

Press Release



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Covestro and Ceres Holographics announce strategic partnership

Cost-effective holographic display solutions for mobility

- **Holographic Transparent Display products from Ceres incorporate digitally mastered HOEs**
- **Efficient production of volume holograms with Covestro's Bayfol® HX film**

Scottish technology provider [Ceres Holographics](#) announces a strategic partnership with [Covestro](#) to commercialize Bayfol® HX photopolymer films for transparent automotive display applications. Ceres Holographics uses them to create specialty solutions with customized holographic optical elements (HOEs) designed to enable a new generation of transparent display applications for automobiles and commercial vehicles. The new partnership represents the next stage in what has already been a long-standing cooperation between the two companies.

Bayfol® HX film from Covestro is a transparent and thin film featuring a light-sensitive, self-developing photopolymer. It is ideal for the reproducible production of highly efficient volume holograms. Throughout their collaboration to date, the two partners have customized the film to meet the specific requirements of this application.

New generation of display applications in vehicles

This transparent display solution enables new line-of-sight applications in automobiles and commercial vehicles that provides drivers, passengers and pedestrians with a safer and more pleasant experience on the road than before while still achieving the quality, price levels and production volumes demanded by automotive OEMs.



“Ceres Holographics has been testing how to harness the unique properties of our Bayfol® HX film for holographic transparent display applications for years, and has produced outstanding results,” said Yuen-Ling Lok, Head of Commercial Operations, Holographic LightGuiding at Covestro. “We intend to continue working with our partner in the emerging supply chain to commercialize this film in the mobility segment. The project is yet another example of how customers are increasingly asking for specialized solutions. We are happy to support them in this journey.”

Strong demand from OEMs

“Our partnership with Covestro has enabled us to respond to the strong demand for cost-effective and easy-to-implement transparent display solutions in the automotive and commercial vehicle sectors,” said Andy Travers, Chief Executive Officer of Ceres Holographics. “We specialize in the design, mastering and reproduction of thin film HOEs. Our digitally-mastered HOEs feature full color and a wide vision field, yielding precision-engineered optical performance and functionality in windscreens and windows at prices that the market demands.”

Ceres holographic transparent display technology has already been successfully demonstrated in OEM prototypes, enabling full-color display of information on front, side and rear car windows. Ceres is currently involved in go-to-market programs with several global commercial vehicle and automotive OEMs targeting production dates between 2022 and 2025.

About Covestro:

With sales of EUR 12.4 billion in 2019, Covestro is among the world’s largest polymer companies. Business activities are focused on the manufacture of high-tech polymer materials and the development of innovative solutions for products used in many areas of daily life. The main industries served are the automotive, construction, wood processing and furniture, and electrical and electronics industries. Other sectors include sports and leisure, cosmetics, healthcare and the chemical industry itself. Covestro has 30 production sites worldwide and employs approximately 17,200 people (calculated as full-time equivalents) as of the end of 2019.

About Ceres Holographics:

Founded in 2009, in St. Andrews, Scotland, Ceres Holographics uses its proprietary technology to design, digitally master, and replicate next-generation Holographic Optical Elements (HOEs) for new transparent display (TD) and augmented reality heads up display (HUD) systems. With extensive knowledge of the Covestro Bayfol HX® photopolymer film and in-house expertise in photonics and light-guiding, Ceres works with partners and customers to deliver optical systems with precision-engineered, thin-film HOEs enabling mass-



market applications in automotive, transportation, aerospace and wearable technology.

Forward-looking statements

This press release may contain forward-looking statements based on current assumptions and forecasts made by Covestro AG. Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. These factors include those discussed in Covestro's public reports. These reports are available at www.covestro.com. The company assumes no liability whatsoever to update these forward-looking statements or to make them conform to future events or developments.