Boeing Subsidiary Spectrolab Sets World Record for Solar Cell Efficiency

Highest ever energy conversion efficiency without solar concentration

Increased efficiency for ground-based applications

SYLMAR, Calif., April 9, 2013 -- A Spectrolab solar cell recently set a world record by converting more energy from the sun into electricity than any other ground-based solar cell without solar concentration.

The Boeing [NYSE: BA] subsidiary's achievement in ground-based solar cell efficiency was verified by the U.S. Department of Energy's National Renewable Energy Laboratory in Golden, Colo.

The cell converted 37.8 percent of solar energy using a new class of high-efficiency multi-junction solar cell, created from two or more materials and leveraging Boeing technology that makes semiconductor materials more reliable. The record was set without concentration, the common practice of having lenses or mirrors focus solar rays on the cells.

"We expect this solar cell technology will have significant benefits for space, ground-based, and sensor applications," said Troy Dawson, president of Spectrolab.

Spectrolab believes this solar cell technology can attain higher levels of efficiency, "possibly more than 45 percent even under low concentrations," according to Nasser Karam, the company’s vice president for advanced technology.

Spectrolab, which is part of the Boeing Defense, Space & Security unit, is the world's leading merchant supplier of high-efficiency multi-junction solar cells and panels for concentrated photovoltaic and spacecraft power systems. Spectrolab offers sensors and solar simulators, in addition to being the world’s leading provider of airborne searchlights.

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