



IEC 60068-2-68 Blowing Sand Test Lc 2

Ref.: 5005440-3972-0001/198067

Applicant: SolarWorld AG
Martin-Luther-King-Str. 24, 53175 Bonn

Product: Crystalline Photovoltaic (PV)-Modules

Type: A) Sunmodule Plus SW XXX mono Y
A) Sunmodule Plus SW XXX poly Y
B) Sunmodule Plus SW XXX mono Y
B) Sunmodule Plus SW XXX poly Y
C) Sunmodule Plus SW XXX Compact mono Y
C) Sunmodule Plus SW XXX Compact poly Y
D) Sunmodule SW XXX XL mono Y
D) Sunmodule SW XXX XL poly Y
E) Sunmodule Plus SW XXX Vario poly Y
F) Sunmodule Plus SW XXX Compact mono Y
G) Sunmodule Protect SW XXX mono Y
G) Sunmodule Protect SW XXX poly Y
H) Sunmodule Plus SW XXX mono Y
H) Sunmodule Plus SW XXX poly Y

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

135 – 195 for A), 200 – 275 for B), G), H), 130 – 170 for C), F), 260 – 320 for D), 184 – 204 for E)

Y in the type replaces a potential suffix and can be black.

Manufacturer: SolarWorld AG

Standard: IEC 60068-2-68, Test method Lc 2 plus
TechnoLab Sand Test PA03/01 and AECTP 300,
method 313

Test sequence and pass/fail criteria: Based on IEC 61701ed.2

Average particle size: 380µm

Concentration: (2,5 ± 0,5) g/m³

Sand composition: ASIA Desert Rub'al Khali, Saudi Arabia, 97% SiO₂

Wind speed: 9 m/s

Testing time: 6 h (4 positions, 90 minutes testing time each)





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Summary of test results:

Maximum power degradation: required max. 8 %
measured 1,51 %

The measured degradation is within the measurement error.

Dry insulation resistance: required 23,81 M Ω
measured >500 M Ω

The measured dry insulation resistance is far above the limit.

Wet insulation resistance: required 23,81 M Ω
measured >500 M Ω


The measured wet insulation resistance is far above the limit.

Visual inspection: No findings

The complete test results are given in Test Report No.: Report_ET2_198067.

VDE Prüf- und Zertifizierungsinstitut GmbH
VDE Testing and Certification Institute
Fachgebiet ET2 / Section ET2


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