



IEC 62716:2013

Photovoltaic (PV) modules

- Ammonia corrosion testing -

Confirmation of test results

VDE Renewables File Ref.: 10011/2017-40259

Applicant: Wuxi Suntech Power Co., Ltd.
12 Xin Hua Road, 214028 Wuxi City, China.

Product: Crystalline silicon Photovoltaic (PV)-Modules

Type:

A) STPXXX-24/Vfw,	STPXXX-24/Vfb	STPXXX-24/Vfm
STPXXX-24/Vfs,	STPXXX-24/Vfy	
B) STPXXX-20/Wfw,	STPXXX-20/Wfb	STPXXX-20/Wfm
STPXXX-20/Wfs,	STPXXX-20/Wfy	
C) STPXXXS-24/Vfw	STPXXXS-24/Vfb	STPXXXS-24/Vfm
STPXXXS-24/Vfs	STPXXXS-24/Vfy	
D) STPXXXS-20/Wfw	STPXXXS-20/Wfb	STPXXXS-20/Wfm
STPXXXS-20/Wfs	STPXXXS-20/Wfy	

XXX in the type replaces the power in watt and can be any number between: 290 – 350 for A), 255 - 285 for B), 305 - 370 for C), 265 - 320 for D)

Manufacturer: Wuxi Suntech Power Co., Ltd.

Standard: IEC 62716:2013, Ammonia corrosion testing

Test conditions

Hours including heating up:	8 h
NH ₃ -concentration (ppm):	6667
Chamber temperature:	60°C
Relative Humidity:	100 %
Hours including cooling:	16 h
NH ₃ -concentration (ppm):	0
Chamber temperature:	23°C
Relative Humidity:	75 %
No. of test cycles:	20
Total exposure hours:	480h



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Pass criteria

Power degradation: < 5%

Dry Insulation: > 40 MΩm²

Wet insulation: > 40 MΩm²

Ground continuity: < 0.1Ω

Bypass diode functionality: Shall be functional after test

Summary of test results:

Maximum power degradation: allowed max. 5 %
measured max. 0.86 %

The measured degradation is below the allowed degradation.

Dry insulation resistance: required min. 20.6 MΩ
measured >500 MΩ

The measured dry insulation resistance is above the limit.

Wet insulation resistance: required min. 20.6 MΩ
measured >500 MΩ

The measured wet insulation resistance is above the limit.


Ground continuity test: required max. 0.1Ω
measured max. 0.001Ω

Bypass diode functionality test: Still functional after test

The complete test results and the relevant bill of materials are given in Test Report No.: TRPVM-2017-40259-1.

VDE Renewables GmbH


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