Presse Press

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Osram laser brings autonomous driving one step closer

SPL DS90A_3 is Osram's latest addition to its portfolio for LiDAR applications

LiDAR systems are an integral part of driving assistance systems, such as lane assist and emergency braking systems in autonomous or semi-autonomous vehicles. The propagation time of very short light pulses is used to determine the distance between the vehicle and objects in its vicinity. When a laser pulse hits a person or an object it is reflected and captured by a detector. From the time between the emission of the laser beam and its detection it is possible to calculate the distance to the object. The safety system can then decide whether, for example, the vehicle should brake or drive around the person or object.

For more than fifteen years Osram Opto Semiconductors has been successfully developing pulse laser diodes which are used for a wide range of automotive applications. With its new SPL DS90A_3 laser, the company has added a more powerful and more efficient product to its portfolio for LiDAR systems, increasing the range of the applications. The edge emitter scans the vicinity of the car with an infrared laser beam across a particular angle segment. The system uses the scans to create a high-resolution 3D map of the environment. This enables the technology to react to any traffic situation without losing valuable seconds. A car traveling at a speed of 50 miles an hour, for example, covers about 22 meters every second, so every extra second that drivers take to react can have serious consequences for them and other road users.

SPL DS90A_3 can be operated at high currents up to 40 A and achieves a typical output power of 125 W. The laser is suitably qualified for use in automotive applications and offers impressively long life and high efficiency. Its compact dimensions allow for flexible system design within the vehicle.

“With this new laser we have succeeded in taking one of the key technologies for autonomous driving another step forward. Thanks to the higher output, the LiDAR system can reliably detect even small and poorly reflecting objects at big distances and take the necessary action in critical driving situations”, said Andreas Bauer, Marketing Manager for Lasers at Osram Opto Semiconductors.

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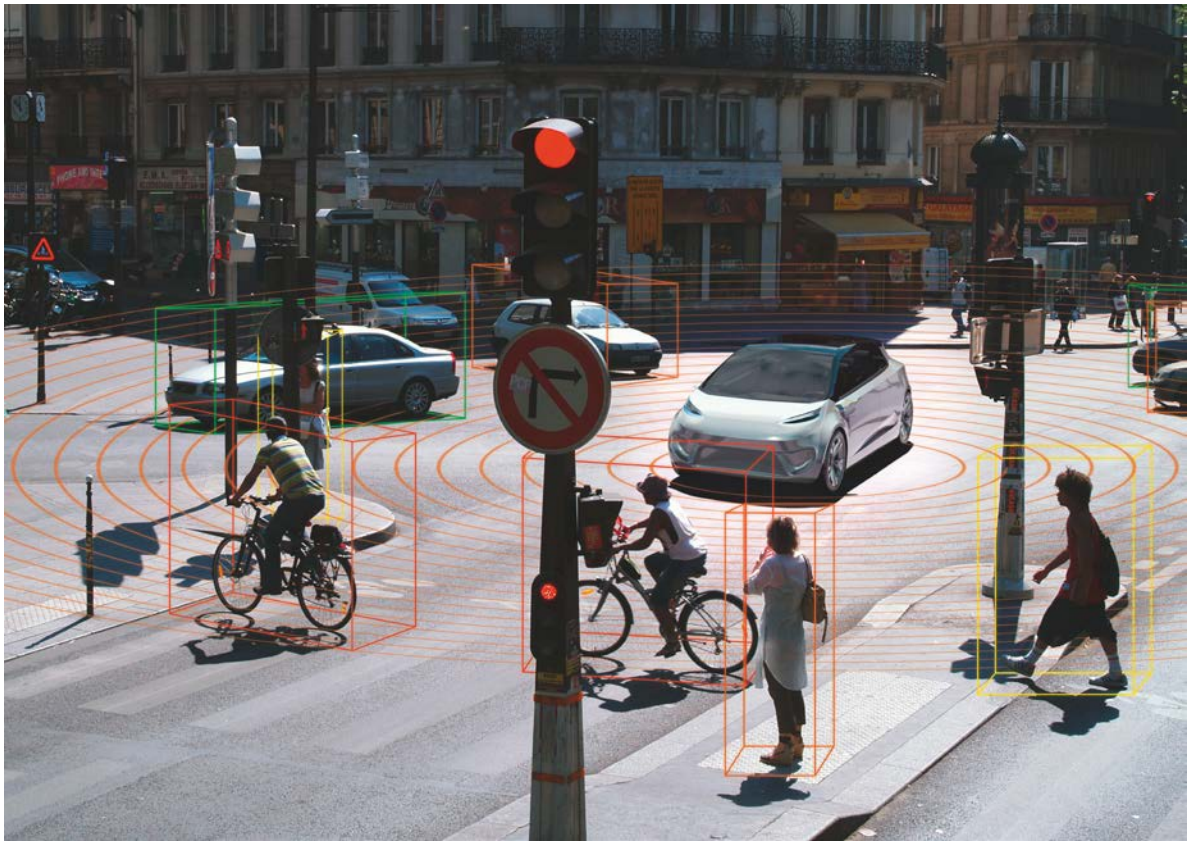
SPL DS90A_3 scans the vicinity of the car with an infrared laser beam and is highly durable.
Picture: Osram



LiDAR systems use the propagation time of laser pulses to calculate the distance between the vehicle and people or objects.
Picture: Osram

ABOUT OSRAM

OSRAM, based in Munich, is a leading global high-tech company with a history dating back more than 110 years. Primarily focused on semiconductor-based technologies, our products are used in highly diverse applications ranging from virtual reality to autonomous driving and from smartphones to networked, intelligent lighting solutions in buildings and cities. OSRAM utilizes the infinite possibilities of light to improve the quality of life for individuals and communities. OSRAM's innovations will enable people all over the world not only to see better, but also to communicate, travel, work, and live better. As of the end of fiscal year 2018 (September 30), OSRAM had approximately 27,400 employees worldwide. It generated revenue of more than €4.1 billion in fiscal year 2018. The company is listed on the stock exchanges in Frankfurt and Munich (ISIN: DE000LED4000; WKN: LED400; trading symbol: OSR). Additional information can be found at www.osram.com.