



Confirmation of Test Result

IEC CD 61215-1: Ed.2.0, LeTID Detection

Photovoltaic (PV) Modules - Test methods for the detection of Light and elevated Temperature Induced Degradation LeTID

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|------------------------------------|---|--------------------|
| Ref.: | 10002_2020-40249 | |
| Applicant: | aleo solar GmbH, Marius-Eriksen-Straße 1, 17291 Prenzlau | |
| Manufacturer: | aleo solar GmbH, Marius-Eriksen-Straße 1, 17291 Prenzlau | |
| Product: | Crystalline silicon Photovoltaic (PV)-Modules | |
| Standard: | 82/1453/CD:2018-07-61215-1: Ed.2.0 82/1454/CD:2018-07-61215-1-1: Ed.2.0 82/1458/CD:2018-07-61215-2: Ed.2.0 | |
| Type: | S19YXXXZ, S79YXXXZ, S59YXXXZ, P19YXXXZ, L19YXXXZ, L79YXXXZ, S25YXXXZ, S75YXXXZ, P25YXXXZ, P75YXXXZ, X19YXXXZ, X59YXXXZ, X79YXXXZ, X25YXXXZ, X55YXXXZ, X75YXXXZ, S23YXXXZ, S63YXXXZ, S83YXXXZ, P23YXXXZ, S21YXXXZ, S61YXXXZ, P21YXXXZ, S81YXXXZ, X23YXXXZ, X63YXXXZ, X83YXXXZ, X21YXXXZ, X61YXXXZ, X81YXXXZ | |
| Test conditions | Cycle time: | 162 h |
| | Chamber temperature: | 75 °C |
| | Applied current | $I_{sc} - I_{mpp}$ |
| Pass criteria | Power degradation after LeTID*: | < 5 % |
| Summary of test results M1: | Number of cycles needed for stabilization | 3 |
| | Power before testing | 329,7 W |
| | Power after 3 cycles LeTID | 324,7 W |
| | Measured degradation | 1,52 % |
| | $P_{max} - P_{min} / P_{average}$ | 0,64 % |
| Summary of test results M2: | Number of cycles needed for stabilization | 3 |
| | Power after LID | 329,8 W |
| | Power after 3 cycles LeTID | 324,8 W |
| | Measured degradation | 1,49 % |
| | $P_{max} - P_{min} / P_{average}$ | 0,49 % |
| Maximum power degradation: | allowed* | max. 5 % |
| | measured | max. 1,52 % |

The measured degradation is below the allowed degradation.

* reproducibility of 1 % acc. IEC 61215-1-1 not included

The complete test results and the relevant bill of materials are given in files "Report_FUE20731" as well "BOMLeTID".

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