

Laser World of Photonics 2022: CeramOptec presents Multicore fibers for industrial laser applications

Metal-coated Harsh Environment Fiber Optics as Second Trade Show Innovation

Multi-core fiber optics for laser applications as well as metal-coated special fibers for harsh-environment applications are the focus of CeramOptec's appearance at Laser World of Photonics. In addition, the fiber optics specialist will provide an overview of its complete fiber optics portfolio for industry, medicine and laboratory technology - including customized fiber production.

Bonn/Livani, March 31, 2022 - Fiber optics specialist CeramOptec will showcase the complete range of its fiber optic solutions for industry, medicine and laboratory technology at Laser World of Photonics (April 26-29 in Munich). New in the program are multicore fiber optics with concentric arrangement of cores, intended for applications in laser technology, as well as metal-coated special fibers for harsh environments. In addition, the biolitec subsidiary will present fiber optics for active laser beam shaping, for long-term UV irradiation and for transmission-sensitive analyses in sensor technology and spectroscopy. For several fiber types, pre-assembled fiber bundles will be presented in addition to single fibers. CeramOptec will also provide information on all stages of its customized glass fiber production - from preform manufacture to the end product.

The multicore fiber optics with concentric cores were developed primarily for fiber-coupled industrial lasers and enable better control of power density and beam shaping. They are available from the factory in versions for wavelength ranges from 190 to 1,200, 300 to 2,400 and 700 to 2,400 nm, and with numerical apertures between 0.10 and 0.28. Fiber jackets made of nylon, acrylate, ETFE (ethylene tetrafluoroethylene) or other particularly resistant materials are available for high-temperature and high-vacuum applications or use in conjunction with aggressive chemicals. In addition, individual fiber designs are possible, for example with polygonal core geometries. This customization option also exists for the high-temperature and reaction-resistant Harsh Environment fibers that CeramOptec offers with coatings of aluminum or tin. They are available as standard with numerical apertures between 0.12 and 0.28 and in versions for wavelengths from 190 to 1,200 nm and 300 to 2,400 nm, respectively. Aluminum coatings even hermetically seal the fibers, allowing them to withstand temperatures from -196 to +400°C. Last but not least, the applied metal coating also makes it possible to solder the fiber.

In addition to these trade show innovations, CeramOptec will present Optran® NCC fibers with polygonal core geometry for active laser beam shaping in ablation, coating or cutting applications as well as the solarization-resistant Optran® UV NSS fibers for long-term applications in UV spectroscopy or UV curing. Also on board are the germanium-doped Optran® Ultra WFGF fibers, developed for sensory and spectroscopic applications with particularly high demands on the durability and transmission quality of the fiber optics.



Interested parties will find CeramOptec in Hall B5, Booth 213. More information on CeramOptec fiber optics is also available online at www.ceramoptec.com.

About CeramOptec

CeramOptec® (Bonn) in cooperation with Ceram Optec SIA (Livani/Latvia) specializes in the production of multimode optical fibers made of quartz glass. The medium-sized company was founded in 1988 and is now a subsidiary of biolitec AG, one of the world's leading medical technology companies in the field of laser applications. With subsidiaries in China and Malaysia and distribution partners in France, Belgium, the Netherlands, India, Japan, Korea and the USA, CeramOptec has a strong presence not only in Europe but also in the Asian and North American markets. The product range comprises fibers, fiber bundles, assemblies and cables for numerous applications, including industrial and medical laser applications, sensor systems in aerospace and spectroscopic applications in astronomy and the chemical industry. The biolitec group employs a total of 285 people.

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