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ABSTRACT

Modern photovoltaic (PV) module manufacturers offer a 25 year warranty. It benefits the PV industry to have a present state maximum power (P_{mp}), mismatch, and degradation analysis performed on modules exposed to real world conditions for long periods of time. In an effort to acquire such data, a sample set of modules and sub strings from PV-USA (ARCO, Solarix, AstroPower, and Advanced Photovoltaic Systems (APS)) arrays are analyzed. The technologies of these PV arrays are polycrystalline-Si, thin-film bifacial polycrystalline, polycrystalline film, and amorphous-Si, respectively. Data is collected at PV-USA using a Solmetric PVA-600 PV analyzer and sensor kit, provided by PV Evolution Labs (PVEL), as well PVEL's Electroluminescence and Wet HiPot testing equipment.



Photovoltaics for Utility Scale Applications (PV-USA) site, located in Davis, CA.

