

## **ABOUT THE HOT SPOT STABILITY OF AGED SILICON CRYSTALLINE PV-MODULES AND MATERIALS**

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### **Abstract/Summary:**

Photovoltaic modules are stressed in indoor climate chambers to determine long-term stability. Generally, aging tests are performed to study the loss of power and energy yield but not the operating stability in reverse bias. That should be analysed as well, because beyond the decrease of power, most of the stressed modules are also showing micro cracked cells. Therefore, this paper presents the electrical and thermal properties of partly shaded modules after aging tests. The tolerance of PV modules towards shading and reverse bias is studied as a function of long-term stability exposure of the modules and the aging of the materials – such as the influence of penetrating humidity. Finally, the paper presents a risk analysis of the hot spot stability of aged silicon crystalline photovoltaic modules and its materials.

**For more information on the topic please contact the R&D Team of PI Berlin.**

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