



Dr. Berthold Schmidt

SUCCESSSTORY
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TRUMPF Photonic Components

“It motivates us constantly driving technological progress in the field of semiconductor lasers. In the future, we will encounter our VCSEL laser diodes in every house, car, smartphone or tablet. Moreover, our mini laser sensors will find their way in multiple industrial applications. Our goal is to expand the Ulm site, while shaping it to become a central Photonics Hub in Europe.” Berthold Schmidt, CEO TRUMPF Photonic Components.

TRUMPF Photonic Components is a leading global supplier of VCSEL (vertical-cavity surface-emitting laser) and photodiode solutions. More than two billion VCSEL chips and photodiodes have been already delivered worldwide. The headquarter is located on the science campus in Ulm. There, the approximately 300 employees have been advancing technological



Behind innovative inventions, their implementation and the companies that create them, there are always people with a passion for progress and development, who make these things their life-goals. They have the urge to turn ideas into reality, to improve on existing conditions, in the world in general and in their own lives.

know-how for more than 20 years. The technology has its origins at the University of Ulm and has been developed to industrial maturity over the years. In 2019, TRUMPF took over the company and has since invested in the location. In addition to the R&D department, the site is home to a state-of-the-art cleanroom production as well as administration and sales. Additional sites are located in Aachen, the Netherlands, China, Taiwan, Korea and the USA to provide the best possible local support for customers.

State-of-the-art laser technology

Whether in the field of consumer electronics, data communication, automotive, industrial sensing and heating systems - VCSEL lasers are used everywhere. In addition to already established sensing and illumination applications such as facial recognition or autofocus in smartphones, VCSELS also support future sensing applications in the field of autonomous driving. In addition, VCSELS and photodiodes are also helping to manage the ever-increasing volumes of data in data centers. Another product area is VCSEL heating systems, which are developed and produced at the Aachen site. Applications include the manufacture of Li batteries, another future market.

Strengthening the Ulm location

"With a Photonics Hub in Ulm, we are aiming to bundle competencies in the region and to combine the existing scientific know-how and industrial strength in the best possible way; as a company, we also particularly value the proximity to the next generation of skilled workers," explains Schmidt, adding, "we are also concerned with future topics such as quantum computers. In the future, for example, we will also produce photonic quantum computer chips in our production facility in Ulm." To this end, the company is planning further investments and an expansion of clean room production.

TRUMPF Photonic Components is part of the TRUMPF Group, a high-technology company that offers manufacturing solutions in the fields of machine tools and laser technology. TRUMPF, with headquarter in Ditzingen near Stuttgart, Germany, is the technology and market leader in machine tools for flexible sheet metal processing and in industrial lasers. In 2020/21, the company generated sales of 3.5 billion euros with approximately 14,800 employees. The TRUMPF group is represented worldwide by more than 80 subsidiaries.

www.trumpf.com/s/VCSEL-solutions

These people put their knowledge, passion, money and time into projects which then, ideally, meet with success. Concrete examples of success such as these are the best motivation!

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