Integra Solar PV System will bring Solar Electricity to the Mass Market

SunSil Photovoltaic Products is launching the next generation of solar PV systems for the commercial and residential markets at InterSolar (9-11 June 2010) that will increase yields for its owner by up to 30% or more as well as reducing initial costs, making solar electricity significantly more financially appealing.

The problem with the current architecture of a standard solar PV system is that it is grossly ineffective in maximizing yield under different condition throughout the day. In addition, due to the fact that it is a distributed architecture consisting of several different components from panel to the wiring and on to the inverter, the ability to cost-effectively manufacture and assemble everything into one unit and install in a few steps on the roof has not been possible until now. The difference in the architecture of the SunSil Integra Solar PV System is that SunSil integrates all of the components of a standard PV system into one 230V 300W AC module using embedded electronics, micro-inverter and software to harvest the maximum amount of electricity from the sun in any condition and throughout the day from sunrise to sunset.

“We have solved the problem with the current solar PV system architecture, which requires the installer spend time putting together a custom solution for every installation from a myriad of panels, inverters, mounting brackets and wiring, by providing a truly integrated “plug-and-play” system that can be easily installed onto the roof of a home or commercial building at half the cost of time and materials,” explains Erik Hansen, CEO of SunSil. “We chose the name ‘Integra’ because it is the short version of integration and integration is the basis for our whole philosophy at SunSil. It removes all of the existing complexity, replacing it with elegant “plug-and-play” units that can be assembled into a complete array on a customer’s home or commercial facility by simply plugging them together. Sun in and AC out. It’s that simple. I believe that this is the breakthrough that will bring solar electricity to the mass market by finally making it simple and cost effective, and thus kick-starting the move to practical green electricity for everyone.”

Peak performance at all times
Current solar panels are made from ‘strings’ of solar cells, i.e. they are wired up in series but, if one of the cells is weaker or shaded, the output of the whole string can drop significantly. Sometimes, a weak cell can burn out altogether rendering the entire string useless, compromising the entire panel. SunSil laser cuts each six inch square cell into microcells. Each is monitored and dynamically controlled by SunSil’s patented Dynamic Microcell Optimisation technology to provide the optimum output for the whole Integra module. Leaves, snow, shadowing, moss, and bird droppings are no longer a problem as the affected microcells are switched out leaving the rest operating at maximum efficiency, enabling the Integra to gather up to 30% more electricity per annum than current designs.

Reduced complexity reduces costs
SunSil's integrated architecture means that the Integra can be assembled in few steps with the use of a fully-automated and high-throughput manufacturing line with 4-6 times the output of standard PV module assembly lines being used by many module manufacturers in the world today. "We are bringing to the solar industry the same benefits of mass production, reliability and standardisation that Henry Ford brought to the car industry," adds Erik Hansen. Initial production of Integras starts in Q4 2010 with volume in Q1 2011, costing around €900 each. The units are currently undergoing certification by Intertek.

Further information on SunSil at www.sunsil.dk [1]
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