

The Key to Success: FiberKey® P

Fiber Coupler Simultaneously Transmits CO₂ Laser Beam and Pilot Beam

The light of CO₂ lasers is often transmitted as a free beam: complex and expensive articulated optical arms bring the light to the required operation site. With the FiberKey® P, it is now possible for the first time to simultaneously guide CO₂ laser light via optical fibers to any point and transmit the light of a pilot beam. Thanks to the pilot beam, the processing beam can be adjusted without a problem. This is the only way to achieve precise orientation.

LASER COMPONENTS' CO₂ fiber coupler is optimized for the wavelength 10.6 µm. A ZnSe lens, which currently guarantees coupling at an efficiency of typically 80%, is integrated into the mechanical component, which is flange mounted to conventional lasers.

The FiberKey® P is used in combination with a further-developed hollow-core fiber: in the fiber cladding, the pilot beam is transmitted, and the non-visible laser light is guided in the hollow-core fiber. The hollow-core fibers used by LASER COMPONENTS excel in comparison to competing technologies with lower attenuation values.

This product is currently available for an output power of up to 30 W and is, therefore, particularly well-suited for medical applications with CO₂ lasers: for example, to cut tissue when removing tumors or in dermatology. Due to the additional transmission of the pilot beam in the FiberKey® P, the point of impact of the laser light is shown, which makes it possible to work precisely.

More Information

www.lasercomponents.com/de-en/news/the-key-to-success-fiberkey-p/

Trade Shows

VISION 2016, November 08-10, 2016, Messe Stuttgart, **Booth 1C33**
Electronica 2016, November 08-11, 2016, Messe München, **Booth B1.306**
SHOT Show, January 16, 2017, Las Vegas, NV, USA, **Table Top**
SPIE Photonics West, January 13 - February 02, 2017, San Francisco, CA, USA, **Booth 2023**
MD&M West Expo, February 07-09, Anaheim, CA, **761**
Automate 2017, April 3-6, 2017, Chicago, IL, USA, **Booth 2661**
SPIE Defense + Commercial Sensing, April 11-13, 2017, Anaheim, CA, USA, **628**

The Company

LASER COMPONENTS specializes in the development, manufacture, and sale of components and services in the laser and optoelectronics industry. At LASER COMPONENTS, we have been serving customers since 1982 with sales branches in five different countries. We have been producing in house since 1986 with production facilities in Germany, Canada, and the United States. In-house production makes up approximately half of our sales revenue. A family-run business, we have more than 200 employees worldwide.