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PETER RÖTHLISBERGER OF SOLAXESS: „THE PRICE DROPS BY TWO THIRDS“

Solaxess has been producing a special film for white modules for several years. The company will soon launch a further development on the market. Sales Manager Peter Röthlisberger explains the advantages it provides.

At the beginning of this year you announced that Solaxess is working on a new version of the special film for colored modules. How is the solution developing?

Peter Röthlisberger: We are well on schedule, even if the corona situation means that we will enter the market later than planned. At the same time, we were also able to use these calmer moments to make progress in development than would have been possible during a normal business period. Initially we wanted to apply the new film outside the module under ETFE or an additional glass. In the next development step, the film should be laminated directly into the module. During the tests with our partners we realized that both solutions are very similar. Therefore we are now developing both variants in parallel and will launch both at the same time.

What is the challenge of the development?

Since the film will be part of the module, we are still going to pre-certify it. The film will also be available in darker colors such as terracotta.

Why is pre-certification necessary?

We will get a TÜV certificate for the new product. This makes it easier for module manufacturers to get a TÜV certificate for their products if they integrate the film. Otherwise they would have to carry out the entire certification process.

So the colored modules will be on the market faster?

Not only. It will also be much cheaper for the module manufacturers. In that case, the certification process will only take two to three months. Pre-certification also reduces costs to about one-fifth compared to a full certification procedure.

Why are you developing two variants?

There are customers who want the ETFE surface also because of its haptics and because it can be structured, pressed and imprinted. These are mainly architects and large construction companies. On the other hand, module manufacturers will be better placed if they can laminate the film into the module, which will reduce manufacturing costs and allow more module manufacturers to offer colored panels.

What cost reductions are possible?

With the new technology we reduce the price of the film by about two thirds. We have further developed the existing films without reducing the aesthetic and optical properties. We have also chosen a different and cheaper production process for the new variant. In addition, it is now easier for module manufacturers to handle, as it is no longer necessary to apply a composite of four individual foils to the glass, but instead either the glass already prefabricated with the foil or the foil is laminated directly into the module. Module manufacturers have such processes well under control. For the end customer, this makes no optical difference to the previous variant, but the costs are reduced.

On the other hand, prices also fall with scaling up of production volumes. How is the demand for Solaxess films developing?

Currently almost 40 module manufacturers are ready to test our new development. So demand from end customers seems to be very high. This will also have an impact on the price. With all other factors, we can reduce the additional costs for a colored module to around 140 to 100 euros per square meter in 2021 compared to a high-quality facade material. Our goal is to reduce the additional costs for colored photovoltaic facades to 50 euros per square meter in the medium term if the solution is manufactured and processed in fully automated production.

What strategy do you have to get more architects interested in colored modules?

There will be architectural projects like the ones we have implemented so far. On the one hand, from the point of view of the building owner as the end customer, we are talking about facades in which many modules with individual dimensions and shapes are installed. On the other hand, there are large facades that are realized with just a few different module dimensions. In addition, there is also the offer to architects, who have varying degrees of flexibility. Because some want a special color, but are able to adapt to the standard dimensions in terms of module sizes. Others realize the facades with a color offered by us.

Do you offer more different colors than before?

Yes. We will start this year with a few different colors and expand the spectrum in spring 2021, so that we will then have 15 or 16 colors to choose from. In addition, we can also offer the films with different transparency.

Until now, one of the main arguments has been that you don't see solar technology. With more transparent foils, the solar cells become visible. Is this a response to market demand?

There are architects and builders who place great value on aesthetics and want solar technology to be invisible. They will continue to work with the opaque films. But we also have inquiries about adding color to facades and customers are willing to make aesthetic compromises.

But there will still be the possibility of individual colors?

Yes. We can adapt the color to the specific wishes of the customer. The requirement is that at least 2,500 square meters of each color are needed to make it worthwhile. Although the development takes four to five months, we can offer any RAL color and have the newly developed color in stock.

What are the advantages of that?

Until now, planners have always ordered around ten percent more modules than they needed when using

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printed glass. In this way, they always had a replacement module in the matching color in the case of a defect. That's no longer necessary with us. Because we can reproduce the color exactly at any time.

Different module sizes and shapes are certainly no problem with the film?

We have a production width of 1.10 meters. Since the modules with 60 cells are getting bigger and bigger, we are expanding this to 1.20 meters. The foil can of course be cut to produce narrower modules. If the modules are wider, for example if a dimension of two by four meters is required, then you simply lay two foil strips next to each other and cut them off at the outer edges. In the lamination process, these will then join together to form a single surface.

If an architect wants the colored modules, what is his path to the product?

At the moment the architects come to us. We execute the project together with a suitable module manufacturer, who is based in the region where the facade is to be built. We supervise the project until the manufacturer takes it in hand. In the future, however, we will specialize in the production and further development of the film. For this reason, we will be opening our website next year so that customers can contact a module manufacturer directly via this website. I assume that from 2021 they will be able to contact around 30 to 40 producers.

The interview was conducted by Sven Ullrich. It is part of the architecture issue of the German professional magazine **photovoltaik**, which you can [order here](#) as a single issue.

Which architectural possibilities the Solaxess solution provides can be found in corresponding dossiers in the [Solar Age project database](#). You can use these free of charge after [registering as Club Member](#). Just enter Solaxess in the search mask as the company involved. (su)