

Innovative, powerful, beautiful

PowerMax by AVANCIS combines performance with aesthetics. Beneficial features for success in the Italian market. “Italians have a great affinity for beauty. PowerMax is a best-performance thin-film module with high-end design”, says Hartmut Fischer, CEO of AVANCIS.



The factory of AVANCIS in Torgau currently has an annual production capacity of 20 MW.

Photos: AVANCIS

“Italy’s market is highly attractive for us. We are expecting that the rapid development will continue and that we will see an accelerated market growth”, says Hartmut Fischer.

AVANCIS from Torgau in Germany – a subsidiary of solar glass producer Saint-Gobain – specializes in the development and manufacturing of thin-film PV modules on the basis of copper-indium-gallium-selenide (CIGS). The modules are primarily designed for rooftop installation. The factory of AVANCIS in Torgau currently has an annual production capacity of 20 MW. The production is highly automated and runs in four-shift operation seven days a week. An experienced team of over 150 fab and HQ members is working at this site, which is located near Leipzig. AVANCIS is currently building a second facility for the production of CIS thin-film modules in Germany. The ultra-modern facility will have a production capacity of 100 MW per year. AVANCIS will manufacture the 3rd generation of its solar modules there. The new generation is a further development based on the already established PowerMax module series. AVANCIS also operates a research and development department and a fab planning department in Munich. The modules are distributed through wholesalers in the Netherlands, Spain, Italy, France and Germany.

AVANCIS’ mission is offering aesthetically appealing high-performance modules. Only recently, the company was able to announce a new efficiency world record: with a 30 x 30 cm fully-encapsulated solar module, AVANCIS achieved an efficiency of 15.1 %. The results were confirmed by the independent National Renewable Energy Laboratory (NREL), Golden, Colorado/USA.

“Our world record proves that CIGS is the most efficient of the thin-film technologies and that we are able to achieve unchallenged manufacturing and technical superiority with our patented two-step production process”, says Dr. Franz Karg, CTO of AVANCIS. “Since the production start in October 2008, we have raised the efficiencies for our modules in the series production from initially 9 % to meanwhile 11 %.”

AVANCIS’ efficiency record was achieved with a module processed with lab equipment. In order to

make sure that the record can be transferred from the research and development department to industrial scale, the researchers only employ processes and materials suitable for series production.

The module PowerMax by AVANCIS features excellent shading tolerances. Even under diffuse light or poor weather conditions, CIGS modules achieve exceptional efficiency values. But also when solar radiation levels are ideal, the modules allow for highest efficiencies as the CIGS absorber converts broader light spectrums into charge carriers than comparable thin-film technologies. In combination with the specific cell design, the module size allows maintaining high performance rates even when the sky is cloudy or luminosity is low. The bypass diode ensures that the entire string continues to function even if one module is shaded.

However, the PowerMax module is not only characterized by cost effectiveness and high performance. Many customers are also attracted by the appealing aesthetics. With the uniform black appearance, a frame made of black anodised aluminium and cells with an elegant pinstripe look, the PV system offers an appealing sight on every rooftop.

The mounting clamps of the modules are concealed in the shadow gap, guaranteeing an aesthetically appealing installation. “Italians have a great affinity for beauty. PowerMax is a best-performance thin-film module with high-end design”, emphasizes Fischer. “I have no doubt that we will be convincing to home owners and business operators alike.”



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