

# Provides practical guidance on the latest quality assurance and accelerated stress test methods for improved long-term performance prediction of PV modules

This book has been written from a historical perspective to guide readers through how the PV industry learned what the failure and degradation modes of PV modules were, how accelerated tests were developed to cause the same failures and degradations in the laboratory, and then how these tests were used as tools to guide the design and fabrication of reliable and long-life modules.

*Photovoltaic Module Reliability* starts with a brief history of photovoltaics, discussing some of the different types of materials and devices used for commercial solar cells. It then goes on to offer chapters on: Module Failure Modes; Development of Accelerated Stress Tests; Qualification Testing; and Failure Analysis Tools. Next, it examines the use of quality management systems to manufacture PV modules. Subsequent chapters cover the PVQAT Effort; the Conformity Assessment and IECRE; and Predicting PV Module Service Life. The book finishes with a look at what the future holds for PV.

- A comprehensive treatment of current photovoltaic (PV) technology reliability and necessary improvement to become a significant part of the electric utility supply system
- Well-documented with experimental and practical cases throughout, enhancing relevance to both scientific community and industry
- Timely contribution to the harmonization of methodological aspects of PV reliability evaluation with test procedures implemented to certify PV module quality
- Written by a leading international authority in PV module reliability

*Photovoltaic Module Reliability* is an excellent book for anyone interested in PV module reliability, including those working directly on PV module and system reliability and preparing to purchase modules for deployment.

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