

IEC 62716:2013

Ammonia corrosion testing of photovoltaic (PV) modules

Confirmation of test results

Ref.:

10018/2021-40119

Applicant:REC Solar Pte Ltd20, Tuas South Avenue 14, 637312 Singapore

Crystalline Silicon Photovoltaic (PV)-Modules

Type:

Product:

A) RECxxxTP2 A) RECxxxTP2M A) RECxxxTP3M B) RECxxxTP2S 72 B) RECxxxTP2SM 72 B) RECXXXNP 72 B) RECxxxTP3SM 72 C) RECxxxTP2S 72 XV C) RECxxxTP2SM 72 XV C) RECxxxNP 72 XV C) RECxxxTP3SM 72 XV D) RECxxxNP E) RECxxxAA F) RECxxxAA 72 G) RECxxxAA 72 XV H) RECxxxTP Plus I) RECxxxNP Plus

- J) RECxxxTP4
- K) RECxxxAA Pure

REC TwinPeak 2 Series REC TwinPeak 2 Mono Series REC TwinPeak 3 Mono Series REC TwinPeak 2S 72 Series REC TwinPeak 2S Mono 72 Series **REC N-Peak 72 Series** REC TwinPeak 3S Mono 72 Series REC TwinPeak 2S 72 XV Series REC TwinPeak 2S Mono 72 XV Series **REC N-Peak 72 XV Series** REC TwinPeak 3S Mono 72 XV Series **REC N-Peak Series REC Alpha Series REC Alpha 72 Series REC Alpha 72 XV Series REC TwinPeak Plus Series REC N-Peak Plus Series REC TwinPeak 4 Series REC Alpha Pure Series**

xxx in the type number replaces the power in Watt at STC and can be any number between: 260 - 340 for A), 310 - 405 for B) & C), 295 - 335 for D), 340 - 380 for E), 420 - 450 for F) & G), 340 - 365 for H), 335 - 370 for I), 355 - 380 for J), 385 - 410 for K)

Optional the type can also include at the end any of the following suffixes, or a combination of these: ECO, BLK, BLK2, IQ, Black

Manufacturer:Solar Power Technology Co., Ltd.Standard:IEC 62716 ed.1.0Test conditions:As given in IEC 62716 ed. 1.01st test section:Testing time8 hNH3 Concentration:6667 ppmChamber temperature:60°CRel. humidity:100%

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2nd test section:	Testing time	16 h		
	NH ₃ Concentration:	0 ppm		
	Chamber temperature:	23°C		
	Rel. humidity:	70 %		
Total testing time		480 h (20 cycles)		
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 Ω		
	Bypass diode functionality	test: Bypass diodes shall remain functional		
Summary of test results:				
Visual inspection:	No findings which affect safety.			

Maximum power degradation:	allowed measured	< 5 % max. 0,85 %

The measured degradation is below the max. allowed degradation.

Dry insulation resistance:	required	≥20,00 MΩ
	measured	min. 500 MΩ

The measured dry insulation resistance is above the min. required insulation resistance.

Wet insulation resistance:	required	≥20,00 MΩ
	measured	min. 500 MΩ

The measured wet insulation resistance is above the min. required wet insulation resistance.

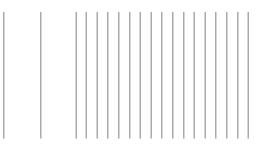
Bonding path resistance:	required	< 0,1 Ω
	measured	max. 0,01 Ω

he measured bonding path resistance is below max. allowed resistance.

Bypass diode functionality test: Bypass diodes remain functional.

The complete test results and the related bill of materials are given in the Test Report No. TRPVM-2021-40119-7





The overview of the already approved modules with the approved bill of materials is given in Annex 1 to 10018/2021-40119-7, dated 2021-06-23

VDE Renewables GmbH

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63755 Alzenau, 2021-06-23