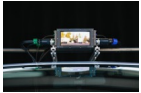


Luminar Technologies, of Portola Valley, California, say their novel approach to lidar design will make autonomous vehicles safer and more scalable. The company have been selected for testing by four major autonomous vehicle programs and are now in a 10,000-unit production run. With their new 50,000- ft<sup>2</sup> manufacturing facility in Orlando, Florida, they expect to make deliveries to strategic partners this year.



To reach this mark, Luminar have made two acquisitions to scale the team to more than 150 people, and raised USD \$36m in seed capital from investors including Canvas Ventures, GVA Capital, and 1517 Fund. The company's lidar technology uses a laser operating at a standard and eye-safe 1550 nm wavelength but incorporates an InGaAs-based receiver. Luminar say they have made a number of breakthroughs to lower the cost of the InGaAs-based receiver, which is usually considered too expensive for mass-market applications.

The company has engineered and manufactured all major components of their system from the chip level up, including lasers, receivers, scanners, and processing electronics. The result, according to Luminar, is the first lidar system to achieve the necessary range and resolution to drive autonomous vehicles safely and at full speed, meeting the needs of every major autonomous vehicle program.

Luminar say their lidar can see 50 times greater resolution and 10 times longer range than current systems, which means that at 200 metres it can detect hard-to-see, low-reflectivity objects such as a black car or tire on the road, offering a full seven seconds of reaction time at 120 km/h. The best currently-deployed systems see such objects (assuming 10% reflectivity) at less than 35 metres, which at highway speeds offers less than one second of reaction time.