

### For Fewer Laser Optics in a System

## Complex Coatings Applied on Both Sides

Coated laser optics are used to optimize the characteristics of the emitted laser beam. However, losses are produced at each glass surface - thus the number of optics should be reduced to a minimum.

LASER COMPONENTS offers laser optics that have complex coatings on both the front and the back. From a technical standpoint, this was almost impossible to achieve for a long time in complex coatings: The coating process on the second side heated the first coating and often caused it to crack – the more complex the coating the more pronounced the problem as the number of layer rises with its complexity.

Complex coating designs are manufactured upon customer request, numerous combinations are possible: laser optics, coated on both sides, are often requested for the usage in resonators or for polarizers.

For applications in resonators, it makes sense to use optics with a dichroic coating on the front, for example a coating that is highly reflective for 1064 nm and simultaneously allows the passage of pump light. The back can be highly or partially reflective for the same or another wavelength.

It is also possible to combine a polarization coating on one side and a mirror coating on the other side. It would be conceivable to use a thin-film polarizer at 45° for 1064 nm, the back side of which is also coated for coupling in another laser wavelength.

Polarization coatings on both sides of an optic are used if the polarization effect has to be increased and the highest extinction ratios are required that could not be achieved otherwise with a coating applied to just one side.

### More Information

<http://www.lasercomponents.com/de-en/news/for-fewer-optics-in-a-system/>

### Trade Shows

**Photon 2014**, Sept. 01-04, 2014, Imperial College London, UK, **Booth 19**  
**Strategies in Biophotonics**, Sept. 09-11, 2014, Boston Park Plaza Hotel, Boston, USA, **Booth 500**  
**enova**, Sept. 16-18, 2014, Paris expo Porte des Versailles, **Booth C11**  
**Photonex 2014**, Oct. 15-16, 2014, Ricoh Arena, Coventry, UK, **Booth D20**  
**Vision 2014**, Nov. 04-06, 2014, Messe Stuttgart, Germany, **Booth 1F14**  
**electronica 2014**, Nov. 11-14 2014, Messe München, Germany, **Booth B1-306**

### 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.