC/1500V (xxx=275-290, in steps of 5)
 60 cells: JAP60S03-xxx/MS/1500V (xxx=270-285, in steps of 5)
 60 cells: JAP60S08-xxx/SC/1500V (xxx=270-290, in steps of 5)
 60 cells: JAP60S08-xxx/PR/1500V (xxx=280-295, in steps of 5)

Maximum system voltage: 1500V
 Maximum overcurrent protection rating: 20A
 Electrical protection class: Class II



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Module types:

PV Modules with Mono-crystalline Silicon Solar Cells (156mm to 158.75mm):

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: JAM72S02-xxx/PR (xxx=345-390, in steps of 5)
72 cells: JAM72S01-xxx/MR (xxx=365-385, in steps of 5)
72 cells: JAM72S02-xxx/MR (xxx=365-385, in steps of 5)
72 cells: JAM72S09-xxx/PR (xxx=370-405, in steps of 5)
72 cells: JAM72S12-xxx/PR (xxx=365-385, in steps of 5)
72 cells: JAM72S09-xxx/BP (xxx=375-385, 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=285-325, in steps of 5)
60 cells: JAM60S02-xxx/PR (xxx=285-325, in steps of 5)
60 cells: JAM60S01-xxx/MR (xxx=305-320, in steps of 5)
60 cells: JAM60S02-xxx/MR (xxx=305-320, in steps of 5)
60 cells: JAM60S09-xxx/PR (xxx=310-335, in steps of 5)
60 cells: JAM60S12-xxx/PR (xxx=305-330, in steps of 5)
60 cells: JAM60S09-xxx/BP (xxx=315-320, in steps of 5)

Maximum system voltage:

1000V or 1500V

Maximum overcurrent protection rating:

20A

Electrical protection class:

Class II

Module types:

PV Modules with Mono-crystalline Silicon half-cut Solar Cells (156mm to 158.75mm):

72 cells: JAM72S03-xxx/PR (xxx=360-395, in steps of 5)
72 cells: JAM72S10-xxx/PR (xxx=380-410, in steps of 5)
72 cells: JAM72S17-xxx/PR (xxx=380-390, in steps of 5)
72 cells: JAM72S10-xxx/MR (xxx=390-430, in steps of 5)
72 cells: JAM72S17-xxx/MR (xxx=390-430, in steps of 5)
72 cells: JAM72S17-xxx/GR (xxx=385-400, in steps of 5)
72 cells: JAM72S10-xxx/BP (xxx=385-400, in steps of 5)
72 cells: JAM72S10-xxx/MB (xxx=395-415, in steps of 5)
72 cells: JAM72S08-xxx/PR (xxx=360-395, in steps of 5)
60 cells: JAM60S03-xxx/PR (xxx=300-330, in steps of 5)
60 cells: JAM60S08-xxx/PR (xxx=300-330, in steps of 5)
60 cells: JAM60S10-xxx/PR (xxx=315-345, in steps of 5)
60 cells: JAM60S10-xxx/MR (xxx=325-355, in steps of 5)
60 cells: JAM60S10-xxx/BP (xxx=320-330, in steps of 5)



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	60 cells: JAM60S10-xxx/MB (xxx=330-345, in steps of 5)
	60 cells: JAM60S17-xxx/PR (xxx=315-325, in steps of 5)
	60 cells: JAM60S17-xxx/MR (xxx=315-355, in steps of 5)
	78 cells: JAM78S10-xxx/MR (xxx=435-465, in steps of 5)
	78 cells: JAM78S10-xxx/MR-J (xxx=435-465, in steps of 5)
	66 cells: JAM66S10-xxx/MR (xxx=345-390, in steps of 5)
Maximum system voltage:	1000V or 1500V
Maximum overcurrent protection rating:	20A
Electrical protection class:	Class II

Module types: **PV Modules with Mono-crystalline Silicon half-cut Solar Cells (166mm to 168mm):**

	72 cells: JAM72S20-xxx/MR (xxx=430-470, in steps of 5)
	72 cells: JAM72S20-xxx/MB (xxx=450-465, in steps of 5)
	60 cells: JAM60S20-xxx/MR (xxx=355-390, in steps of 5)
	60 cells: JAM60S21-xxx/MR (xxx=355-390, in steps of 5)
	60 cells: JAM60S20-xxx/MB (xxx=375-390, in steps of 5)
Maximum system voltage:	1000V or 1500V
Maximum overcurrent protection rating:	20A
Electrical protection class:	Class II

Module types: **PV Modules with 182mm Mono-crystalline Silicon half-cut Solar Cells:**

78 cells: JAM78S30-xxx/MR (xxx=580-605, in steps of 5)
72 cells: JAM72S30-xxx/MR (xxx=510-560, in steps of 5)
66 cells: JAM66S30-xxx/MR (xxx=470-510, in steps of 5)
60 cells: JAM60S30-xxx/MR (xxx=435-460, in steps of 5)
54 cells: JAM54S30-xxx/MR (xxx=390-425, in steps of 5)
78 cells: JAM78S30-xxx/GR (xxx=575-610, in steps of 5)
72 cells: JAM72S30-xxx/GR (xxx=510-560, in steps of 5)
66 cells: JAM66S30-xxx/GR (xxx=500-510, in steps of 5)
60 cells: JAM60S30-xxx/GR (xxx=445-470, in steps of 5)
54 cells: JAM54S30-xxx/GR (xxx=400-420, in steps of 5)
72 cells: JAM72S31-xxx/MR (xxx=510-545, in steps of 5)
66 cells: JAM66S31-xxx/MR (xxx=470-500, in steps of 5)
60 cells: JAM60S31-xxx/MR (xxx=425-450, in steps of 5)
54 cells: JAM54S31-xxx/MR (xxx=385-415, in steps of 5)



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78 cells: JAM78S31-xxx/GR (xxx=570-590, in steps of 5)
 72 cells: JAM72S31-xxx/GR (xxx=510-545, in steps of 5)
 66 cells: JAM66S31-xxx/GR (xxx=480-500, in steps of 5)
 60 cells: JAM60S31-xxx/GR (xxx=435-450, in steps of 5)
 54 cells: JAM54S31-xxx/GR (xxx=395-415, in steps of 5)
 72 cells: JAM72S40-xxx/GR (xxx=540-575, in steps of 5)
 66 cells: JAM66S40-xxx/GR (xxx=495-525, in steps of 5)
 60 cells: JAM60S40-xxx/GR (xxx=450-480, in steps of 5)
 54 cells: JAM54S40-xxx/GR (xxx=405-430, in steps of 5)
 72 cells: JAM72S41-xxx/GR (xxx=540-570, in steps of 5)
 66 cells: JAM66S41-xxx/GR (xxx=495-525, in steps of 5)
 60 cells: JAM60S41-xxx/GR (xxx=450-475, in steps of 5)
 54 cells: JAM54S41-xxx/GR (xxx=405-430, in steps of 5)
 72 cells: JAM72S30-xxx/LR (xxx=555-580, in steps of 5)
 54 cells: JAM54S30-xxx/LR (xxx=415-435, in steps of 5)
 54 cells: JAM54S31-xxx/LR (xxx=415-425, in steps of 5)
 72 cells: JAM72S30-xxx/MB (xxx=535-550, in steps of 5)
 72 cells: JAM72S31-xxx/MB (xxx=525-540, in steps of 5)
 54 cells: JAM54S30-xxx/MB (xxx=385-410, in steps of 5)
 54 cells: JAM54S31-xxx/MB (xxx=385-405, in steps of 5)
 54 cells: JAM54S30-xxx/LB (xxx=410-425, in steps of 5)
 54 cells: JAM54S31-xxx/LB (xxx=410-415, in steps of 5)
 72 cells: JAM72S40-xxx/MR (xxx=560-590, in steps of 5)

Maximum system voltage: 1000V or 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

Module types:

PV Modules with 210mm Mono-crystalline Silicon 1/3-cut Solar Cells:

50 cells: JAM50S40-xxx/MR (xxx=490-500, in steps of 5)
 66 cells: JAM66S35-xxx/MR (xxx=650-670, in steps of 5)
 60 cells: JAM60S35-xxx/MR (xxx=590-610, in steps of 5)

Maximum system voltage: 1000V or 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II



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Module types:	PV Modules with 182mm Mono-crystalline Silicon 1/5-cut Solar Cells: 68 cells: JAM68S11-xxx/PR (xxx=355-365, in steps of 5) 68 cells: JAM68S11-xxx/PR(B) (xxx=345-365, in steps of 5) 76 cells: JAM76S11-xxx/PR(B) (xxx=395-415, in steps of 5)
Maximum system voltage:	1000V or 1500V
Maximum overcurrent protection rating:	25A
Electrical protection class:	Class II
Module types:	PV Modules with Poly-crystalline Silicon Solar Cells (156mm to 158.75mm): 72 cells: JAP72S01-xxx/SC (xxx=310-345, in steps of 5) 72 cells: JAP72S02-xxx/SC (xxx=310-345, in steps of 5) 72 cells: JAP72S01-xxx/PR (xxx=330-345, in steps of 5) 72 cells: JAP72S02-xxx/PR (xxx=330-345, in steps of 5) 72 cells: JAP72S09-xxx/SC (xxx=320-345, in steps of 5) 72 cells: JAP72S01-xxx/MS (xxx=325-340, in steps of 5) 60 cells: JAP60S01-xxx/SC (xxx=255-290, in steps of 5) 60 cells: JAP60S02-xxx/SC (xxx=255-290, in steps of 5) 60 cells: JAP60S01-xxx/PR (xxx=275-285, in steps of 5) 60 cells: JAP60S02-xxx/PR (xxx=275-285, in steps of 5) 60 cells: JAP60S09-xxx/SC (xxx=265-290, in steps of 5) 60 cells: JAP60S01-xxx/MS (xxx=270-280, in steps of 5) 54 cells: JAP54S01-xxx/SC (xxx=245-255, in steps of 5)
Maximum system voltage:	1000V or 1500V
Maximum overcurrent protection rating:	20A
Electrical protection class:	Class II
Module types:	PV Modules with Poly-crystalline Silicon half-cut Solar Cells (156mm to 158.75mm): 72 cells: JAP72S03-xxx/PR (xxx=335-355, in steps of 5) 72 cells: JAP72S03-xxx/SC (xxx=320-345, in steps of 5) 72 cells: JAP72S10-xxx/SC (xxx=335-350, in steps of 5) 72 cells: JAP72S03-xxx/MS (xxx=320-345, in steps of 5) 72 cells: JAP72S08-xxx/SC (xxx=320-345, in steps of 5) 72 cells: JAP72S08-xxx/PR (xxx=335-355, in steps of 5) 60 cells: JAP60S03-xxx/PR (xxx=280-295, in steps of 5) 60 cells: JAP60S03-xxx/SC (xxx=270-290, in steps of 5)



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

60 cells: JAP60S03-xxx/MS (xxx=270-285, in steps of 5)

60 cells: JAP60S08-xxx/SC (xxx=270-290, in steps of 5)

60 cells: JAP60S08-xxx/PR (xxx=280-295, in steps of 5)

Maximum system voltage: 1000V or 1500V

Maximum overcurrent protection rating: 20A

Electrical protection class: Class II

Remark:

For detailed product information, please refer to CDF (Constructional Data Form).



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CERTIFICATE

TÜV NORD CERT GmbH
herewith declares that

Shanghai JA Solar Technology Co., Ltd.
No. 118, Lane 3111, West Huancheng 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):

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules



Valid from: 2024-12-13

Valid until: 2026-09-29

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	IEC 61701:2020 / EN IEC 61701:2020
Remark:	Test Method 6
	Test duration: 1344 hours
Registered No.:	44 780 23 406749 - 191R11A6M12
Manufacturer and factory(-ies):	See Annex 1
Test Report No.:	492012551.013
File No.:	PVP09104/24P-01



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Essen, 2024-12-13

Please also pay attention to the information stated overleaf.

Manufacturer and factory(-ies):

Manufacturer:	Shanghai JA Solar Technology Co., Ltd. No. 118, Lane 3111, West Huancheng Road, Fengxian District Shanghai 201401, P.R. China
Factory 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.:	862010153.012
Factory 2:	Hefei JA Solar Technology Co., Ltd. No. 999, Chang Ning Road, Hi-tech Zone, Hefei 230088, P.R. China
Factory inspection report no.:	862010241.011
Factory 3:	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.:	862010290.009
Factory 4:	JA Solar New Energy Yangzhou Co., Ltd. No.1, Jinhui Road, Economic Development Zone Yangzhou, Jiangsu Province, 225131, P.R. China.
Factory inspection report no.:	862010496.005
Factory 5:	Yiwu JA Solar Technology Co., Ltd. No. 165, Tongze Road, Yiting Town, Yiwu City, Zhejiang Province, 322000, P.R. China.
Factory inspection report no.:	862010513.005
Factory 6:	JA Solar Viet Nam Company Limited Lot G, Quang Chau Industiral Park, Quang Chau Ward, Viet Yen Town, 236110 Bac Giang Province, VIETNAM.
Factory inspection report no.:	862010560.004



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Factory 7:	JA Solar New Energy Yangzhou Co., Ltd. (Jingshan Park) No.123, Jinshan Road, Economic Development Zone, Yangzhou, Jiangsu Province, 225131, P.R. China.
Factory inspection report no.:	862010584.004
Factory 8:	HSA ENERJI A.S. OSB III. Kisim Keciliköy OSB Mah., Mustafa Kemal Bulvari No:15/1., 45030 Yunusemre – Manisa, TURKEY
Factory inspection report no.:	862010735.002
Factory 9:	Dongtai JA Solar Technology Co., Ltd. No.8 Zaofeng North Road, Dongtai High-tech Zone, Dongtai City, 224248 Yancheng City, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA
Factory inspection report no.:	862010802.002
Factory 10:	QuJing JA Solar Technology Co., Ltd. North of Nanhai Avenue and East of Shaoxi Road, Qujing Economic and Technological Development Zone, 655000 Qujing City, Yunnan Province, PEOPLE'S REPUBLIC OF CHINA
Factory inspection report no.:	862010866.002
Factory 11:	Inner Mongolia JA Solar PV Technology Co., Ltd. No.21, Zhuangbei Avenue, Xin Guihua Area, Equipment park, Qingshan District, 014000 Baotou, Inner Mogolia Autonomous Region, PEOPLE'S REPUBLIC OF CHINA
Factory inspection report no.:	862010874.002
Factory 12:	Ordos JA Solar Technology Co., Ltd. Room 2007, Office Building, High-tech Industrial Development Zone, Dongsheng District Equipment Manufacturing Base, 017000 Ordos City, Inner Mongolia, PEOPLE'S REPUBLIC OF CHINA
Factory inspection report no.:	862011003.001



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Factory 13: **Inner Mongolia JA Naoer New Energy Co., Ltd.**
Room 620, Office Building of the Management Committee, No.1 Fuyuan
Road, North Economic and Technological Development Zone, Bayannur
City 015000, Inner Mongolia Autonomous Region, PEOPLE'S REPUBLIC
OF CHINA

Factory inspection report no.: 862011027.001

Factory 14: **MEM PANEL SOLAR ENERJI SANAYI VETICARET A.S**
Organized Industrial Site 3. Street No: 4 Onikisubat, 46050
Kahramanmaras, TURKIYE

Factory inspection report no.: 862011040.001

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 Mono-crystalline Silicon Solar Cells (156mm to 158.75mm):

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=320-345, in steps of 5)
72 cells: JAM6(K)-72-xxx/PR (xxx=325-370, in steps of 5)
72 cells: JAM72S02-xxx/PR (xxx=325-390, in steps of 5)
72 cells: JAM72S01-xxx/PR/1000V (xxx=345-390, in steps of 5)
72 cells: JAM72S01-xxx/SC/1000V (xxx=320-365, in steps of 5)
72 cells: JAM72S01-xxx/MR/1000V (xxx=365-385, in steps of 5)
72 cells: JAM72S09-xxx/PR/1000V (xxx=370-405, in steps of 5)
72 cells: JAM72S09-xxx/BP/1000V (xxx=375-385, in steps of 5)
72 cells: JAM72S02-xxx/PR/1000V (xxx=345-390, in steps of 5)
72 cells: JAM72S02-xxx/SC/1000V (xxx=320-365, in steps of 5)
72 cells: JAM72S02-xxx/MR/1000V (xxx=365-385, in steps of 5)
72 cells: JAM72S12-xxx/PR/1000V (xxx=365-385, 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=265-285, in steps of 5)
60 cells: JAM6(K)-60-xxx/PR (xxx=275-310, in steps of 5)
60 cells: JAM60S02-xxx/PR (xxx=280-325, in steps of 5)
60 cells: JAM60S01-xxx/PR/1000V (xxx=285-325, in steps of 5)
60 cells: JAM60S01-xxx/SC/1000V (xxx=265-305, in steps of 5)
60 cells: JAM60S01-xxx/MR/1000V (xxx=305-320, in steps of 5)
60 cells: JAM60S09-xxx/PR/1000V (xxx=310-335, in steps of 5)
60 cells: JAM60S09-xxx/BP/1000V (xxx=315-320, in steps of 5)
60 cells: JAM60S02-xxx/PR/1000V (xxx=285-325, in steps of 5)
60 cells: JAM60S02-xxx/SC/1000V (xxx=265-305, in steps of 5)



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60 cells: JAM60S02-xxx/MR/1000V (xxx=305-320, in steps of 5)
60 cells: JAM60S12-xxx/PR/1000V (xxx=305-330, 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
Maximum overcurrent protection rating: 20A
Electrical protection class: Class II

Module types:

PV Modules with 125mm 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
Maximum overcurrent protection rating: 10A
Electrical protection class: Class II

Module types:

PV Modules with Mono-crystalline Silicon half-cut Solar Cells (156mm to 158.75mm):

72 cells: JAM72S03-xxx/PR/1000V (xxx=360-395, in steps of 5)
72 cells: JAM72S10-xxx/PR/1000V (xxx=380-410, in steps of 5)
72 cells: JAM72S10-xxx/BP/1000V (xxx=385-400, in steps of 5)
72 cells: JAM72S10-xxx/MR/1000V (xxx=390-430, in steps of 5)
72 cells: JAM72S10-xxx/MB/1000V (xxx=395-415, in steps of 5)
72 cells: JAM72S08-xxx/PR/1000V (xxx=360-395, in steps of 5)
72 cells: JAM72S17-xxx/PR/1000V (xxx=380-390, in steps of 5)
72 cells: JAM72S17-xxx/MR/1000V (xxx=390-430, in steps of 5)
72 cells: JAM72S17-xxx/GR/1000V (xxx=385-400, in steps of 5)
60 cells: JAM60S03-xxx/PR/1000V (xxx=300-330, in steps of 5)
60 cells: JAM60S10-xxx/PR/1000V (xxx=315-345, in steps of 5)
60 cells: JAM60S10-xxx/BP/1000V (xxx=320-330, in steps of 5)
60 cells: JAM60S10-xxx/MR/1000V (xxx=325-355, in steps of 5)



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	60 cells: JAM60S10-xxx/MB/1000V (xxx=330-345, in steps of 5)
	60 cells: JAM60S08-xxx/PR/1000V (xxx=300-330, in steps of 5)
	60 cells: JAM60S17-xxx/PR/1000V (xxx=315-325, in steps of 5)
	60 cells: JAM60S17-xxx/MR/1000V (xxx=315-355, in steps of 5)
	78 cells: JAM78S10-xxx/MR/1000V (xxx=435-465, in steps of 5)
	66 cells: JAM66S10-xxx/MR/1000V (xxx=345-390, in steps of 5)
Maximum system voltage:	1000V
Maximum overcurrent protection rating:	20A
Electrical protection class:	Class II

Module types:	PV Modules with Mono-crystalline Silicon half-cut Solar Cells (166mm to 168mm):
	72 cells: JAM72S20-xxx/MR/1000V (xxx=430-470, in steps of 5)
	72 cells: JAM72S20-xxx/MB/1000V (xxx=450-465, in steps of 5)
	60 cells: JAM60S20-xxx/MR/1000V (xxx=355-390, in steps of 5)
	60 cells: JAM60S21-xxx/MR/1000V (xxx=355-390, in steps of 5)
	60 cells: JAM60S20-xxx/MB/1000V (xxx=375-390, in steps of 5)

Maximum system voltage:	1000V
Maximum overcurrent protection rating:	25A
Electrical protection class:	Class II

Module types:	PV Modules with 182mm Mono-crystalline Silicon half-cut Solar Cells:
	60 cells: JAM60S30-xxx/MR/1000V (xxx=435-460, in steps of 5)
	66 cells: JAM66S30-xxx/MR/1000V (xxx=470-510, in steps of 5)
	72 cells: JAM72S30-xxx/MR/1000V (xxx=510-560, in steps of 5)
	78 cells: JAM78S30-xxx/MR/1000V (xxx=580-605, in steps of 5)
	54 cells: JAM54S30-xxx/MR/1000V (xxx=390-425, in steps of 5)
	78 cells: JAM78S30-xxx/GR/1000V (xxx=575-610, in steps of 5)
	72 cells: JAM72S30-xxx/GR/1000V (xxx=510-560, in steps of 5)
	66 cells: JAM66S30-xxx/GR/1000V (xxx=500-510, in steps of 5)
	60 cells: JAM60S30-xxx/GR/1000V (xxx=445-470, in steps of 5)
	54 cells: JAM54S30-xxx/GR/1000V (xxx=400-420, in steps of 5)
	72 cells: JAM72S31-xxx/MR/1000V (xxx=510-545, in steps of 5)
	66 cells: JAM66S31-xxx/MR/1000V (xxx=470-500, in steps of 5)
	60 cells: JAM60S31-xxx/MR/1000V (xxx=425-450, in steps of 5)
	54 cells: JAM54S31-xxx/MR/1000V (xxx=385-415, in steps of 5)

78 cells: JAM78S31-xxx/GR/1000V (xxx=570-590, in steps of 5)
 72 cells: JAM72S31-xxx/GR/1000V (xxx=510-545, in steps of 5)
 66 cells: JAM66S31-xxx/GR/1000V (xxx=480-500, in steps of 5)
 60 cells: JAM60S31-xxx/GR/1000V (xxx=435-450, in steps of 5)
 54 cells: JAM54S31-xxx/GR/1000V (xxx=395-415, in steps of 5)
 72 cells: JAM72S40-xxx/GR/1000V (xxx=540-575, in steps of 5)
 66 cells: JAM66S40-xxx/GR/1000V (xxx=495-525, in steps of 5)
 60 cells: JAM60S40-xxx/GR/1000V (xxx=450-480, in steps of 5)
 54 cells: JAM54S40-xxx/GR/1000V (xxx=405-430, in steps of 5)
 72 cells: JAM72S41-xxx/GR/1000V (xxx=540-570, in steps of 5)
 66 cells: JAM66S41-xxx/GR/1000V (xxx=495-525, in steps of 5)
 60 cells: JAM60S41-xxx/GR/1000V (xxx=450-475, in steps of 5)
 54 cells: JAM54S41-xxx/GR/1000V (xxx=405-430, in steps of 5)
 72 cells: JAM72S30-xxx/LR/1000V (xxx=555-580, in steps of 5)
 54 cells: JAM54S30-xxx/LR/1000V (xxx=415-435, in steps of 5)
 54 cells: JAM54S31-xxx/LR/1000V (xxx=415-425, in steps of 5)
 72 cells: JAM72S30-xxx/MB/1000V (xxx=535-550, in steps of 5)
 72 cells: JAM72S31-xxx/MB/1000V (xxx=525-540, in steps of 5)
 54 cells: JAM54S30-xxx/MB/1000V (xxx=385-410, in steps of 5)
 54 cells: JAM54S31-xxx/MB/1000V (xxx=385-405, in steps of 5)
 54 cells: JAM54S30-xxx/LB/1000V (xxx=410-425, in steps of 5)
 54 cells: JAM54S31-xxx/LB/1000V (xxx=410-415, in steps of 5)
 72 cells: JAM72S40-xxx/MR/1000V (xxx=560-590, in steps of 5)

Maximum system voltage: 1000V
 Maximum overcurrent protection rating: 25A
 Electrical protection class: Class II

Module types: **PV Modules with 210mm Mono-crystalline Silicon 1/3-cut Solar Cells:**

50 cells: JAM50S40-xxx/MR/1000V (xxx=490-500, in steps of 5)
 66 cells: JAM66S35-xxx/MR/1000V (xxx=650-670, in steps of 5)
 60 cells: JAM60S35-xxx/MR/1000V (xxx=590-610, in steps of 5)

Maximum system voltage: 1000V
 Maximum overcurrent protection rating: 25A
 Electrical protection class: Class II



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Module types:	PV Modules with 182mm Mono-crystalline Silicon 1/5-cut Solar Cells:
	76 cells: JAM76S11-xxx/PR(B)/1000V (xxx=395-415, in steps of 5)
Maximum system voltage:	1000V
Maximum overcurrent protection rating:	25A
Electrical protection class:	Class II

Module types:	PV Modules with Poly-crystalline Silicon Solar Cells (156mm to 158.75mm):
	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=310-330, in steps of 5)
	72 cells: JAP72S01-xxx/SC/1000V (xxx=310-345, in steps of 5)
	72 cells: JAP72S01-xxx/PR/1000V (xxx=330-345, in steps of 5)
	72 cells: JAP72S09-xxx/SC/1000V (xxx=320-345, in steps of 5)
	72 cells: JAP72S01-xxx/MS/1000V (xxx=325-340, in steps of 5)
	72 cells: JAP72S02-xxx/SC/1000V (xxx=310-345, in steps of 5)
	72 cells: JAP72S02-xxx/PR/1000V (xxx=330-345, 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/1000V (xxx=255-290, in steps of 5)
	60 cells: JAP60S01-xxx/PR/1000V (xxx=275-285, in steps of 5)
	60 cells: JAP60S09-xxx/SC/1000V (xxx=265-290, in steps of 5)
	60 cells: JAP60S01-xxx/MS/1000V (xxx=270-280, in steps of 5)
	60 cells: JAP60S02-xxx/SC/1000V (xxx=255-290, in steps of 5)
	60 cells: JAP60S02-xxx/PR/1000V (xxx=275-285, 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
Maximum overcurrent protection rating:	20A



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Electrical protection class: Class II

Module types:

PV Modules with Poly-crystalline Silicon half-cut Solar Cells (156mm to 158.75mm):

72 cells: JAP72S03-xxx/SC/1000V (xxx=320-345, in steps of 5)
72 cells: JAP72S03-xxx/PR/1000V (xxx=335-355, in steps of 5)
72 cells: JAP72S10-xxx/SC/1000V (xxx=335-350, in steps of 5)
72 cells: JAP72S03-xxx/MS/1000V (xxx=320-345, in steps of 5)
72 cells: JAP72S08-xxx/SC/1000V (xxx=320-345, in steps of 5)
72 cells: JAP72S08-xxx/PR/1000V (xxx=335-355, in steps of 5)
60 cells: JAP60S03-xxx/SC/1000V (xxx=270-290, in steps of 5)
60 cells: JAP60S03-xxx/PR/1000V (xxx=280-295, in steps of 5)
60 cells: JAP60S10-xxx/SC/1000V (xxx=275-290, in steps of 5)
60 cells: JAP60S03-xxx/MS/1000V (xxx=270-285, in steps of 5)
60 cells: JAP60S08-xxx/SC/1000V (xxx=270-290, in steps of 5)
60 cells: JAP60S08-xxx/PR/1000V (xxx=280-295, in steps of 5)

Maximum system voltage: 1000V

Maximum overcurrent protection rating: 20A

Electrical protection class: Class II

Module types:

PV Modules with Mono-crystalline Silicon Solar Cells (156mm to 158.75mm):

72 cells: JAM6(K)-72-xxx/PR/1500V (xxx=345-370, in steps of 5)
72 cells: JAM6(K)-72-xxx/4BB/1500V (xxx=320-345, in steps of 5)
72 cells: JAM72S01-xxx/PR (xxx=345-390, in steps of 5)
72 cells: JAM72S01-xxx/SC/1500V (xxx=320-365, in steps of 5)
72 cells: JAM72S01-xxx/MR/1500V (xxx=365-385, in steps of 5)
72 cells: JAM72S09-xxx/PR/1500V (xxx=370-405, in steps of 5)
72 cells: JAM72S09-xxx/BP/1500V (xxx=375-385, in steps of 5)
72 cells: JAM72S02-xxx/PR/1500V (xxx=345-390, in steps of 5)
72 cells: JAM72S02-xxx/SC/1500V (xxx=320-365, in steps of 5)
72 cells: JAM72S02-xxx/MR/1500V (xxx=365-385, in steps of 5)
72 cells: JAM72S12-xxx/PR/1500V (xxx=365-385, in steps of 5)
60 cells: JAM6(K)-60-xxx/PR/1500V (xxx=285-310, in steps of 5)
60 cells: JAM6(K)-60-xxx/4BB/1500V (xxx=265-285, in steps of 5)
60 cells: JAM60S01-xxx/PR/1500V (xxx=285-325, in steps of 5)
60 cells: JAM60S01-xxx/SC/1500V (xxx=265-305, in steps of 5)
60 cells: JAM60S01-xxx/MR/1500V (xxx=305-320, in steps of 5)



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60 cells: JAM60S09-xxx/PR/1500V (xxx=310-335, in steps of 5)
 60 cells: JAM60S09-xxx/BP/1500V (xxx=315-320, in steps of 5)
 60 cells: JAM60S02-xxx/PR/1500V (xxx=285-325, in steps of 5)
 60 cells: JAM60S02-xxx/SC/1500V (xxx=265-305, in steps of 5)
 60 cells: JAM60S02-xxx/MR/1500V (xxx=305-320, in steps of 5)
 60 cells: JAM60S12-xxx/PR/1500V (xxx=305-330, in steps of 5)
 72 cells: JAM6(K)(DG)-72-xxx/PR/1500V (xxx=330-365, in steps of 5)
 72 cells: JAM6(K)(DG)-72-xxx/4BB/1500V (xxx=320-340, in steps of 5)
 72 cells: JAM72D00-xxx/PR (xxx=340-385, in steps of 5)
 72 cells: JAM72D00-xxx/PR/1500V (xxx=340-385, in steps of 5)
 72 cells: JAM72D00-xxx/SC (xxx=320-340, in steps of 5)
 72 cells: JAM72D00-xxx/BP (xxx=330-385, in steps of 5)
 72 cells: JAM72D00-xxx/BP/1500V (xxx=330-385, in steps of 5)
 72 cells: JAM72D00-xxx/MB (xxx=370-380, in steps of 5)
 72 cells: JAM72D00-xxx/MB/1500V (xxx=370-380, in steps of 5)
 72 cells: JAM72D09-xxx/BP (xxx=360-400, in steps of 5)
 72 cells: JAM72D09-xxx/BP/1500V (xxx=360-400, in steps of 5)
 60 cells: JAM6(DG)-60-xxx/1500V (xxx=250-270, in steps of 5)
 60 cells: JAM6(K)(DG)-60-xxx/4BB/1500V (xxx=260-285, in steps of 5)
 60 cells: JAM6(K)(DG)-60-xxx/PR/1500V (xxx=270-305, in steps of 5)
 60 cells: JAM6(DG)-60-xxx/4BB/1500V (xxx=260-280, in steps of 5)
 60 cells: JAM60D00-xxx/PR (xxx=285-320, in steps of 5)
 60 cells: JAM60D00-xxx/PR/1500V (xxx=285-320, in steps of 5)
 60 cells: JAM60D00-xxx/SC (xxx=260-285, in steps of 5)
 60 cells: JAM60D00-xxx/BP (xxx=275-320, in steps of 5)
 60 cells: JAM60D00-xxx/BP/1500V (xxx=275-320, in steps of 5)
 60 cells: JAM60D00-xxx/MB (xxx=310-315, in steps of 5)
 60 cells: JAM60D00-xxx/MB/1500V (xxx=310-315, in steps of 5)
 60 cells: JAM60D09-xxx/BP (xxx=300-340, in steps of 5)
 60 cells: JAM60D09-xxx/BP/1500V (xxx=300-340, in steps of 5)

Maximum system voltage: 1500V
 Maximum overcurrent protection rating: 20A
 Electrical protection class: Class II



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Module types:

PV Modules with Mono-crystalline Silicon half-cut Solar Cells (156mm to 158.75mm):

72 cells: JAM72S03-xxx/PR/1500V (xxx=360-395, in steps of 5)
72 cells: JAM72S10-xxx/PR/1500V (xxx=380-410, in steps of 5)
72 cells: JAM72S10-xxx/BP/1500V (xxx=385-400, in steps of 5)
72 cells: JAM72S10-xxx/MR/1500V (xxx=390-430, in steps of 5)
72 cells: JAM72S10-xxx/MB/1500V (xxx=395-415, in steps of 5)
72 cells: JAM72S08-xxx/PR/1500V (xxx=360-395, in steps of 5)
72 cells: JAM72S17-xxx/PR/1500V (xxx=380-390, in steps of 5)
72 cells: JAM72S17-xxx/MR/1500V (xxx=390-430, in steps of 5)
72 cells: JAM72S17-xxx/GR/1500V (xxx=385-400, in steps of 5)
60 cells: JAM60S03-xxx/PR/1500V (xxx=300-330, in steps of 5)
60 cells: JAM60S10-xxx/PR/1500V (xxx=315-345, in steps of 5)
60 cells: JAM60S10-xxx/BP/1500V (xxx=320-330, in steps of 5)
60 cells: JAM60S10-xxx/MR/1500V (xxx=325-355, in steps of 5)
60 cells: JAM60S10-xxx/MB/1500V (xxx=330-345, in steps of 5)
60 cells: JAM60S20-xxx/MR/1500V (xxx=355-390, in steps of 5)
60 cells: JAM60S21-xxx/MR/1500V (xxx=355-390, in steps of 5)
60 cells: JAM60S08-xxx/PR/1500V (xxx=300-330, in steps of 5)
60 cells: JAM60S17-xxx/PR/1500V (xxx=315-325, in steps of 5)
60 cells: JAM60S17-xxx/MR/1500V (xxx=315-355, in steps of 5)
78 cells: JAM78S10-xxx/MR/1500V (xxx=435-465, in steps of 5)
66 cells: JAM66S10-xxx/MR/1500V (xxx=345-390, in steps of 5)
72 cells: JAM72D10-xxx/MB (xxx=385-430, in steps of 5)
72 cells: JAM72D10-xxx/MB/1500V (xxx=385-430, in steps of 5)
60 cells: JAM60D10-xxx/MB (xxx=320-355, in steps of 5)
60 cells: JAM60D10-xxx/MB/1500V (xxx=320-355, in steps of 5)
72 cells: JAM72D10-xxx/BP (xxx=385-415, in steps of 5)
72 cells: JAM72D10-xxx/BP/1500V (xxx=385-415, in steps of 5)
60 cells: JAM60D10-xxx/BP (xxx=320-345, in steps of 5)
60 cells: JAM60D10-xxx/BP/1500V (xxx=320-345, in steps of 5)
78 cells: JAM78D10-xxx/MB (xxx=435-455, in steps of 5)
78 cells: JAM78D10-xxx/MB/1500V (xxx=435-455, in steps of 5)
66 cells: JAM66D10-xxx/MB (xxx=360-380, in steps of 5)
66 cells: JAM66D10-xxx/MB/1500V (xxx=360-380, in steps of 5)
72 cells: JAM72D20-xxx/MB (xxx=430-465, in steps of 5)
72 cells: JAM72D20-xxx/MB/1500V (xxx=430-465, in steps of 5)
60 cells: JAM60D20-xxx/MB (xxx=355-385, in steps of 5)
60 cells: JAM60D20-xxx/MB/1500V (xxx=355-385, in steps of 5)
72 cells: JAM72D10-xxx/TB (xxx=400-420, in steps of 5)



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	72 cells: JAM72D10-xxx/TB/1500V (xxx=400-420, in steps of 5)
	60 cells: JAM60D10-xxx/TB (xxx=335-350, in steps of 5)
	60 cells: JAM60D10-xxx/TB/1500V (xxx=335-350, in steps of 5)
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	20A
Electrical protection class:	Class II

Module types: **PV Modules with Mono-crystalline Silicon half-cut Solar Cells (166mm to 168mm):**

	72 cells: JAM72S20-xxx/MR/1500V (xxx=430-470, in steps of 5)
	72 cells: JAM72S20-xxx/MB/1500V (xxx=450-465, in steps of 5)
	60 cells: JAM60S20-xxx/MB/1500V (xxx=375-390, in steps of 5)
Maximum system voltage:	1500V
Maximum overcurrent protection rating:	25A
Electrical protection class:	Class II

Module types: **PV Modules with 182mm Mono-crystalline Silicon half-cut Solar Cells:**

	78 cells: JAM78S30-xxx/MR/1500V (xxx=580-605, in steps of 5)
	72 cells: JAM72S30-xxx/MR/1500V (xxx=510-560, in steps of 5)
	66 cells: JAM66S30-xxx/MR/1500V (xxx=470-510, in steps of 5)
	60 cells: JAM60S30-xxx/MR/1500V (xxx=435-460, in steps of 5)
	54 cells: JAM54S30-xxx/MR/1500V (xxx=390-425, in steps of 5)
	78 cells: JAM78S30-xxx/GR/1500V (xxx=575-610, in steps of 5)
	72 cells: JAM72S30-xxx/GR/1500V (xxx=510-560, in steps of 5)
	66 cells: JAM66S30-xxx/GR/1500V (xxx=500-510, in steps of 5)
	60 cells: JAM60S30-xxx/GR/1500V (xxx=445-470, in steps of 5)
	54 cells: JAM54S30-xxx/GR/1500V (xxx=400-420, in steps of 5)
	72 cells: JAM72S31-xxx/MR/1500V (xxx=510-545, in steps of 5)
	66 cells: JAM66S31-xxx/MR/1500V (xxx=470-500, in steps of 5)
	60 cells: JAM60S31-xxx/MR/1500V (xxx=425-450, in steps of 5)
	54 cells: JAM54S31-xxx/MR/1500V (xxx=385-415, in steps of 5)
	78 cells: JAM78S31-xxx/GR/1500V (xxx=570-590, in steps of 5)
	72 cells: JAM72S31-xxx/GR/1500V (xxx=510-545, in steps of 5)
	66 cells: JAM66S31-xxx/GR/1500V (xxx=480-500, in steps of 5)
	60 cells: JAM60S31-xxx/GR/1500V (xxx=435-450, in steps of 5)
	54 cells: JAM54S31-xxx/GR/1500V (xxx=395-415, in steps of 5)



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72 cells: JAM72S40-xxx/GR/1500V (xxx=540-575, in steps of 5)
 66 cells: JAM66S40-xxx/GR/1500V (xxx=495-525, in steps of 5)
 60 cells: JAM60S40-xxx/GR/1500V (xxx=450-480, in steps of 5)
 54 cells: JAM54S40-xxx/GR/1500V (xxx=405-430, in steps of 5)
 72 cells: JAM72S41-xxx/GR/1500V (xxx=540-570, in steps of 5)
 66 cells: JAM66S41-xxx/GR/1500V (xxx=495-525, in steps of 5)
 60 cells: JAM60S41-xxx/GR/1500V (xxx=450-475, in steps of 5)
 54 cells: JAM54S41-xxx/GR/1500V (xxx=405-430, in steps of 5)
 72 cells: JAM72S30-xxx/LR/1500V (xxx=555-580, in steps of 5)
 54 cells: JAM54S30-xxx/LR/1500V (xxx=415-435, in steps of 5)
 54 cells: JAM54S31-xxx/LR/1500V (xxx=415-425, in steps of 5)
 72 cells: JAM72S30-xxx/MB/1500V (xxx=535-550, in steps of 5)
 72 cells: JAM72S31-xxx/MB/1500V (xxx=525-540, in steps of 5)
 54 cells: JAM54S30-xxx/MB/1500V (xxx=385-410, in steps of 5)
 54 cells: JAM54S31-xxx/MB/1500V (xxx=385-405, in steps of 5)
 54 cells: JAM54S30-xxx/LB/1500V (xxx=410-425, in steps of 5)
 54 cells: JAM54S31-xxx/LB/1500V (xxx=410-415, in steps of 5)
 72 cells: JAM72S40-xxx/MR/1500V (xxx=560-590, in steps of 5)
 78 cells: JAM78D30-xxx/MB (xxx=580-605, in steps of 5)
 78 cells: JAM78D30-xxx/MB/1500V (xxx=580-605, in steps of 5)
 72 cells: JAM72D30-xxx/MB (xxx=505-560, in steps of 5)
 72 cells: JAM72D30-xxx/MB/1500V (xxx=505-560, in steps of 5)
 72 cells: JAM72D30-xxx/MB/F (xxx=505-560, in steps of 5)
 72 cells: JAM72D30-xxx/MB/F/1500V (xxx=505-560, in steps of 5)
 66 cells: JAM66D30-xxx/MB (xxx=465-505, in steps of 5)
 66 cells: JAM66D30-xxx/MB/1500V (xxx=465-505, in steps of 5)
 66 cells: JAM66D30-xxx/MB/F (xxx=465-505, in steps of 5)
 66 cells: JAM66D30-xxx/MB/F/1500V (xxx=465-505, in steps of 5)
 60 cells: JAM60D30-xxx/MB (xxx=435-460, in steps of 5)
 60 cells: JAM60D30-xxx/MB/1500V (xxx=435-460, in steps of 5)
 54 cells: JAM54D30-xxx/MB (xxx=390-415, in steps of 5)
 54 cells: JAM54D30-xxx/MB/1500V (xxx=390-415, in steps of 5)
 54 cells: JAM54D31-xxx/MB (xxx=395-400, in steps of 5)
 54 cells: JAM54D31-xxx/MB/1500V (xxx=395-400, in steps of 5)
 78 cells: JAM78D30-xxx/GB (xxx=585-610, in steps of 5)
 78 cells: JAM78D30-xxx/GB/1500V (xxx=585-610, in steps of 5)
 72 cells: JAM72D30-xxx/GB (xxx=505-560, in steps of 5)
 72 cells: JAM72D30-xxx/GB/1500V (xxx=505-560, in steps of 5)
 66 cells: JAM66D30-xxx/GB (xxx=495-510, in steps of 5)
 66 cells: JAM66D30-xxx/GB/1500V (xxx=495-510, in steps of 5)



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60 cells: JAM60D30-xxx/GB (xxx=450-470, in steps of 5)
 60 cells: JAM60D30-xxx/GB/1500V (xxx=450-470, in steps of 5)
 54 cells: JAM54D30-xxx/GB (xxx=405-420, in steps of 5)
 54 cells: JAM54D30-xxx/GB/1500V (xxx=405-420, in steps of 5)
 54 cells: JAM54D31-xxx/GB (xxx=410-420, in steps of 5)
 54 cells: JAM54D31-xxx/GB/1500V (xxx=410-420, in steps of 5)
 72 cells: JAM72D30-xxx/HB (xxx=530-560, in steps of 5)
 72 cells: JAM72D30-xxx/HB/1500V (xxx=530-560, in steps of 5)
 78 cells: JAM78D30-xxx/TB (xxx=580-630, in steps of 5)
 78 cells: JAM78D30-xxx/TB/1500V (xxx=580-630, in steps of 5)
 72 cells: JAM72D30-xxx/TB (xxx=540-580, in steps of 5)
 72 cells: JAM72D30-xxx/TB/1500V (xxx=540-580, in steps of 5)
 78 cells: JAM78D40-xxx/MB (xxx=580-655, in steps of 5)
 78 cells: JAM78D40-xxx/MB/1500V (xxx=580-655, in steps of 5)
 72 cells: JAM72D40-xxx/MB (xxx=540-610, in steps of 5)
 72 cells: JAM72D40-xxx/MB/1500V (xxx=540-610, in steps of 5)
 72 cells: JAM72D40-xxx/MB-US (xxx=585-600, in steps of 5)
 72 cells: JAM72D40-xxx/MB-US/1500V (xxx=585-600, in steps of 5)
 66 cells: JAM66D40-xxx/MB (xxx=500-545, in steps of 5)
 66 cells: JAM66D40-xxx/MB/1500V (xxx=500-545, in steps of 5)
 60 cells: JAM60D40-xxx/MB (xxx=455-495, in steps of 5)
 60 cells: JAM60D40-xxx/MB/1500V (xxx=455-495, in steps of 5)
 54 cells: JAM54D40-xxx/MB (xxx=405-455, in steps of 5)
 54 cells: JAM54D40-xxx/MB/1500V (xxx=405-455, in steps of 5)
 72 cells: JAM72D41-xxx/MB (xxx=575-590, in steps of 5)
 72 cells: JAM72D41-xxx/MB/1500V (xxx=575-590, in steps of 5)
 54 cells: JAM54D41-xxx/MB (xxx=405-440, in steps of 5)
 54 cells: JAM54D41-xxx/MB/1500V (xxx=405-440, in steps of 5)
 54 cells: JAM54D40-xxx/MR (xxx=405-455, in steps of 5)
 54 cells: JAM54D40-xxx/MR/1500V (xxx=405-455, in steps of 5)
 78 cells: JAM78D40-xxx/GB (xxx=580-655, in steps of 5)
 78 cells: JAM78D40-xxx/GB/1500V (xxx=580-655, in steps of 5)
 72 cells: JAM72D40-xxx/GB (xxx=540-610, in steps of 5)
 72 cells: JAM72D40-xxx/GB/1500V (xxx=540-610, in steps of 5)
 66 cells: JAM66D40-xxx/GB (xxx=500-560, in steps of 5)
 66 cells: JAM66D40-xxx/GB/1500V (xxx=500-560, in steps of 5)
 60 cells: JAM60D40-xxx/GB (xxx=455-505, in steps of 5)
 60 cells: JAM60D40-xxx/GB/1500V (xxx=455-505, in steps of 5)
 54 cells: JAM54D40-xxx/GB (xxx=405-455, in steps of 5)
 54 cells: JAM54D40-xxx/GB/1500V (xxx=405-455, in steps of 5)



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72 cells: JAM72D41-xxx/GB (xxx=575-590, in steps of 5)
72 cells: JAM72D41-xxx/GB/1500V (xxx=575-590, in steps of 5)
54 cells: JAM54D41-xxx/GB (xxx=415-435, in steps of 5)
54 cells: JAM54D41-xxx/GB/1500V (xxx=415-435, in steps of 5)
72 cells: JAM72D30-xxx/LB (xxx=555-575, in steps of 5)
72 cells: JAM72D30-xxx/LB/1500V (xxx=555-575, in steps of 5)
54 cells: JAM54D30-xxx/LB (xxx=420-430, in steps of 5)
54 cells: JAM54D30-xxx/LB/1500V (xxx=420-430, in steps of 5)
66 cells: JAM66D42-xxx/MB (xxx=540-600, in steps of 5)
66 cells: JAM66D42-xxx/MB/1500V (xxx=540-600, in steps of 5)
66 cells: JAM66D42-xxx/MR (xxx=540-600, in steps of 5)
66 cells: JAM66D42-xxx/MR/1500V (xxx=540-600, in steps of 5)
66 cells: JAM66D43-xxx/MB (xxx=565-580, in steps of 5)
66 cells: JAM66D43-xxx/MB/1500V (xxx=565-580, in steps of 5)

Maximum system voltage: 1500V
Maximum overcurrent protection rating: 25A or 30A
Electrical protection class: Class II

Module types:

PV Modules with 182mm Mono-crystalline Silicon half-cut or Asymmetric cut Solar Cells:

72 cells: JAM72D40-xxx/LB (xxx=560-620, in steps of 5)
72 cells: JAM72D40-xxx/LB/1500V (xxx=560-620, in steps of 5)
60 cells: JAM60D40-xxx/LB (xxx=485-515, in steps of 5)
60 cells: JAM60D40-xxx/LB/1500V (xxx=485-515, in steps of 5)
54 cells: JAM54D40-xxx/LB (xxx=420-465, in steps of 5)
54 cells: JAM54D40-xxx/LB/1500V (xxx=420-465, in steps of 5)
54 cells: JAM54D40-xxx/LR (xxx=420-465, in steps of 5)
54 cells: JAM54D40-xxx/LR/1500V (xxx=420-465, in steps of 5)
60 cells: JAM60D41-xxx/LB (xxx=485-500, in steps of 5)
60 cells: JAM60D41-xxx/LB/1500V (xxx=485-500, in steps of 5)
54 cells: JAM54D41-xxx/LB (xxx=420-455, in steps of 5)
54 cells: JAM54D41-xxx/LB/1500V (xxx=420-455, in steps of 5)
72 cells: JAM72D42-xxx/LB (xxx=590-655, in steps of 5)
72 cells: JAM72D42-xxx/LB/1500V (xxx=590-655, in steps of 5)
60 cells: JAM60D42-xxx/LB (xxx=500-545, in steps of 5)
60 cells: JAM60D42-xxx/LB/1500V (xxx=500-545, in steps of 5)
54 cells: JAM54D42-xxx/LB (xxx=455-485, in steps of 5)
54 cells: JAM54D42-xxx/LB/1500V (xxx=455-485, in steps of 5)



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78 cells: JAM78D49-xxx/LB (xxx=585-610, in steps of 5)
 78 cells: JAM78D49-xxx/LB /1500V (xxx=585-610, in steps of 5)
 66 cells: JAM66D45-xxx/LB (xxx=580-630, in steps of 5)
 66 cells: JAM66D45-xxx/LB /1500V (xxx=580-630, in steps of 5)
 66 cells: JAM66D45-xxx/LR (xxx=580-630, in steps of 5)
 66 cells: JAM66D45-xxx/LR /1500V (xxx=580-630, in steps of 5)
 72 cells: JAM72D40-xxx/HB (xxx=585-605, in steps of 5)
 72 cells: JAM72D40-xxx/HB /1500V (xxx=585-605, in steps of 5)
 54 cells: JAM54D40-xxx/HB (xxx=440-450, in steps of 5)
 54 cells: JAM54D40-xxx/HB /1500V (xxx=440-450, in steps of 5)
 54 cells: JAM54D41-xxx/HB (xxx=430-445, in steps of 5)
 54 cells: JAM54D41-xxx/HB /1500V (xxx=430-445, in steps of 5)

Maximum system voltage: 1500V
 Maximum overcurrent protection rating: 25A or 30A
 Electrical protection class: Class II

Module types: **PV Modules with 210mm Mono-crystalline Silicon 1/3-cut Solar Cells:**

50 cells: JAM50S40-xxx/MR/1500V (xxx=490-500, in steps of 5)
 50 cells: JAM50D40-xxx/MB (xxx=485-500, in steps of 5)
 50 cells: JAM50D40-xxx/MB/1500V (xxx=485-500, in steps of 5)

Maximum system voltage: 1500V
 Maximum overcurrent protection rating: 25A
 Electrical protection class: Class II

Module types: **PV Modules with 210mm Mono-crystalline Silicon 1/2-cut Solar Cells:**

66 cells: JAM66S35-xxx/MR/1500V (xxx=650-670, in steps of 5)
 60 cells: JAM60S35-xxx/MR/1500V (xxx=590-610, in steps of 5)
 66 cells: JAM66D35-xxx/MB (xxx=650-665, in steps of 5)
 66 cells: JAM66D35-xxx/MB/1500V (xxx=650-665, in steps of 5)
 60 cells: JAM60D35-xxx/MB (xxx=590-605, in steps of 5)
 60 cells: JAM60D35-xxx/MB/1500V (xxx=590-605, in steps of 5)
 66 cells: JAM66D46-xxx/LB (xxx=685-730, in steps of 5)
 66 cells: JAM66D46-xxx/LB /1500V (xxx=685-730, in steps of 5)

Maximum system voltage: 1500V



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Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

Module types: **PV Modules with 182mm PERC Mono-crystalline Silicon 1/2-cut Solar Cells:**

72 cells: JAM72S30-xxx/MR (xxx=525-560, in steps of 5)

66 cells: JAM66S30-xxx/MR (xxx=480-510, in steps of 5)

54 cells: JAM54S30-xxx/MR (xxx=395-420, in steps of 5)

72 cells: JAM72S30-xxx/LR (xxx=560-580, in steps of 5)

54 cells: JAM54S30-xxx/LR (xxx=415-435, in steps of 5)

72 cells: JAM72S30-xxx/GR (xxx=530-570, in steps of 5)

54 cells: JAM54S30-xxx/GR (xxx=400-425, in steps of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

Module types: **PV Modules with 182mm TOPCon Mono-crystalline Silicon 1/2-cut Solar Cells:**

72 cells: JAM72S40-xxx/LR (xxx=560-615, in steps of 5)

60 cells: JAM60S40-xxx/LR (xxx=475-510, in steps of 5)

54 cells: JAM54S40-xxx/LR (xxx=420-460, in steps of 5)

72 cells: JAM72S41-xxx/LR (xxx=560-595, in steps of 5)

60 cells: JAM60S41-xxx/LR (xxx=475-495, in steps of 5)

54 cells: JAM54S41-xxx/LR (xxx=420-445, in steps of 5)

72 cells: JAM72S42-xxx/LR (xxx=600-655, in steps of 5)

66 cells: JAM66S42-xxx/MR (xxx=550-600, in steps of 5)

60 cells: JAM60S42-xxx/LR (xxx=500-545, in steps of 5)

54 cells: JAM54S42-xxx/LR (xxx=450-490, in steps of 5)

72 cells: JAM72S43-xxx/LR (xxx=595-635, in steps of 5)

66 cells: JAM66S43-xxx/MR (xxx=545-585, in steps of 5)

60 cells: JAM60S43-xxx/LR (xxx=495-530, in steps of 5)

54 cells: JAM54S43-xxx/LR (xxx=445-475, in steps of 5)

72 cells: JAM72S40-xxx/MR (xxx=580-605, in steps of 5)

54 cells: JAM54S40-xxx/MR (xxx=435-450, in steps of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 25A



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Electrical protection class: Class II

Module types: **PV Modules with 210mm TOPCon Mono-crystalline Silicon 1/2-cut Solar Cells:**

66 cells: JAM66S45-xxx/LR (xxx=600-635, in steps of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 30A

Electrical protection class: Class II

Module types: **PV Modules with 182mm Mono-crystalline Silicon 1/5-cut Solar Cells:**

76 cells: JAM76S11-xxx/PR(B)/1500V (xxx=395-415, in steps of 5)

Maximum system voltage: 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

Module types: **PV Modules with Poly-crystalline Silicon Solar Cells (156mm to 158.75mm):**

72 cells: JAP6(K)-72-xxx/4BB/1500V (xxx=310-330, in steps of 5)

72 cells: JAP72S01-xxx/SC/1500V (xxx=310-345, in steps of 5)

72 cells: JAP72S01-xxx/PR/1500V (xxx=330-345, in steps of 5)

72 cells: JAP72S09-xxx/SC/1500V (xxx=320-345, in steps of 5)

72 cells: JAP72S01-xxx/MS/1500V (xxx=325-340, in steps of 5)

72 cells: JAP72S02-xxx/SC/1500V (xxx=310-345, in steps of 5)

72 cells: JAP72S02-xxx/PR/1500V (xxx=330-345, in steps of 5)

60 cells: JAP6(K)-60-xxx/4BB/1500V (xxx=255-275, in steps of 5)

60 cells: JAP60S01-xxx/SC/1500V (xxx=255-290, in steps of 5)

60 cells: JAP60S01-xxx/PR/1500V (xxx=275-285, in steps of 5)

60 cells: JAP60S09-xxx/SC/1500V (xxx=265-290, in steps of 5)

60 cells: JAP60S01-xxx/MS/1500V (xxx=270-280, in steps of 5)

60 cells: JAP60S02-xxx/SC/1500V (xxx=255-290, in steps of 5)

60 cells: JAP60S02-xxx/PR/1500V (xxx=275-285, in steps of 5)

72 cells: JAP6(DG)-72-xxx/4BB/1500V (xxx=305-325, in steps of 5)

72 cells: JAP6(DG)-72-xxx/3BB/1500V (xxx=305-315, in steps of 5)

72 cells: JAP6(DG)-72-xxx/4BB/RE/1500V (xxx=310-335, in steps of 5)

72 cells: JAP6(K)(DG)-72-xxx/4BB/1500V (xxx=310-335, in steps of 5)

72 cells: JAP72D00-xxx/SC (xxx=305-345, in steps of 5)



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72 cells: JAP72D00-xxx/SC/1500V (xxx=310-340, in steps of 5)
 72 cells: JAP72D00-xxx/PR (xxx=330-350, in steps of 5)
 72 cells: JAP72D00-xxx/PR/1500V (xxx=330-345, in steps of 5)
 72 cells: JAP72D09-xxx/SC (xxx=325-345, in steps of 5)
 72 cells: JAP72D09-xxx/SC/1500V (xxx=330-345, in steps of 5)
 60 cells: JAP6(DG)-60-xxx/4BB/1500V (xxx=250-275, in steps of 5)
 60 cells: JAP6(DG)-60-xxx/3BB/1500V (xxx=245-265, in steps of 5)
 60 cells: JAP6(DG)-60-xxx/4BB/RE/1500V (xxx=255-280, in steps of 5)
 60 cells: JAP6(K)(DG)-60-xxx/4BB/1500V (xxx=255-280, in steps of 5)
 60 cells: JAP60D00-xxx/SC (xxx=255-290, in steps of 5)
 60 cells: JAP60D00-xxx/SC/1500V (xxx=260-285, in steps of 5)
 60 cells: JAP60D00-xxx/PR (xxx=275-290, in steps of 5)
 60 cells: JAP60D00-xxx/PR/1500V (xxx=275-290, in steps of 5)
 60 cells: JAP60D09-xxx/SC (xxx=270-290, in steps of 5)
 60 cells: JAP60D09-xxx/SC/1500V (xxx=275-290, in steps of 5)

Maximum system voltage: 1500V
 Maximum overcurrent protection rating: 20A
 Electrical protection class: Class II

Module types:

PV Modules with Poly-crystalline Silicon half-cut Solar Cells (156mm to 158.75mm):

72 cells: JAP72S03-xxx/SC/1500V (xxx=320-345, in steps of 5)
 72 cells: JAP72S03-xxx/PR/1500V (xxx=335-355, in steps of 5)
 72 cells: JAP72S10-xxx/SC/1500V (xxx=335-350, in steps of 5)
 72 cells: JAP72S03-xxx/MS/1500V (xxx=320-345, in steps of 5)
 72 cells: JAP72S08-xxx/SC/1500V (xxx=320-345, in steps of 5)
 72 cells: JAP72S08-xxx/PR/1500V (xxx=335-355, in steps of 5)
 60 cells: JAP60S03-xxx/SC/1500V (xxx=270-290, in steps of 5)
 60 cells: JAP60S03-xxx/PR/1500V (xxx=280-295, in steps of 5)
 60 cells: JAP60S10-xxx/SC/1500V (xxx=275-290, in steps of 5)
 60 cells: JAP60S03-xxx/MS/1500V (xxx=270-285, in steps of 5)
 60 cells: JAP60S08-xxx/SC/1500V (xxx=270-290, in steps of 5)
 60 cells: JAP60S08-xxx/PR/1500V (xxx=280-295, in steps of 5)

Maximum system voltage: 1500V
 Maximum overcurrent protection rating: 20A
 Electrical protection class: Class II



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Module types:

PV Modules with Mono-crystalline Silicon Solar Cells (156mm to 158.75mm):

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: JAM72S02-xxx/PR (xxx=345-390, in steps of 5)
72 cells: JAM72S01-xxx/MR (xxx=365-385, in steps of 5)
72 cells: JAM72S02-xxx/MR (xxx=365-385, in steps of 5)
72 cells: JAM72S09-xxx/PR (xxx=370-405, in steps of 5)
72 cells: JAM72S12-xxx/PR (xxx=365-385, in steps of 5)
72 cells: JAM72S09-xxx/BP (xxx=375-385, 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=285-325, in steps of 5)
60 cells: JAM60S02-xxx/PR (xxx=285-325, in steps of 5)
60 cells: JAM60S01-xxx/MR (xxx=305-320, in steps of 5)
60 cells: JAM60S02-xxx/MR (xxx=305-320, in steps of 5)
60 cells: JAM60S09-xxx/PR (xxx=310-335, in steps of 5)
60 cells: JAM60S12-xxx/PR (xxx=305-330, in steps of 5)
60 cells: JAM60S09-xxx/BP (xxx=315-320, in steps of 5)

Maximum system voltage:

1000V or 1500V

Maximum overcurrent protection rating:

20A

Electrical protection class:

Class II

Module types:

PV Modules with Mono-crystalline Silicon half-cut Solar Cells (156mm to 158.75mm):

72 cells: JAM72S03-xxx/PR (xxx=360-395, in steps of 5)
72 cells: JAM72S10-xxx/PR (xxx=380-410, in steps of 5)
72 cells: JAM72S17-xxx/PR (xxx=380-390, in steps of 5)
72 cells: JAM72S10-xxx/MR (xxx=390-430, in steps of 5)
72 cells: JAM72S17-xxx/MR (xxx=390-430, in steps of 5)
72 cells: JAM72S17-xxx/GR (xxx=385-400, in steps of 5)
72 cells: JAM72S10-xxx/BP (xxx=385-400, in steps of 5)
72 cells: JAM72S10-xxx/MB (xxx=395-415, in steps of 5)
72 cells: JAM72S08-xxx/PR (xxx=360-395, in steps of 5)
60 cells: JAM60S03-xxx/PR (xxx=300-330, in steps of 5)
60 cells: JAM60S08-xxx/PR (xxx=300-330, in steps of 5)
60 cells: JAM60S10-xxx/PR (xxx=315-345, in steps of 5)
60 cells: JAM60S10-xxx/MR (xxx=325-355, in steps of 5)
60 cells: JAM60S10-xxx/BP (xxx=320-330, in steps of 5)



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	60 cells: JAM60S10-xxx/MB (xxx=330-345, in steps of 5)
	60 cells: JAM60S17-xxx/PR (xxx=315-325, in steps of 5)
	60 cells: JAM60S17-xxx/MR (xxx=315-355, in steps of 5)
	78 cells: JAM78S10-xxx/MR (xxx=435-465, in steps of 5)
	78 cells: JAM78S10-xxx/MR-J (xxx=435-465, in steps of 5)
	66 cells: JAM66S10-xxx/MR (xxx=345-390, in steps of 5)
Maximum system voltage:	1000V or 1500V
Maximum overcurrent protection rating:	20A
Electrical protection class:	Class II

Module types: **PV Modules with Mono-crystalline Silicon half-cut Solar Cells (166mm to 168mm):**

	72 cells: JAM72S20-xxx/MR (xxx=430-470, in steps of 5)
	72 cells: JAM72S20-xxx/MB (xxx=450-465, in steps of 5)
	60 cells: JAM60S20-xxx/MR (xxx=355-390, in steps of 5)
	60 cells: JAM60S21-xxx/MR (xxx=355-390, in steps of 5)
	60 cells: JAM60S20-xxx/MB (xxx=375-390, in steps of 5)
Maximum system voltage:	1000V or 1500V
Maximum overcurrent protection rating:	20A
Electrical protection class:	Class II

Module types: **PV Modules with 182mm Mono-crystalline Silicon half-cut Solar Cells:**

78 cells: JAM78S30-xxx/MR (xxx=580-605, in steps of 5)
72 cells: JAM72S30-xxx/MR (xxx=510-560, in steps of 5)
66 cells: JAM66S30-xxx/MR (xxx=470-510, in steps of 5)
60 cells: JAM60S30-xxx/MR (xxx=435-460, in steps of 5)
54 cells: JAM54S30-xxx/MR (xxx=390-425, in steps of 5)
78 cells: JAM78S30-xxx/GR (xxx=575-610, in steps of 5)
72 cells: JAM72S30-xxx/GR (xxx=510-560, in steps of 5)
66 cells: JAM66S30-xxx/GR (xxx=500-510, in steps of 5)
60 cells: JAM60S30-xxx/GR (xxx=445-470, in steps of 5)
54 cells: JAM54S30-xxx/GR (xxx=400-420, in steps of 5)
72 cells: JAM72S31-xxx/MR (xxx=510-545, in steps of 5)
66 cells: JAM66S31-xxx/MR (xxx=470-500, in steps of 5)
60 cells: JAM60S31-xxx/MR (xxx=425-450, in steps of 5)
54 cells: JAM54S31-xxx/MR (xxx=385-415, in steps of 5)



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78 cells: JAM78S31-xxx/GR (xxx=570-590, in steps of 5)
 72 cells: JAM72S31-xxx/GR (xxx=510-545, in steps of 5)
 66 cells: JAM66S31-xxx/GR (xxx=480-500, in steps of 5)
 60 cells: JAM60S31-xxx/GR (xxx=435-450, in steps of 5)
 54 cells: JAM54S31-xxx/GR (xxx=395-415, in steps of 5)
 72 cells: JAM72S40-xxx/GR (xxx=540-575, in steps of 5)
 66 cells: JAM66S40-xxx/GR (xxx=495-525, in steps of 5)
 60 cells: JAM60S40-xxx/GR (xxx=450-480, in steps of 5)
 54 cells: JAM54S40-xxx/GR (xxx=405-430, in steps of 5)
 72 cells: JAM72S41-xxx/GR (xxx=540-570, in steps of 5)
 66 cells: JAM66S41-xxx/GR (xxx=495-525, in steps of 5)
 60 cells: JAM60S41-xxx/GR (xxx=450-475, in steps of 5)
 54 cells: JAM54S41-xxx/GR (xxx=405-430, in steps of 5)
 72 cells: JAM72S30-xxx/LR (xxx=555-580, in steps of 5)
 54 cells: JAM54S30-xxx/LR (xxx=415-435, in steps of 5)
 54 cells: JAM54S31-xxx/LR (xxx=415-425, in steps of 5)
 72 cells: JAM72S30-xxx/MB (xxx=535-550, in steps of 5)
 72 cells: JAM72S31-xxx/MB (xxx=525-540, in steps of 5)
 54 cells: JAM54S30-xxx/MB (xxx=385-410, in steps of 5)
 54 cells: JAM54S31-xxx/MB (xxx=385-405, in steps of 5)
 54 cells: JAM54S30-xxx/LB (xxx=410-425, in steps of 5)
 54 cells: JAM54S31-xxx/LB (xxx=410-415, in steps of 5)
 72 cells: JAM72S40-xxx/MR (xxx=560-590, in steps of 5)

Maximum system voltage: 1000V or 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II

Module types: **PV Modules with 210mm Mono-crystalline Silicon 1/3-cut Solar Cells:**

50 cells: JAM50S40-xxx/MR (xxx=490-500, in steps of 5)
 66 cells: JAM66S35-xxx/MR (xxx=650-670, in steps of 5)
 60 cells: JAM60S35-xxx/MR (xxx=590-610, in steps of 5)

Maximum system voltage: 1000V or 1500V

Maximum overcurrent protection rating: 25A

Electrical protection class: Class II



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Module types:	PV Modules with 182mm Mono-crystalline Silicon 1/5-cut Solar Cells: 68 cells: JAM68S11-xxx/PR (xxx=355-365, in steps of 5) 68 cells: JAM68S11-xxx/PR(B) (xxx=345-365, in steps of 5) 76 cells: JAM76S11-xxx/PR(B) (xxx=395-415, in steps of 5)
Maximum system voltage:	1000V or 1500V
Maximum overcurrent protection rating:	25A
Electrical protection class:	Class II
Module types:	PV Modules with Poly-crystalline Silicon Solar Cells (156mm to 158.75mm): 72 cells: JAP72S01-xxx/SC (xxx=310-345, in steps of 5) 72 cells: JAP72S02-xxx/SC (xxx=310-345, in steps of 5) 72 cells: JAP72S01-xxx/PR (xxx=330-345, in steps of 5) 72 cells: JAP72S02-xxx/PR (xxx=330-345, in steps of 5) 72 cells: JAP72S09-xxx/SC (xxx=320-345, in steps of 5) 72 cells: JAP72S01-xxx/MS (xxx=325-340, in steps of 5) 60 cells: JAP60S01-xxx/SC (xxx=255-290, in steps of 5) 60 cells: JAP60S02-xxx/SC (xxx=255-290, in steps of 5) 60 cells: JAP60S01-xxx/PR (xxx=275-285, in steps of 5) 60 cells: JAP60S02-xxx/PR (xxx=275-285, in steps of 5) 60 cells: JAP60S09-xxx/SC (xxx=265-290, in steps of 5) 60 cells: JAP60S01-xxx/MS (xxx=270-280, in steps of 5) 54 cells: JAP54S01-xxx/SC (xxx=245-255, in steps of 5)
Maximum system voltage:	1000V or 1500V
Maximum overcurrent protection rating:	20A
Electrical protection class:	Class II
Module types:	PV Modules with Poly-crystalline Silicon half-cut Solar Cells (156mm to 158.75mm): 72 cells: JAP72S03-xxx/PR (xxx=335-355, in steps of 5) 72 cells: JAP72S03-xxx/SC (xxx=320-345, in steps of 5) 72 cells: JAP72S10-xxx/SC (xxx=335-350, in steps of 5) 72 cells: JAP72S03-xxx/MS (xxx=320-345, in steps of 5) 72 cells: JAP72S08-xxx/SC (xxx=320-345, in steps of 5) 72 cells: JAP72S08-xxx/PR (xxx=335-355, in steps of 5) 60 cells: JAP60S03-xxx/PR (xxx=280-295, in steps of 5) 60 cells: JAP60S03-xxx/SC (xxx=270-290, in steps of 5)



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

60 cells: JAP60S03-xxx/MS (xxx=270-285, in steps of 5)

60 cells: JAP60S08-xxx/SC (xxx=270-290, in steps of 5)

60 cells: JAP60S08-xxx/PR (xxx=280-295, in steps of 5)

Maximum system voltage: 1000V or 1500V

Maximum overcurrent protection rating: 20A

Electrical protection class: Class II

Remark:

For detailed product information, please refer to CDF (Constructional Data Form).



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CLARIFICATION OF PV CYCLE

Data: 6th March 2024

To whom it may concern:

In consideration of Photovoltaic (PV) module recycle after its service life, so far there is 3rd party called PV cycle for this kind of work, but this needs module being shipped to the appointed place and PV cycle will charge the cost for recycling, JA is the member of PV cycle which the JA modules could be recycled by PV cycle. You could refer to the introduction and certificate as attachments.

For general recycling, customer could generally disposal the nonoperative modules based on separating the key parts such as aluminum frame, laminate, and glass via physics, as there is no toxic material for module assemble, you could refer to the module MSDS as attached.

If you have any further question, please feel free to let us know, and welcome to JA Solar manufacture.

We are looking forward to working with you in Vietnam.

Best regards,

Frank Zhu

Technical Support, APAC

No.8 Building, Nuode Center, No1 Courtyard, East Auto Museum Road,

Fengtai District, Beijing, China, 100000

Web: www.jasolar.com

MSDS REPORT

MATERIAL SAFETY DATA SHEET

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SECTION 1- PRODUCT AND COMPANY IDENTIFICATION

Solar Electric Crystal Silicon Module

Type: JAM60D09; JAM72D09; JAM60D10; JAM72D10; JAM78D10; JAM60D20; JAM72D20; JAM60D30; JAM72D30; JAM78D30; JAM54D40; JAM54D41; JAM72D40; JAM66D42; JAM66D45; JAM72D42; JAM78D49;

Company Identification: JA SOLAR

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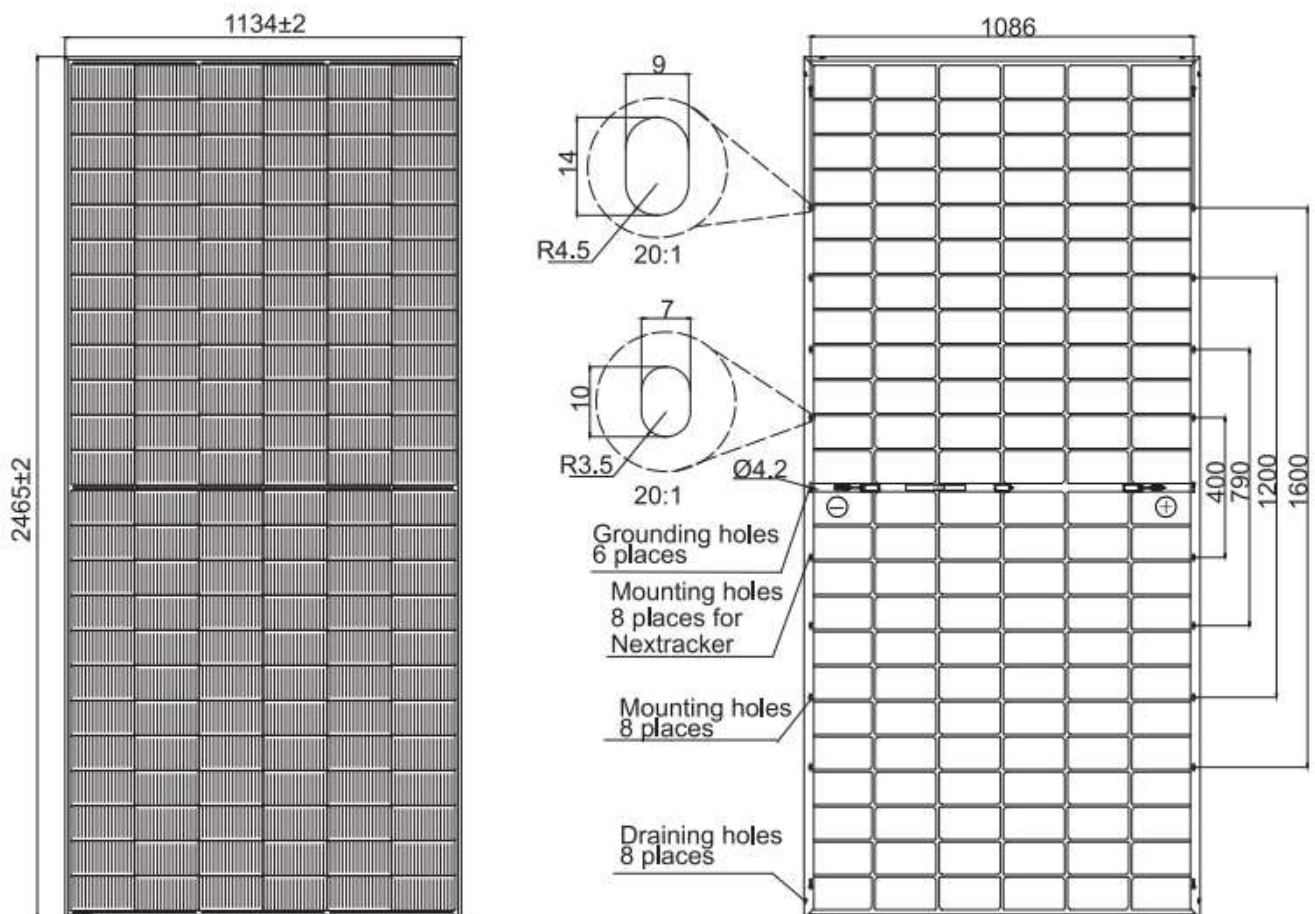
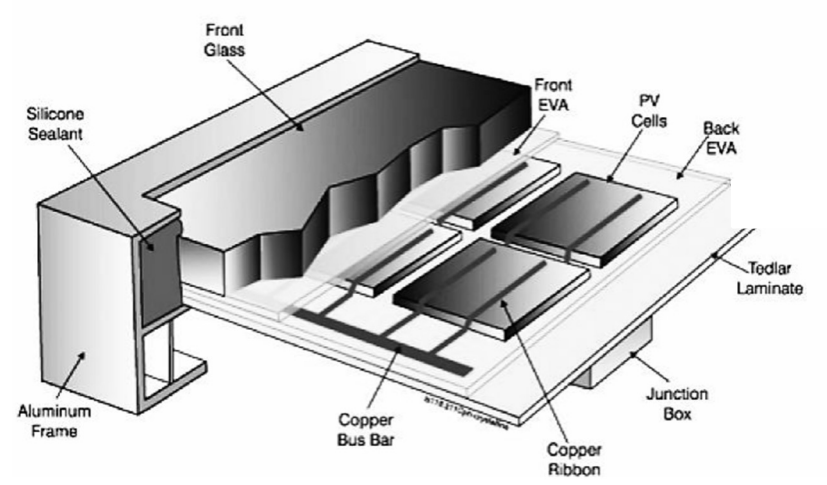
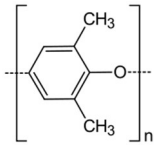
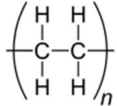
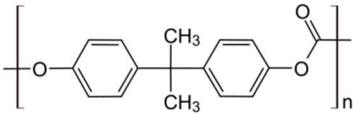
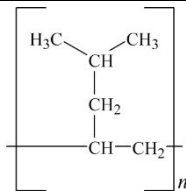


Figure 1 72 Cell Module

SECTION2- COMPOSITION, INFORMATION ON INGREDIENTS



Material Item	Chemical Name of Composition	Formula & Model
Frame	Aluminum	AL
	Alumina	AL ₂ O ₃
	Manganese	Mn
Cell	Silicon	Si
	Phosphorus	P
	Boron	B
	Silicon nitride	Si ₃ N _x
	Silver	Ag
	Aluminum	AL

Junction-Box	Polyphenylene oxide (PPO)	
	Tin	Sn
	Copper	Cu
	Polyethylene (PE)	
	Polycarbonate (PC)	
Front Glass	Tin	Sn
	Tempered glass	SiO ₂
Silica Gel	Silicon substrate	(SiO ₂) _m ·(H ₂ O) _n
	Silane coupling agent	KH550
Bus bar	Copper (99%)	Cu
	Tin (<1%)	Sn
	Lead (<1%)	Pb
	Isopropyl alcohol	C ₃ H ₈ O
Back Glass	Tin	Sn
	Tempered glass	SiO ₂
	Barium (<0.1%)	Ba
Laminate material	PO Polyolefin	

SECTION3- HAZARDS IDENTIFICATION

Emergency Overview: warning, non-demolition, not exposed to flame or fire. There is the risk of explosion and burn under fire conditions. Do not short-circuit, squeezing, burning, or removing the module.

Potential health hazards

Risk Categories: None

Invasive Ways: None

Environmental Hazards: None

Health Hazards: None

Explosion Hazard: Tempered glass has a 1/10000 explosion risk.

The inverter device does not meet the provision, the flaws on system design, the quality problem of the junction box, the hot spot effect will be the reason of spontaneous combustion of this product.

SECTION4- FIRST AID MEASURES

Eye contact: No damage found on eye contact, no special provisions.

Skin contact: No skin contact injury found. It is proposed to wash hands before and after touch back sheet. If molten polymer contacts skin, immediately cool it with cold water, and do not directly peel them from the skin, go to hospital for treatment by burns drugs.

- Ingestion: No damage found, no special provisions.
- Inhalation: No damage found, no special provisions. If you have overheating or fire hazard, be away from heat. Go to hospital if any discomfort.

SECTION5- FIRE FIGHTING MEASURES

In general: during normal operation, this product is not prone to burning.

Hazardous Combustion Products: CO, HF,

Extinguishing Media: The hydrogen produced under the using of water may be mixed with air to form an explosive mixture if the module is burning. For small fires, carbon dioxide, dry powder or foam extinguishing agent are preferred medium. But they may not work to the burning module until the combustion module will be completely burned out.

LITH-X (powdered graphite) or copper powder extinguisher, sand, dried, pulverized dolomite or soda ash can also be used, and these materials can be used as a smothering agent.

Extinguishing Note: transfer people to a safe area in the upwind air, wear respirators, protective gloves and fire fighting clothing. If large amounts are inhaled, give emergency medical treatment.

SECTION6- ACCIDENTAL RELEASE MEASURES

Emergency treatment: solid normally, NA.

SECTION7- HANDLING AND STORAGE

Handling Precautions Outline

- 1, In strict accordance with the requirements of the specification to install modules, and are not free to install, maintain.
- 2, Do not strongly illuminate module artificially(artificial sunlight is unavailable)
- 3, The system DC voltage exceeds 100V, operation must be done by specialized electrician.
- 4, It is potentially dangerous to contact a voltage of 30V or above.
- 5, Junction boxes, cables, brackets, etc. should be matched with modules during installation of electrical systems.
- 6, Installation of all accessories must follow safe working practices (other accessories must also comply with the security provisions of operation)
- 7, The installation should be in accordance with local, national and international standards.
- 8, Module installation should be operated by professionals.

Safe handling

- 1, Properly packed before installation of modules.
- 2, Do not directly holding the junction box to handle the modules
- 3, Not drop modules or obstacles fall on it.
- 4, Handle it gently, especially angular point.
- 5, Do not disassemble the modules and move any part of the modules or label after installation.
- 6, Do spray paint or stick other items on the back of the modules.
- 7, Do not drill on the glass and module border.
- 8, Do not place the module without bracket or not an unsafe place
- 9, The module cannot be used after glass is broken.
10. To operate with dry tool in the clean environment.

Install security

- 1, Do not allow the children to close during installation.
- 2, Module cannot be installed in high winds.
- 3, Appropriate Installation methods and safety equipment should be used in the installation site to prevent the falling of modules.
- 4, Do not touch the wire or connection port when the installation of the modules or the modules are exposed to the sunlight.
- 5, Do not wear metal jewelry during the installation.
- 6, Do not disconnect the line or unplug the connection plug when circuit is working.

Fire safety

- 1, Roof structures and installations that may affect the fire safety of the entire building, unreasonable installation will aggravate to the severity of the fire.
- 2, The modules should be installed on the fire isolation layer, in order to improve security
- 3, Module installation on the rooftop and ground should be the same, with insurance device and circuit fuse.
- 4, Do not install the modules near the storage equipment and place of flammable gas.

Electrical Installation

- 1, Avoid the risk of electric shock during installation, wiring, module operating.
- 2, The module of different specifications cannot used in the same array.
- 3, The open circuit voltage of module is less than the maximum voltage of standard system.
- 4, All of the modules no matter how much voltage should be grounding.
- 5, The cable is to be placed where the children and animals cannot touch.
- 6, Cables and junction boxes may overheat at high current.
- 7, Make sure junction box and wire can go through the short-circuit current.
- 8, Make sure the positive and negative polarity of the cable and terminal during connection.
- 9, Grounding line is provided.

Mechanical Installation

- 1, Fix the modules with the installation tools and special bracket to support modules
- 2, Make sure the module can still work carrying a certain load, which is not affected by the impact of the snow load or thermal expansion and contraction
- 3, Make sure that the modules can still work in the ambient temperature within the variable range of -40 to +80 F / -40 to 176 F

- 4, Off-grid power generation system installed in large areas of snow, require module position lower and bracket narrower
- 5, Providing install mounting holes for frame modules which can withstand a certain degree of mechanical strength.
- 6, All four position holes on the module are used for installation.
- 7, Be well-ventilated behind the module. (5 cm / 2 inch gap)
- 8, Be away from the other items behind the modules.

Storage:

Use wooden boxes (carton) packaging and store it in a cool, well-ventilated place, be away from heat and fire sources.

SECTION8-EXPOSURE CONTROLS/PERSONAL PROTECTION EQUIPMENT

Engineering Controls: NA

Eye protection: NA

Skin contact: NA under normal conditions, if the module is damaged, please wear appropriate protective gloves.

Clothing: NA under normal conditions, if the module is on fire and burst, please wear appropriate protective clothing.

Respirator: NA under normal conditions

SECTION9- PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid

Odor: None

Voltage: different specifications, different voltage

Weight: 19.5 kg to 34.6kg

Solubility in water: insoluble in water

SECTION10- STABILITY AND REACTIVITY

Stability: Stable under normal storage and operating conditions.

Conditions to avoid: fire, high temperature, high humidity, salt spray

Substances to be avoided: strong oxidizing agents.

Hazardous decomposition products: fire conditions may produce hazardous decomposition products.

Hazardous Polymerization: No information available.

SECTION11- TOXICOLOGICAL INFORMATION

Acute poisoning: under normal conditions, the product will not cause any abnormal emergency injury

Irritation: None

SECTION12- ECOLOGICAL INFORMATION

Ecological toxicity: the proper use and disposal of the module will not cause harm to the environment. Disposal of waste modules, be away from the water, rain and snow.

SECTION13- DISPOSAL

Disposal: Should refer to national and local laws and regulations before disposal.

SECTION14- TRANSPORT INFORMATION

Dangerous Goods Code: No information

UN Number: information

Packing mark: no information

Packaging category: Z01

Packing method: No information available.

Transportation Note: Package should be complete before transportation, and loading should be safe. To ensure that the container does not leak, not fall, not damaged during transportation. Do not be together with oxidizing agents, alkalis, food chemicals. Goods should be anti-exposure, rain, anti-high temperature during transportation.

SECTION15- REGULATORY INFORMATION

Regulatory Information: Refer to local, domestic, EU / international regulations

SECTION16-OTHER INFORMATION

MSDS Preparation date: October 2023



2024

www.pvcycle.org

PV CYCLE a.i.s.b.l
hereby declares that based on current commitments

JA Solar International Limited

(Business registration nr.: 66148624-000-05-21-6)

- benefits from collection and treatment services* for discarded PV panels and solar energy equipment;
- adheres to the high principle of PV CYCLE's PV waste management program;
- advocates and supports the development of sustainable PV waste management on a global scale;
- contributes to sustainable PV waste management by informing customers about legal developments and requirements.

This certificate is valid until **31/12/2024** around the globe excluding the European Union Member States, UK, the EFTA countries and any other countries or regions where Extended Producer Responsibility legislation is in place or where it is not possible for PV CYCLE to deliver services due to political instabilities and uncontrollable factors.

Brussels, 04.12.2023

A handwritten signature in blue ink, appearing to read "Jan Clyncke", written over a faint circular watermark.

Jan Clyncke
Managing Director

*This membership does not cover the financing of collection, recycling and treatment of discarded PV panels and solar energy equipment. Details can be found in the signed terms and conditions.

The validity of this certificate can only be confirmed on PV CYCLE portal
PV CYCLE aisbl is registered in Brussels, Belgium with BE 0893.027.827



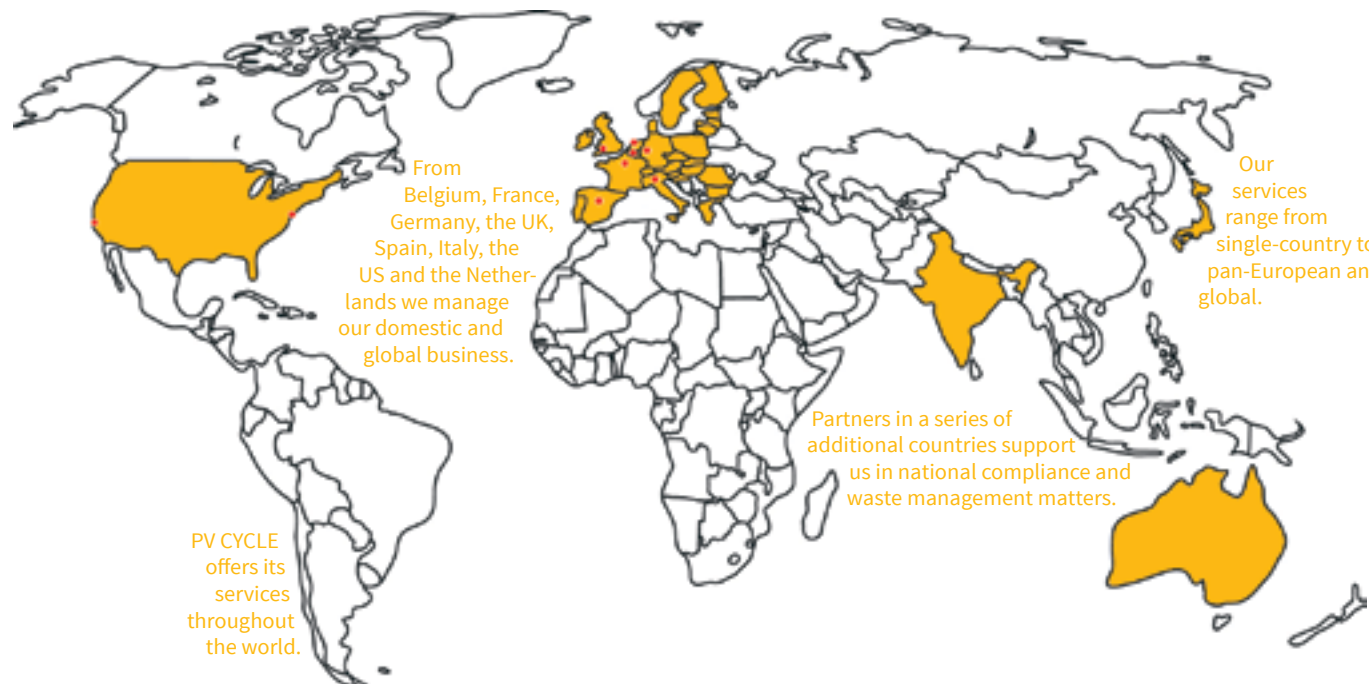
SERVICES & SOLUTIONS

PV CYCLE

**THE SOLUTION FOR EXTENDED PRODUCER
RESPONSIBILITY AND WASTE MANAGEMENT**

www.pvcycle.org

GLOBAL SOLUTIONS. NATIONAL FOCUS.



A non-profit member-based organization, PV CYCLE offers both collective and tailor-made waste management and legal compliance services for companies and waste holders around the world.

Founded in 2007 by and for the PV industry, PV CYCLE today includes a broad range of electrical and electronic equipment, batteries, packaging and industrial waste in its portfolio.

The organization has national representations throughout the globe including Europe's biggest PV markets Germany, Italy, France, Spain and the United Kingdom, as well as in the United States, Japan and in India.

Email us at join@pvcycle.org for membership or operations@pvcycle.org for waste treatment requests.

OUR SERVICES

PV CYCLE offers national waste management and legal compliance services for a variety of products - including electrical and electronic equipment, PV modules, batteries, packaging, production and industrial waste - as well as tailor-made solutions for internationally operating companies.

Find a selection of our service portfolio here:

WASTE MANAGEMENT

- Take-back:
 - Network of fixed collection points
 - Unique pick-up service for large quantities
 - Collection via municipal collection points
 - Collection via distributor locations
- State-of-the-art recycling and disposal

LEGAL COMPLIANCE

- Centralized registration and declaration
- Financial guarantee products
- PV-focused consultancy
- Comprehensive campaigning and marketing
- Support with tenders, scorecards, indexes
- Representation and campaigning

YOUR ADVANTAGE

ONE-STOP-SHOP

One single point of contact for the entire process of waste management and legal compliance.

NON-FOR-PROFIT

Independent from investors and recyclers, PV CYCLE is a member association. Members benefit directly from our assets.

INDUSTRY-DRIVEN

A member-association, PV CYCLE focuses on our clients' needs and priorities.

TRANSPARENT

Transparent prices, fair partnerships and sustainable solutions make us the preferred partner in the industry.

COLLECTIVE

Lower costs through longtime experience and a collective approach.

LEGAL COMPLIANCE

Producers of products falling under WEEE or Battery Waste regulation are obliged to comply with the legal requirements of the countries they are based in.

Legal compliance with WEEE or Battery Waste legislation is subject to the European Union only.

EUROPEAN UNION

WEEE LEGISLATION

PV modules and other e-products are regulated under the Waste Electrical and Electronic Equipment Directive (WEEE) 2012/19/EU.

BATTERY LEGISLATION

The waste management of batteries is formally regulated under the Battery Directive 2006/66/EC.


PRODUCER DEFINITION

The following companies are classed as Producers:

- Companies or natural persons established in a country of the European Union and:
 - Manufacturing and selling there
 - Importing and selling there
 - Rebranding and selling there
- Online shops selling directly to customers in an EU country and being based in another EU or third country.

Compliance with national WEEE and/or Battery law is mandatory in every single country where a legal entity is established. For more information contact our national representations. For pan-European compliance solutions contact us at join@pvcycle.org.

PRODUCER OBLIGATIONS

Obligations	WEEE	Battery
Organize and finance the take-back and treatment of your products	✓	✓
Register the company at the national Producers register	✓	✓
Periodically report to the national register the quantity of sold products	✓	✓
Inform the users on correct waste disposal	✓	✓
Mark the products with a crossed-out wheelee bin 	✓	✓
Ensure a financial guarantee (country-specific)	✓	
Mark the products with your identification mark (brand, logo, ...)	✓	
Inform treatment facilities of product's composition and use of hazardous materials	✓	

LEGAL COMPLIANCE

For the following countries PV CYCLE offers comprehensive WEEE and Battery Waste compliance, including waste management:

COUNTRY LIST

- Austria
- Belgium
- Bulgaria
- Croatia (collective waste management not allowed)
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary (collective waste management not allowed)
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- Switzerland
- The Netherlands
- United Kingdom

To learn more about our services, please contact join@pvcycle.org.

AUTHORIZED REPRESENTATIVE

Companies established in an EU country (C1) and putting PV modules on the market of another EU country (C2), must or may appoint an Authorized Representative (AR) to fulfil their Producer obligations in C2.

Appointment of an AR has to be executed by written mandate and must be submitted to the national register where the registration application is filed. Through our partner WEEE-AR, we offer AR services under national WEEE legislation throughout the European Union.

MANDATORY APPOINTMENT

An Authorized Representative must be appointed in case of sales to end-users by means of distance communication (e.g. online shop).

VOLUNTARY APPOINTMENT

An Authorized Representative may be appointed if a company established in C1 takes over the Producer obligations of his B2B customer based in C2.

PREMIUM COMPLIANCE PROGRAM

Photovoltaic manufacturers or distributors established in a country outside of the EU or in another EU country (Commissioner) can take over the financial obligations related to the WEEE compliance of their B2B customers (Producer).

The PV CYCLE Premium Compliance Program distinguishes European and non-European photovoltaic companies committed to relieving their B2B customers in their mandatory WEEE compliance. Commissioners enter into a privileged business relationship with their B2B customers and offer, via PV CYCLE, a truly sustainable PV product.

Commissioners only take over the financial burden related to the WEEE compliance of those customers considered to be a Producer under national WEEE.

WEEE OUTSOURCING

To free companies with (multiple) Producer obligations from their national administration requirements, PV CYCLE offers its all-inclusive WEEE Outsourcing service.

FINANCIAL GUARANTEE PRODUCTS

PV CYCLE Members can benefit from special conditions for third party financial guarantee products. The financial guarantee obligation is limited to Germany only.

WASTE MANAGEMENT

Companies interested in waste management as part of their environmental commitment or after sales service can benefit from our unique waste management offers.

WASTE MANAGEMENT CONTRACT

A company-individual solution for your production and/or post-production waste. The waste management service is limited to the countries and waste products as defined between the company and PV CYCLE. Global scope possible. Applicable for WEEE, battery, packaging and industrial waste.

DISMANTLING SERVICE

Waste holders with dismantling needs can benefit from a comprehensive decommissioning service, including dismantling by a professional partner and waste packaging. Our dismantling service may be limited in some countries.

COLLECTIVE WASTE MANAGEMENT

Companies in India and the United States can become member of our overseas collective schemes. Our all-inclusive service covers waste management as well as consultancy, marketing and representation. To become member of PV CYCLE USA or PV CYCLE India, please contact join@pvcycle.org.



GLOBAL SERVICES

PREMIUM ASSOCIATED MEMBERSHIP

A marketing solution for companies promoting their environmental commitment.

TRAININGS & CONCEPT DEVELOPMENT

Various waste consultancy and training services for company-internal waste management and compliance programs.

GOVERNANCE

PV CYCLE gives contractual members the possibility to take an active stake in the governance of our organizations. Contractual members are members who have signed a membership contract with at least one of the PV CYCLE take-back schemes. For more information on the various governance levels, please contact your country manager or join@pvcycle.org.

OTHER SERVICES





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