Confirmation of Test Result

IEC 62716:2013
Ammonia corrosion testing of photovoltaic (PV) modules

Ref.: **TRPVM-2019- 40222**

Applicant: SOLARWATT GmbH, Maria-Reiche-Str. 2a, 01109 Dresden

Manufacturer: SOLARWATT GmbH, Maria-Reiche-Str. 2a, 01109 Dresden

Product: **Crystalline silicon Photovoltaic (PV)-Modules**

Standard: IEC 62716:2013, Ammonia corrosion test

Type:

Vision 60M
Vision 60M style
Vision 60M construct
Vision 60P style
EasyIn 60M style
Vision 60M (1500V edition)
Vision 60M style (1500V edition)

Test conditions

Hours including heating up:	8 h
NH3 -concentration (ppm):	6667
Chamber temperature:	60°C
Relative Humidity:	100 %
Hours including cooling:	16 h
NH3 -concentration (ppm):	0
Chamber temperature:	23°C
Relative Humidity:	75 %
Number of Cycles:	20
Total exposure:	480h

Pass criteria

Power degradation:	< 5%
Dry Insulation:	> 40 MΩm²
Wet insulation:	> 40 MΩm²
Ground continuity:	< 0.1Ω
Visual Inspection:	No findings which may affect safety.
Bypass diode functionality:	Shall be functional after test.

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Summary of test results:

Maximum power degradation:	required	max. 5 %
	measured	max. 0,2 %

The measured degradation is below the allowed degradation.

Dry insulation resistance:	required	24,10 MΩ
	measured	>9990 MΩ

The measured dry insulation resistance is above the limit.

Wet insulation resistance:	required	24.10 MΩ
	measured	>911 MΩ

The measured wet insulation resistance is above the limit.

Visual inspection:	No findings

Ground continuity test:	required	max. 0,1Ω
	measured	max. 0,0008Ω

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-2019-40222-2

VDE Renewables GmbH

Ruben Schönfelder ***Arnd Roth***

63755 Alzenau, 2021-08-06