



TS IEC 62804-1:2015

Photovoltaic (PV) Modules - Test Methods for the detection of potential-induced degradation

Part 1: Crystalline silicone Confirmation of test results

VDE Renewables File Ref.: 10045/2017-40085-1

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) SMAXXXM-6X12	B) SMDXXXM-6X10
B) SMAXXXM-6X10	C) SMDXXXM-6X06	C) SMAXXXM-6X06
D) SMDXXXM-4X12	D) SMAXXXM-4X12	E) SMDXXXM-4X10
E) SMAXXXM-4X10	F) SMDXXXM-4X09	F) SMAXXXM-4X09
G) SMDXXXM-4X06	G) SMAXXXM-4X06	H) SMDXXXM-4X04
H) SMAXXXM-4X04	I) SMDXXXM-2X12	I) SMAXXXM-2X12
J) SMDXXXM-2X10	J) SMAXXXM-2X10	K) SMDXXXM-2X06
K) SMAXXXM-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: TS IEC 62804-1:2015

Test conditions

Testing time:	192 h
Chamber temperature:	85°C
Relative Humidity:	85 %
Potential to ground:	- 1000 V

Pass criteria

Power degradation:	< 5%
Dry Insulation:	> 40 MΩm ²
Wet insulation:	> 40 MΩm ²



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Summary of test results:

Maximum power degradation:	required	max. 5 %
	measured	max. 0.77 %

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

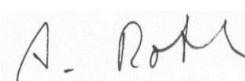
The measured wet insulation resistance is above the limit.

Visual inspection: No findings

The complete test results are given in Test Report No.: TRPVM-2017-40085-1.

VDE Renewables GmbH


Roland Herbert


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63755 Alzenau, 2018-01-15