

# CERTIFICATE

**TÜV NORD CERT GmbH**  
herewith declares that

**Jolywood (Taizhou) Solar Technology Co., Ltd.**  
Kaiyang Rd. Jiangyan Economic Development Zone  
Taizhou City, Jiangsu Province, 225500  
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: 2023-04-03

Valid until: 2028-04-02

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	P12.4-AA-02 Rev. 00 (IEC TS 62804-1:2015 modified)
Remark:	Test temperature: 85°C; Relative humidity: 85%; Test duration: 96 hours.
Registered No.:	44 780 23 406749 - 089
Manufacturer:	see Annex 1
Test Report No.:	492012351.001
File No.:	PVP12064/22P-04



**TÜV NORD CERT GmbH**  
**Certification Body**  
**Consumer Products**



Essen, 2023-04-03

Please also pay attention to the information stated overleaf.

**Manufacturer:**

Manufacturer 1: **Jolywood (Taizhou) Solar Technology Co., Ltd.**  
Kaiyang Rd. Jiangyan Economic Development Zone  
Taizhou City, Jiangsu Province, 225500, P.R. China

Factory inspection report no.: 862010439.004

Manufacturer 2: **FENGYANG JOY ENERGY TECHNOLOGY CO., LTD**  
88 East Yongqing Road, Economic Development Zone,  
Fengyang County, 233100 Chuzhou City, Anhui Province,  
P.R. China

Factory inspection report no.: 862010737.001

**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: **Double Glass PV Modules with 157.35mm to 158.75mm Mono n-type Bifacial Solar Cells:**

72 cells: JW-D72N-xxx (xxx=365-410, in steps of 5)

60 cells: JW-D60N-xxx (xxx=305-340, in steps of 5)

Remark: xxx indicates output power from the front side only

Maximum system voltage: 1500V

Fuse rating: 20A

Application class: Class A

Electrical protection class: Class II

Module types: **Double Glass PV Modules with 158.75mm Half-cut Mono n-type Bifacial Solar Cells:**

156 cells: JW-HD156N-xxx (xxx=425-455, in steps of 5)

144 cells: JW-HD144N-xxx (xxx=390-420, in steps of 5)

120 cells: JW-HD120N-xxx (xxx=325-350, in steps of 5)

Remark: xxx indicates output power from the front side only

Maximum system voltage: 1500V

Fuse rating: 20A

Application class: Class A

Electrical protection class: Class II

Module types: **Double Glass PV Modules with 166mm Half-cut Mono n-type Bifacial Solar Cells:**

144 cells: JW-HD144N-xxx (xxx=430-470, in steps of 5)

120 cells: JW-HD120N-xxx (xxx=360-390, in steps of 5)

Remark: xxx indicates output power from the front side only

Maximum system voltage: 1500V

Fuse rating: 30A

Application class: Class A

Electrical protection class: Class II



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Module types: **Double Glass PV Modules with 182mm Half-cut Mono n-type Bifacial Solar Cells:**  
156 cells: JW-HD156N-xxx (xxx=580-630, in steps of 5)  
144 cells: JW-HD144N-xxx (xxx=525-585, in steps of 5)  
120 cells: JW-HD120N-xxx (xxx=435-485, in steps of 5)  
132 cells: JW-HD132N-xxx (xxx=485-535, in steps of 5)  
108 cells: JW-HD108N-xxx (xxx=395-435, in steps of 5)  
Remark: xxx indicates output power from the front side only

Maximum system voltage: 1500V

Fuse rating: 30A

Application class: Class A

Electrical protection class: Class II

Module types: **Double Glass PV Modules with 182mm Half-cut Mono p-type Bifacial Solar Cells:**  
144 cells: JW-HD144P-xxx (xxx=525-555, in steps of 5)  
120 cells: JW-HD120P-xxx (xxx=435-460, in steps of 5)  
132 cells: JW-HD132P-xxx (xxx=485-505, in steps of 5)  
108 cells: JW-HD108P-xxx (xxx=395-415, in steps of 5)  
Remark: xxx indicates output power from the front side only

Maximum system voltage: 1500V

Fuse rating: 30A

Application class: Class A

Electrical protection class: Class II

Module types: **Double Glass PV Modules with 210mm Half-cut Mono n-type Bifacial Solar Cells:**  
120 cells: JW-HD120N-xxx (xxx=580-620, in steps of 5)  
132 cells: JW-HD132N-xxx (xxx=655-680, in steps of 5)  
Remark: xxx indicates output power from the front side only

Maximum system voltage: 1500V

Fuse rating: 30A

Application class: Class A

Electrical protection class: Class II



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Module types:	<b>Double Glass PV Modules with 210mm Half-cut Mono p-type Bifacial Solar Cells:</b> 120 cells: JW-HD120P-xxx (xxx=580-610, in steps of 5) Remark: xxx indicates output power from the front side only
Maximum system voltage:	1500V
Fuse rating:	30A
Application class:	Class A
Electrical protection class:	Class II

Remark:

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



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