



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
- I) Sunmodule SW XX poly RMA
- J) Sunmodule SW XX poly RGA
- K) Sunmodule SW XX poly RNA
- L) Sunmodule SW XX mono RHA
- M) Sunmodule SW XXX poly RIB
- N) Sunmodule SW XXX poly RGP
- O) Sunmodule SW XXX poly R6A

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

135 – 195 for A), 200 – 300 for B), G), H), 130 – 170 for C), F), 260 – 360 for D), 184 – 240 for E), 50 – 55 for I), 50 for J), 80 - 85 for K), 80 for L), 100 for M), N), 140 – 160 for O)

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





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Wind speed: 9 m/s

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

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 MΩ
measured >500 MΩ

The measured dry insulation resistance is far above the limit.

Wet insulation resistance: required 23,81 MΩ
measured >500 MΩ

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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