IEC 61701:2011
Salt mist corrosion testing of photovoltaic (PV) modules
Confirmation of test results

VDE Renewables File Ref.: 10045/2017-40085

Applicant: Sunman (Hong Kong) Limited
Room 1401, 14/F., World Commerce Centre, Harbour City, 7-11
Canton Road, Tsimshatsui, Kowloon, Hong Kong, P.R. China

Product: Crystalline silicon Photovoltaic (PV)-Modules

Type:

A) SMDXXXM-6X12	A) SMDXXXP-6X12	A) SMAXXXM-6X12
A) SMAXXXP-6X12	B) SMDXXXM-6X10	B) SMDXXXP-6X10
B) SMAXXXM-6X10	B) SMAXXXP-6X10	C) SMDXXXM-6X06
C) SMAXXXM-6X06	D) SMDXXXM-4X12	D) SMDXXXP-4X12
D) SMAXXXM-4X12	D) SMAXXXP-4X12	E) SMDXXXM-4X10
E) SMDXXXP-4X10	E) SMAXXXM-4X10	E) SMAXXXP-4X10
F) SMDXXXM-4X09	F) SMAXXXM-4X09	G) SMDXXXM-4X06
G) SMDXXXP-4X06	G) SMAXXXM-4X06	G) SMAXXXP-4X06
H) SMDXXXM-4X04	H) SMAXXXM-4X04	I) SMDXXXM-2X12
I) SMDXXXP-2X12	I) SMAXXXM-2X12	I) SMAXXXP-2X12
J) SMDXXXM-2X10	J) SMDXXXP-2X10	J) SMAXXXM-2X10
J) SMAXXXP-2X10	K) SMDXXXM-2X06	K) SMDXXXP-2X06
K) SMAXXXM-2X06	K) SMAXXXP-2X06	L) SMDXXXM-2X04
L) SMAXXXM-2X04		

XXX in the type replaces the power in watt and can be any number between:

275 - 340 for A)	230 - 280 for B)	140 - 170 for C)
185 - 225 for D)	155 - 190 for E)	140 - 170 for F)
90 - 110 for G)	60 - 75 for H)	90 - 110 for I)
75 - 95 for J)	45 - 55 for K)	30 - 35 for L)

Manufacturer: Sunman (Hong Kong) Limited

Standard: IEC 61701:2011, Salt mist corrosion test

Test conditions

Severity level:	1
Testing time:	672 hrs
Chamber temperature:	40°C
Relative Humidity:	93 %
Mist pH level:	7

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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:	required	max. 5 %
	measured	max. +0.06 %

The measured degradation is below the allowed degradation.

Dry insulation resistance:	required	19.8 MΩ
	measured	>500 MΩ

The measured dry insulation resistance is above the limit.

Wet insulation resistance:	required	19.8 MΩ
	measured	>500 MΩ

The measured wet insulation resistance is above the limit.

Visual inspection:	No findings	
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-2017-40085-3

VDE Renewables GmbH

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63755 Alzenau, 2017-04-27

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