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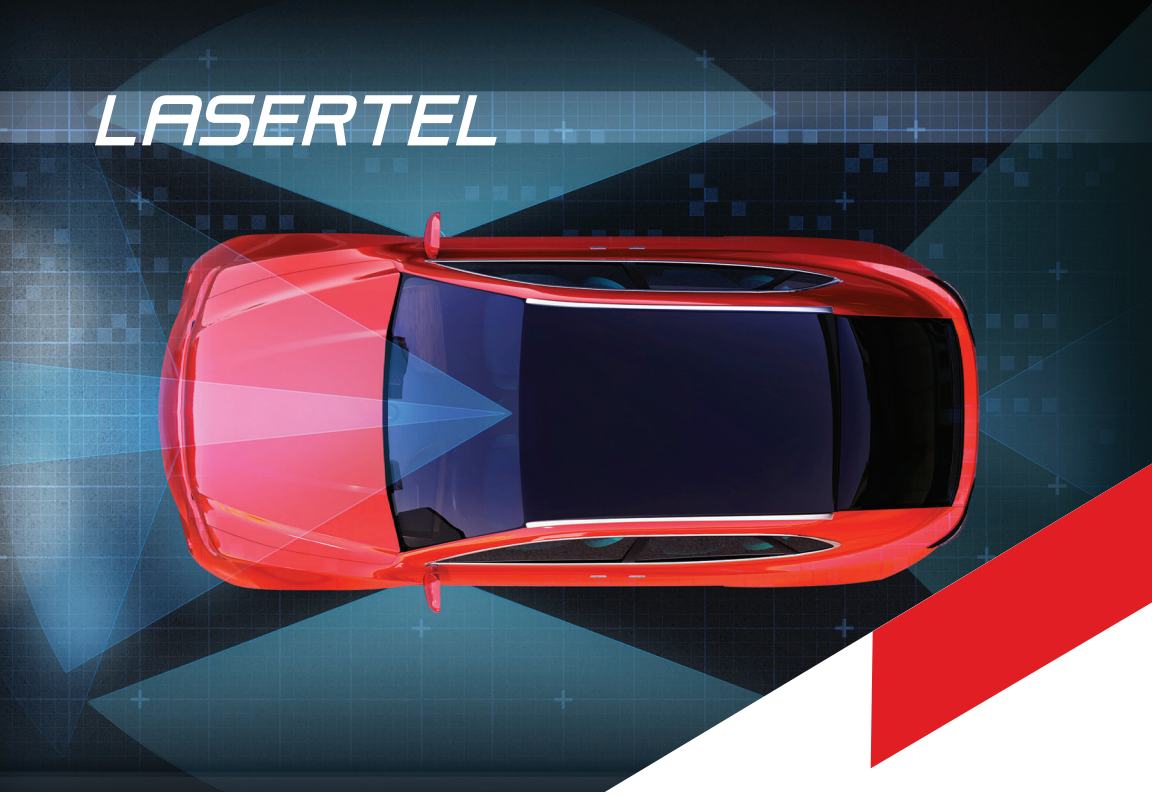
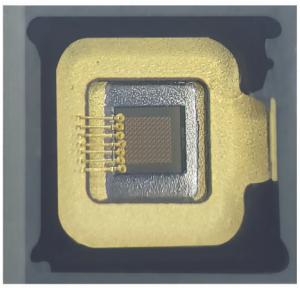


Automotive Lidar Illumination Sources

Lasertel, a US based company, has been manufacturing lasers and laser systems for over 20 years. These systems have proven reliability and robust operation in extremely harsh defense environments. The latest advancements in ADAS and autonomous vehicle sensors require high performance illumination sources that can be custom designed to fit particular sensor architectures and maintain performance over extreme automotive conditions.

VCSEL arrays and edge emitters that can be supplied on sub-mounts, with short pulse drivers, packaging and optics. Our team of experts work with customers to provide the best illumination solution for short, mid and long range lidar systems. Whether using a flash, scanning or a hybrid approach to lidar, Lasertel can help provide a cost effective source from concept and initial product demonstration through to high volume production.

VCSEL ARRAYS



VCSEL arrays are offered at 808 nm, 850 nm, 905 nm 920 nm, 950 nm, and 980 nm with customizable emitter geometries. Arrays can be combined to provide the desired power and size. They can be individually addressed or sections within an array can be addressed individually. Operation modes are from ns pulses to CW with intensities of >10 kW/cm^2 in 10 ns pulses.

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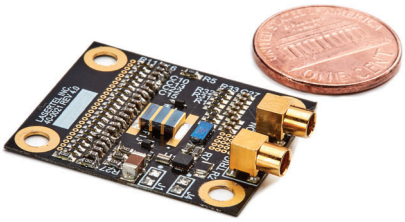

SHORT PULSED DRIVERS

To ensure eye safety, many lidar systems require short pulses in the nanosecond regime. To maintain high peak power, in short pulses, a high current driver is typically required. Lasertel offers custom short pulse drivers to complement our VCSEL arrays and edge emitting lasers. We also offer full system integration.

EDGE EMITTING LASERS

Edge emitters are offered at 760 nm, 808 nm, 830 nm, 905 nm, 940 nm, 976 nm, 1064 nm and 1550 nm and in a variety of sizes and configurations. They can be stacked in arrays to fit the required power and geometry. Peak powers of >240 W in <10 ns pulses are achieved. Each laser bar can be collimated individually to provide one spot in the far field which assures lidar performance with the highest resolution.

OPTICS AND BEAM CONDITIONING

To ensure the best performance from a lidar system, it is important to make sure that the maximum optical power illuminates the required area with the appropriate field of view. Lasertel can provide custom optics to optimize the brightness of the lidar system. This is key to enabling higher resolution at longer ranges.

ABOUT US

Leonardo Electronics US enables next-gen technologies in defense, security, medical, automotive and industrial segments. For over 20 years, the Lasertel facility based in Tucson, AZ has driven robust laser design and innovation resulting in enabling technology to support market leaders worldwide.

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Lasertel products are proudly made in the USA

Patent Numbers: US 7,660,335 | US 7,864,825
US 6,352,873 | US 6,295,307

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