IEC 62716:2013

Ammonia corrosion testing of photovoltaic (PV) modules

Confirmation of test results

Ref.:	**10036/2020-40524**	
Applicant:	**LG Electronics Inc.** **168, Suchul-daero, Gumi-si, Gyeongsangbuk-do,** **730-903, South Korea**	
Product:	**Crystalline Silicon Photovoltaic (PV)-Modules**	
Type:	**A) LGXXXN2W-E6** **B) LGXXXN2W-E6.AW5** **C) LGXXXN2T-E6** **D) LGXXXN1C-E6** **E) LGXXXN1W-E6** **F) LGXXXN1K-E6** **G) LGXXXN1T-E6** XXX in the type replace the power in Watt and can be any number between: 430 – 470 for A), B), 420 – 440 for C), 355 – 390 for D), E), 350 – 380 for F) and 345 – 365 for G).	
Manufacturer:	LG Electronics Inc.	
Standard:	IEC 62716:2013	
Test conditions:	As given in IEC 62716:2013	
1st test section:	Testing time	8 h
	NH_3 Concentration:	6667 ppm
	Chamber temperature:	60°C
	Rel. humidity:	100%
2nd test section:	Testing time	16 h
	NH_3 Concentration:	0 ppm
	Chamber temperature:	25°C
	Rel. humidity:	36 %
Total testing time		480 h (20 cycles)

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Pass criteria

Visual inspection:	No findings which may affect safety.
Power degradation:	<5 %
Dry Insulation:	>40 MΩm²
Wet insulation:	>40 MΩm²
Bonding path resistance:	<0,1 MΩ
Bypass diode functionality test:	Bypass diodes shall remain functional

Summary of test results:

Visual inspection: No findings which affect safety.

Maximum power degradation:	allowed	<5 %
	measured	0,92 %

The measured degradation is below the allowed degradation.

Dry insulation resistance:	required	≥18,2 MΩ
	measured	min. 999 MΩ

The measured dry insulation resistance is above the limit.

Wet insulation resistance:	required	≥18,2 MΩ
	measured	min. 999 MΩ

The measured wet insulation resistance is above the limit.

Bonding path resistance:	required	<0,1 MΩ
	measured	<0,01 MΩ

The measured resistance is below the limit.

Bypass diode functionality test: Bypass diodes remain functional

The complete test results and the related bills of materials are given in the Test Reports No. TRPVM-2020-40524-1 and TRPVM-2020-40525-1.

VDE Renewables GmbH

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