Tough, Durable Optical Coatings for Harsh Use Environments

The ZC&R Coatings for Optics (ZC&R) Division of Abrisa Technologies, designs and manufactures custom anti-reflection, mirror and filter coatings for use in medical, dental and other markets to fulfill demanding optical performance where harsh environmental use conditions, fast ramp installation temperatures and high humidity or chemical resistance is required.

Optical elements in medical and dental devices not only have to enhance throughput efficiency and separate or combine portions of the light spectrum, they must also survive the device assembly and cleaning processes.

It is not uncommon for optical elements to be brazed or solder sealed into an assembly to provide permanent mounting and good hermetic environmental seals. Autoclaving, soldering and brazing involve high and often localized rapid temperature ramps which often damage and craze most commercially available coatings.

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According to Lisa Tsufura, Product Manager at ZC&R, “Designing coatings for harsh environments requires careful selection of coating and substrate materials, development of special designs and use of select deposition processes that enable low stress and craze resistant coating performance, particularly for very thick high efficiency and sharp cut-off designs. ZC&R consistently delivers high performance, durable optical coating solutions that are engineered to survive tough cleaning, use and assembly environments by design.”

Abrisa Technologies is a recognized, US based, global supplier of high quality, fabricated glass components, optical thin film coatings, and custom glass solutions for diverse industries such as microelectronics and displays, semiconductor, military, automotive, aerospace, medical, telecom and scientific R&D. We provide custom flat glass and coating products for applications as: flat panel display, touch and gesture recognition; imaging and surveillance; entertainment, lighting; advanced instrumentation; and photonics.

Contact us at www.abrisatechnologies.com for more information.