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Optics Balzers launches innovation: SoFi[™] Solar Filter satisfies the most rigorous requirements

Balzers, June 10, 2009 – Global growth in solar energy production has boosted demand for photovoltaic applications and massively increased the related requirements. In response to the needs of this market of the future, Optics Balzers has developed interference filters satisfying the most rigorous customer-specific requirements, for example for sun simulators. Thanks to the company's years of experience, these filters offer outstanding spectral characteristics, long-term stability, and accurate reproducibility even when manufactured in large volumes.

The wish to replace fossil fuels by clean and renewable energy is driving the development of power production systems using solar cells (photovoltaic cells). As a consequence, an increasing number of interference filters are being applied for quality checking and further development of solar cells. The solar cells are tested by means of sun simulators (devices generating a light spectrum as similar as possible to that of the sun). With the aid of the new interference filters developed by Optics Balzers, the illumination spectrum of a lamp (for example xenon) is converted so that it becomes equivalent to the solar spectrum. The nature of this spectrum is defined in a standard (IEC 60904-9) and divided into different quality grade (Class A), but even produce spectra with much narrower specifications. For special sun simulator applications not covered by the standard, Optics Balzers is in a position to design and manufacture innovative filters meeting entirely different customer-specific spectral characteristic requirements.



Best possible manufacturing method for sophisticated filters and beam splitters

In order to split sunlight into different spectral regions, the interference filters can also be used as optically stable beam splitters which are resistant to environmental influences. Such beam splitters are applied, for example, in concentrator cells (concentrating photovoltaics), which split sun radiation and direct it to different solar cell types with optimal efficiency. In the production of beam splitters, Optics Balzers as one of the world's leading providers of sophisticated sputter coating technologies can take full advantage of this core competence. The optical filter coatings manufactured by this high-precision technology ensure a consistently high quality even when volume-produced and are characterized by their outstanding spectral and environmental stability. In applications such as projection displays (beamers), the beam splitters of Optics Balzers have proven their worth millions of times.



Caption: Diagram of sun simulator

Optics Balzers AG has been the preferred partner for innovative optical solutions for over 60 years. As a global leader in the supply of optical thin-film components and subassemblies, Optics Balzers focuses on selected markets such as Advanced Lighting, Automotive, Biophotonics, Projection Display, and Sensors & Imaging. The company possesses comprehensive know-how in optical thin-film coatings, glass processing, patterning, sealing, and optical subassemblies. Optics Balzers has 150 employees and generates annual sales of about CHF 35 million. The company is headquartered in Balzers, Liechtenstein.

More information: www.opticsbalzers.com