

Diffractive Optics for Online Measurements

Beam Samplers for the Perfect Beam Copy



When monitoring laser beams, their measurement must be carried out during the laser process without affecting the processing beam. It is also imperative that the measurement beam is absolutely identical to the processing beam.

One excellent option is the use of a diffractive beam sampler because the beam that is coupled out is a perfect copy of the laser beam to be measured. Not only that but there are also at least two additional beams available that allow power measurements and beam profile measurements to be carried out simultaneously.

The diffractive optical element, DOE, offered from LASER COMPONENTS, is placed in transmission into the collimated beam. Approximately 99% of the main beam is transmitted through the DOE without changing; the other 1% of the beam intensity is split into higher orders for measurement purposes. Thus, a part of the power is emitted at $\pm 15^\circ$, for example; other copies of the main beam can be found at even lower power in the other orders ($\pm 30^\circ$). The intensity of all partial beams do not depend on the polarization of the laser.

There are quite a few standard elements available, as well as designs according to customer specifications for the wavelengths between 193 nm and 10.6 μm at attractive prices.

More Information

<http://www.lasercomponents.com/de-en/optics/optical-components/diffractive-optical-elements/>

Trade Shows

Photonics West 2015, Feb, 10 - 12, 2015, Moscone Center, San Francisco, USA, **Booth 2023**

OFC 2015, Mar, 24-26, 2015, Los Angeles Convention Center, Los Angeles, **Booth 2424**

DSS 2015, Apr 21-23, Baltimore Convention Center, Baltimore, MD, **Booth 1125**

Sensor+Test 2015, May, 19 - 21, 2015, Messe Nürnberg, Germany, **Booth 12.117**

Anga Com 2015, Jun, 09 - 11, 2015, Messe Köln, Germany

LASER. World of Photonics 2015, Jun, 22 - 25, 2015, Messe München, Germany, **Booth B3.303**

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 170 employees worldwide.