

Flexible Photovoltaics for Your Advantage



Solar Energy – The sun really is green

Ever increasing carbon dioxide emissions and their impact on climate changes as well as rising energy costs and diminishing fossil resources necessitate a shift to more sustainable and ecologically sound energy resources.

Because photovoltaic converts sun light directly into electrical power, this technology offers important advantages compared to other renewable energies, such as silent operation, no moving parts, zero emission, no storage of hazardous fuels, long lifetime, low maintenance, no operating costs and unattended operation.

Many European governments promote the installation of photovoltaic systems by offering special feed-in tariffs and/or investment incentives. Under certain circumstances subsidies from the European Structural Fond can be obtained.



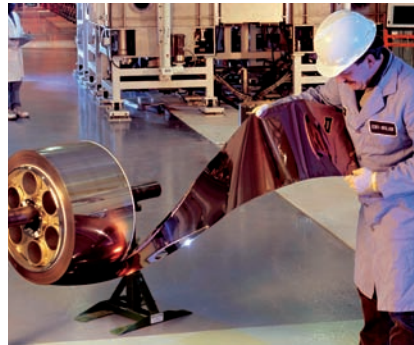
UNITED SOLAR OVONIC – Thin film technology at its best

UNITED SOLAR OVONIC is the world's largest manufacturer of triple-junction amorphous-silicon solar panels. Founded in 1990 we offer years of experience in photovoltaics. As a wholly-owned subsidiary of the American technology leader in renewable energies Energy Conversion Devices, Inc. (ECD) (Nasdaq: ENER) holding nearly 1000 patents, we can draw on extensive and fundamental know-how from materials and production technology to the final product. Together with ECD, we have been selling products for more than 20 years.

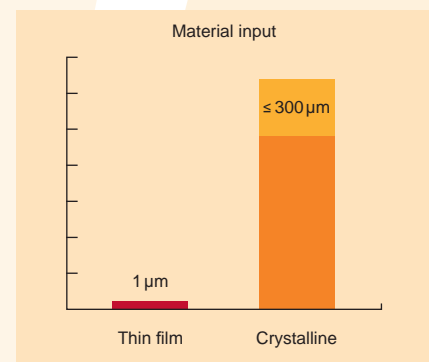
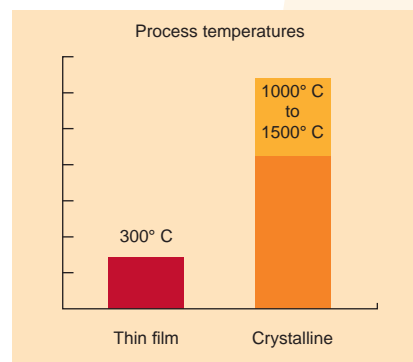
Our Innovative Technology – Good for you and the environment

UNI-SOLAR® thin film solar cells are made in a roll-to-roll vacuum deposition process on a continuous roll of stainless steel, exceptionally suitable for high volume production.

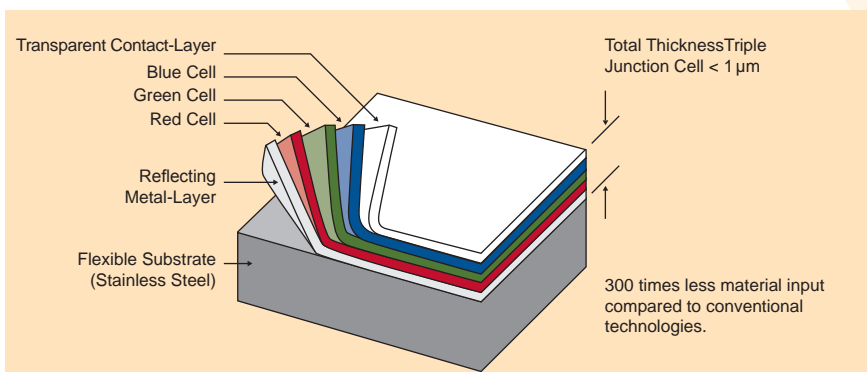
Because thin film cells can be up to 300 times thinner than crystalline solar cells, less material is required. The vacuum deposition process uses lower process temperatures leading to lower energy consumption during production. Therefore, compared to conventional crystalline PV products UNI-SOLAR® thin film solar cells offer a better energy balance, providing a higher contribution to the protection of the environment.



UNI-SOLAR®: Efficient and ecological production due to lower material and energy input



Cross-Section of the UNI-SOLAR®-Triple-Junction-Technology



Each UNI-SOLAR® PV-module utilizes the unique Triple-Junction thin film silicon solar cells, where the blue, green and red light of the sun is absorbed in different layers of the cell yielding unprecedented performance. This light spectrum splitting capability is the key to higher efficiency, especially at lower insolation levels and under diffused light.

Take Your Chance – Product advantages for your benefit



Flexible

Flexible UNI-SOLAR® PV-laminates offer freedom of design to architects as they can even conform to curved surfaces and hence are meeting the increasing demand for aesthetically pleasing building integrated PV (BIPV).



Lightweight

Lightweight UNI-SOLAR® PV-laminates are particularly suited for retrofitting of existing buildings or applications, where additional weight and/or wind load are critical to the statics of a building or structure.



No-Glass

No Glass UNI-SOLAR® PV-laminates in ground-mounted PV installations reduce sub-construction requirements and total system costs substantially.



Durable

Durable UNI-SOLAR® PV-products encapsulated in UV stabilized, weather-resistant polymers have proven themselves over decades under the most extreme conditions imaginable, including satellites, ocean buoys and military applications.

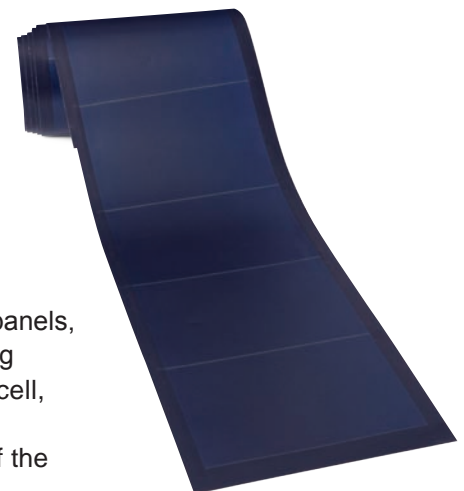


UNI-SOLAR® PV Products – The right solution for every application

UNI-SOLAR® PV Products are offered in the form of flexible laminates for building integrated PV solutions.

Flexible UNI-SOLAR® PV-laminates can be bonded to conventional metal roofing panels, single-ply membranes, modified bitumen roofing materials and others. The resulting modules are exceptionally durable. By-pass diodes are connected across each cell, allowing the modules to produce power even when partially shaded or soiled.

UNI-SOLAR® PV Products come with a 20 year/80 % warranty on power output of the Rated Power (at Standard Test Conditions).





Shadow Tolerant

Shadow tolerant
UNI-SOLAR® PV-products offer higher outdoor performance in low and diffuse light conditions due to higher absorption of light in the blue wavelength range. Our products deliver power even when partially shaded or soiled.



High Temp Performance

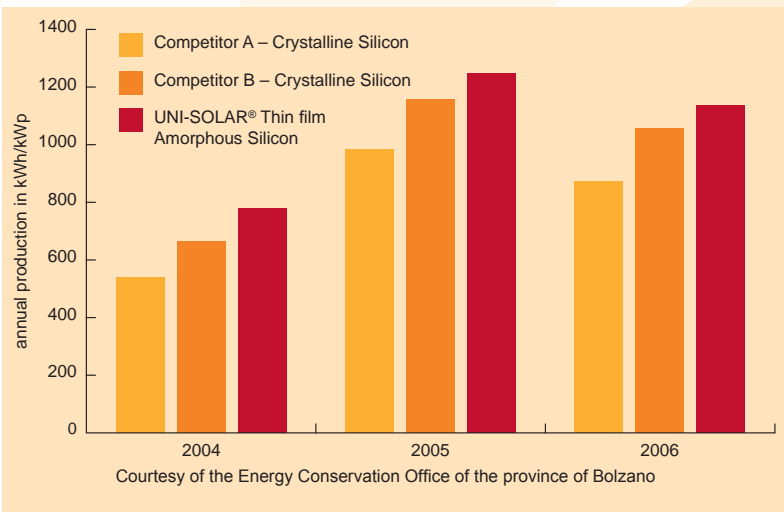
UNI-SOLAR® PV-products render better energy yield at high module temperatures and in warm climates. Under real outdoor conditions, module temperature can be up to 80° C, especially if they are building integrated and directly in the sun. At these temperatures UNI-SOLAR® PV-products can yield up to 20 % more electricity compared to conventional crystalline solar modules of the same power rating.



More kWh – higher RoI

UNI-SOLAR® PV-products achieve higher kWh energy output per Wp installed than most conventional crystalline products. Make the most out of your photovoltaic investment!

Annual Energy Yield of different Technologies, Bolzano, Italy



Get In Touch – Start generating your own pollution-free energy now

Your United Solar Ovonic team at your disposal

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