

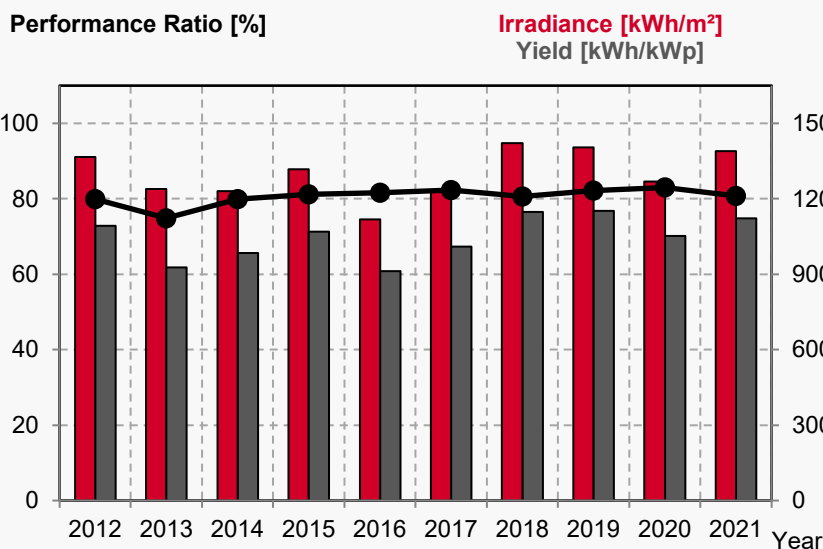
## AVANCIS demonstrates ten years of successful performance monitoring for its CIGS thin-film solar modules

Stable energy yield of a ground-mounted system with *PowerMax* solar modules independently confirmed by the Fraunhofer Institute for Solar Energy Systems ISE. SKALA monitoring system shows same behavior for facade applications.

### Torgau/Munich, May 9, 2022

AVANCIS, leading manufacturer of premium class CIGS solar modules, demonstrates stability of its CIGS thin-film solar modules regarding energy yield and performance ratio in a ground-mounted solar power plant. This is confirmed by the independent monitoring of the performance characteristics of the *PowerMax* modules by the Fraunhofer ISE Institute over a duration for ten years.

"A reliable long-term stable energy yield is one of the key factors for the so-called bankability of solar modules," explains Dr. Thomas Dalibor, Director CTO of AVANCIS GmbH. "For this purpose, we operate our own reference plants for different applications of our thin-film PV modules, but we also have plants monitored by independent institutes. The 631 kWp ground-mounted system in Znojmo, Czech Republic, for example, has been monitored for ten years by the Fraunhofer ISE Institute with regard to energy yield and performance ratio."

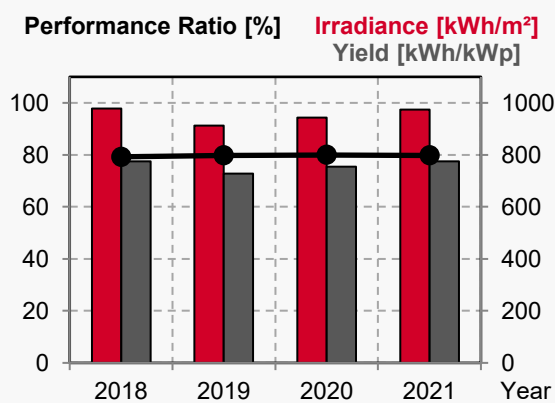


### *PowerMax* at a ground-mounted plant in Znojmo, Czech Republic

The diagram illustrates the locally measured annual irradiance (red) and the annual yield of the modules (gray). The black line indicates the annual performance ratio which shows no sign of degradation over the past 10 years.

The data obtained demonstrate the reliability of the CIGS thin-film technology, which is reflected in the stable performance of the *PowerMax* modules over the entire ten-year period.

However, CIGS thin-film technology is proving its worth not only in ground-mounted applications. Our own results from monitoring CIGS solar modules of the SKALA product platform in one of the newer facade applications (BIPV) have shown very stable yield and performance ratio results for four years now. In this application, the modules are operated at significantly higher temperatures of +15 °C at peak compared to the free field installation in Znojmo.



**A facade made of SKALA modules installed at the Climbing Center Eichstätt, Germany**

The constant performance ratio of the system proves the stability of the facade modules SKALA.

CIGS technology is one of the PV technologies that has been established on the market for years. Nevertheless, independently determined data on the long-term stability of the energy yield are scarce. AVANCIS demonstrates the reliability of its CIGS thin-film technology with these results.

"This is a very positive signal for the ambitious goals in Europe and Germany to completely convert the energy generation system to renewable energy sources," continues Dr. Thomas Dalibor. "Thin-film technologies are generally characterized by very short energy payback times and a comparatively small CO<sub>2</sub> footprint compared to the established crystalline silicon technology. In particular, the thin-film technology developed by AVANCIS in Germany has the additional advantage that the modules are manufactured without the use of environmentally critical heavy metals such as cadmium or lead."

**About AVANCIS GmbH**

AVANCIS develops and produces premium class solar modules based on the copper indium gallium diselenide compound (CIGS modules) "Made in Germany". This innovative technology is developed in the company's own R&D centers in Munich and Torgau and implemented in the production facilities in Torgau. AVANCIS technology dates back to pioneering work in the 1980s at Arco Solar and has evolved through many intermediate stages into today's thin-film technology. The main brands are the SKALA product platform as an energy-generating façade cladding material for buildings and infrastructure facilities, and the PowerMax photovoltaic module, which is used in ground-mounted and rooftop installations. AVANCIS has been part of the CNBM Group since 2014.

For more information: Ines Scheibner | Marketing Manager | ines.scheibner@avancis.de  
[www.avancis.de](http://www.avancis.de) | [www.skalafacade.com](http://www.skalafacade.com)