Tech Note

SunEdison Modules Certified Against Desert and Marine Salt Mist Corrosion

SILVANTIS® MODULES PASS HIGHEST STRESS RATING UNDER IEC 61701

Solar modules must operate in tough environmental conditions, with some of the most challenging installations located in marine and desert climates. Salt mist can corrode important components on solar modules, including frames, glass surfaces, and junction boxes. This corrosion can reduce the output of modules that aren't resistant, weaken the mechanical strength of the frame, and expose module components to additional moisture that can cause internal damage if the corrosion persists.

SunEdison's Silvantis solar modules have received salt mist corrosion certifications for Level 1 (marine conditions) and Level 6 (desert conditions) under the IEC 61701 Salt Mist Corrosion Tests. These demanding, independent industry certifications apply to all Silvantis products and demonstrate the ability of SunEdison modules to deliver consistent, reliable, long-term performance when installed in marine environments, coastal areas and desert climates.

BUILT FOR RELIABLE PERFORMANCE

SunEdison's Silvantis solar modules are engineered for reliable, long-term performance in even the harshest environments. SunEdison carefully selects and validates the most durable and proven materials for module construction, and applies over 50 years of manufacturing experience to assemble modules under the most stringent manufacturing quality systems. Anodized aluminum alloy frames, silicon-sealed diodes and high-temperature lamination ensure modules are impervious to corrosion and moisture.

A DEMANDING TESTING ENVIRONMENT

Silvantis solar modules are tested under both marine conditions (Level 1) and desert conditions (Level 6). Over an eight-week period, solar modules are sprayed with a five percent sodium chloride solution and stored in a controlled environment of 40 °C and over 90 percent relative humidity. The Level 1 test subjects modules to four cycles of exposure over 680 hours to simulate marine conditions. The Level 6 test is the most stringent: extended eight times longer than the standard desert environment test, which includes a combination of humidity chamber and dry storage exposure, modules must endure 32 cycles of exposure over 768 hours. After prolonged exposure to each testing condition technicians measure the electrical integrity and power output of the solar modules.

These tests were developed by the International Electrotechnical Commission (IEC), a global standards organization. Its objective is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields.

DEPENDABLE PERFORMANCE IN HARSH CONDITIONS

SunEdison solar technology is designed with rugged, high-quality components to deliver robust performance and maximum return on investment for decades. Successful certification under this industry standard underscores SunEdison's commitment to providing customers with durable, reliable, bankable products for the long term.

ABOUT SUNEDISON

SunEdison is the leading provider of solar energy services, serving business, public sector, utility, and residential customers. SunEdison is dedicated to transforming lives by delivering economical, clean, renewable energy to communities around the globe. Visit www.sunedison.com for more information.

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