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THE COLORFUL REVOLUTION IN FAÇADE ARCHITECTURE

In architecture, aesthetic, functional and, increasingly, ecological aspects must interact perfectly. This is a challenging task, especially for façades. After all, they not only serve to protect the building, but also shape the overall appearance to a special degree.

Colored solar modules for the façade are an innovative solution that cleverly takes all aspects into account. The options previously available for coloring solar modules either offer mediocre efficiency or a very small range of colors to choose from. With Ceramic Colors Wolbring's patented ColorQuant™ technology, almost any color can be provided for solar modules with high color consistency – without significant losses in solar output.

"Many competitors talk about colored solar façades while just offering 10 standard colors," says Holger Geisler, General manager of Ceramic Colors Wolbring. "We are currently the only supplier with whom

architects or module manufacturers can develop completely individual colors for their projects. After just a few days, they receive the sample printed and fired onto glass. After the final decision for a color sample, we deliver a colored glass in 20 x 20 cm to the module builder so that they can build a functional mini module for efficiency measurement."

The ColorQuant™ technology offers an almost infinite variety of color variants, all of which are developed in the company's own laboratory. Each mixture is archived and can be easily reordered if required. The ability to test and customize different shades ensures that the end result is exactly as intended.



About the provider – Ceramic Colors Wolbring

Founded in 1952, the family-run company Ceramic Colors Wolbring is still owner-managed today and is one of the leading developers and suppliers of ceramic colors for flat and container glass. The Wolbring Group also includes the companies Hans Wolbring GmbH Keramischer Bedarf and Wolbring HPC GmbH.

Ceramic Colors Wolbring produces exclusively in the premium sector in various color systems and for a wide range of application methods – from screen printing to roller application and spraying. The company has exclusive marketing rights for the ColorQuant™ system in the most important regions of the world. The company is happy to help architects select a suitable module manufacturer to produce modules in the desired quantities, formats and colors.

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HIGH EFFICIENCY BIPV IF YOU CAN IMAGINE IT, WE CAN COLOR IT

PRESS INFORMATION

COLORQUANT™
www.colorquant.cc



The technological basis

The ColorQuant™ colors offered exclusively by Ceramic Colors Wolbring are based on the physical principle of interference. Instead of absorbing sunlight, the color layer printed on the back of the front glass reflects only the desired tone and thus creates the visible color effect.

The low opacity leads to an outstanding Color Performance Ratio of up to 98 % compared to uncolored standard glass. The efficiency of the installed solar modules is therefore virtually maintained, making ColorQuant™ tints an ideal solution for energy-efficient buildings.

The color is applied to the back of the front glass using conventional screen printing. All the technical possibilities of this printing process, such as patterns, motifs or multi-colored prints, can therefore also be used for the colored solar façade. The front of the glass can be glossy, matt or textured, depending on the requirements for glare protection and the desired design effect.

Since the ColorQuant™ tints are developed and produced in-house, Ceramic Colors Wolbring is able to guarantee fast and reliable sampling with the desired colors.



Ceramic Colors Wolbring now offers more than 500 standard shades. Individual samples are also available at any time.

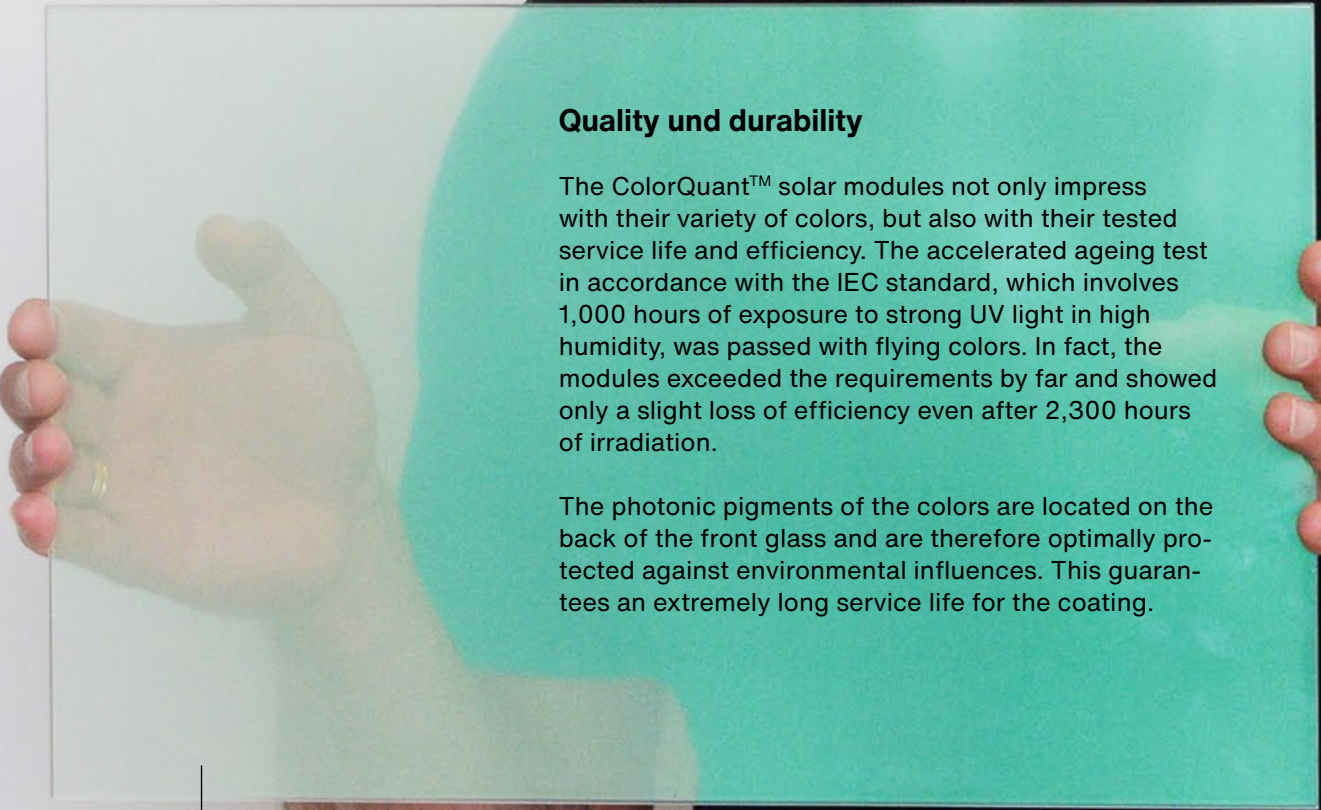
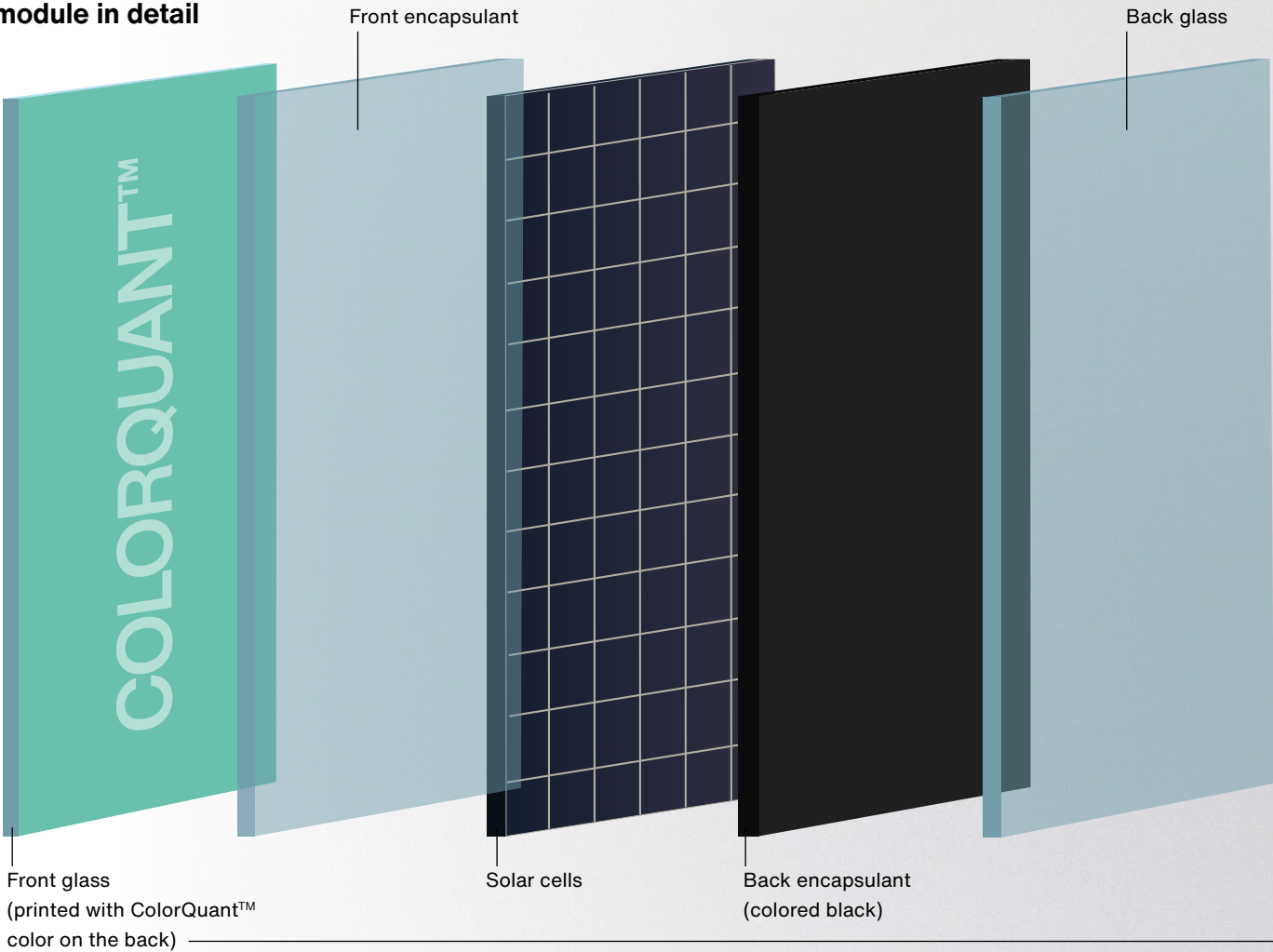
If you can imagine it, we can color it!

This is the bold promise made by Ceramic Colors Wolbring to architects and module manufacturers. The ColorQuant™ technology opens up exciting new possibilities and ensures unprecedented efficiency for colored solar modules. It combines energy efficiency with aesthetic sophistication and offers almost unlimited design possibilities. With the ColorQuant™ technology, architects and module manufacturers are making a clear statement about sustainability and design.



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A module in detail



Quality und durability

The ColorQuant™ solar modules not only impress with their variety of colors, but also with their tested service life and efficiency. The accelerated ageing test in accordance with the IEC standard, which involves 1,000 hours of exposure to strong UV light in high humidity, was passed with flying colors. In fact, the modules exceeded the requirements by far and showed only a slight loss of efficiency even after 2,300 hours of irradiation.

The photonic pigments of the colors are located on the back of the front glass and are therefore optimally protected against environmental influences. This guarantees an extremely long service life for the coating.

Holger Geisler,
General manager of Ceramic Colors Wolbring

Applications and benefits

Solar modules colored with ColorQuant™ offer numerous advantages for different requirements:

- 1 Architectural design**
Building owners and architects can integrate façades harmoniously into the overall design or deliberately set colorful accents and emphasize the solar modules.
- 2 Monument protection**
In regions with strict specifications for the coloring of protected historical buildings, the colored modules offer the possibility to preserve the authentic color tones of historical architecture.
- 3 Natural integration**
For solar arrays in natural environments, modules can be designed in such a way that they blend harmoniously into the landscape and become almost invisible.
- 4 Individuality**
In addition to solid colors, solar modules with patterns or motifs are also possible. The colors are applied using a screen printing process and fused inseparably to the glass by the use of heat.