# Press Release

**Nothing remains hidden anymore: Detect defects in glass, carbon fiber fabrics and reflective surfaces using CX polarization cameras**

(10/11/2018) The new CMOS-based CX series polarization cameras with GigE and USB 3.0 by Baumer, uses the polarization properties of light and thus allows a wide range of new industrial image processing applications, e.g. for quality control in glass production, carbon fiber fabric (CFRP) or reflective surfaces. The cameras use the 5 Megapixel IMX250MZR global shutter sensor by *Sony* which has an additional polarization layer consisting of four polarization filters (0°, 90°, 45°, 135°) at the pixel level. A single image is sufficient to simultaneously determine the degree and angle of polarization of the polarized light without changing the filter. Thanks to the effective interaction between the integrated evaluation algorithm and the Baumer GAPI SDK, only the polarization information is transmitted. Applications can therefore be solved inline and be implemented flexibly, easily and cost-effectively. The series production of the new cameras will start in the 4th quarter of 2018.

With the CX polarization cameras, physical material properties not detectable by the human eye can be visualized and evaluated in order to optimize manufacturing processes, reduce rejects or improve quality. So they are of great value in the glass industry during the quality assurance phase in the production of glass articles such as bottles or ampoules. Thanks to their ability to capture the complete linear polarization state any mechanical residual stress that increases instability and the risk of breakage, will be reliably detected. These cameras can also be of benefit to the production process of carbon fiber fabrics for the automotive or aviation industries. The low-reflective, poor-contrasting carbon fibers are highly polarizing, which is why the grain of the fabric, the decisive factor influencing the stability of the material, can be inspected efficiently. An angular resolution of 1° is achieved by factory calibration of polarization. This means that the slightest deviations in the grain can be detected. The new CX cameras excel even when inspecting reflective or shiny surfaces such as metal. By selecting a polarization direction, glossy effects can be reduced effectively, e.g. to better identify scratches or to be able to read codes reliably.

Learn more at: www.baumer.com/cameras/CX

**Baumer at VISION: Hall 1, Booth 1F32**

Photo: The new polarization cameras of the CX series are suitable for the quality control in glass production, in the manufacture of carbon fiber fabrics (CFRP) or for the surface inspection of reflective materials.

Number of characters (with spaces): approx. 2430

Text and picture download at: [**www.baumer.com/press**](http://www.baumer.com/press)

**Baumer Group**

The Baumer Group is one of the worldwide leading manufacturers of sensors, encoders, measuring instruments and components for automated image processing. Baumer combines innovative technologies and customer-oriented service into intelligent solutions for factory and process automation and offers an unrivalled wide technology and product portfolio. With around 2,700 employees and 38 subsidiaries in 19 countries, the family-owned group of companies is always close to the customer. Baumer provides clients in most diverse industries with vital benefits and measurable added value by worldwide consistent high quality standards and outstanding innovative potential. Learn more at [www.baumer.com](http://www.baumer.com) on the internet.

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