



NEWS RELEASE

# Lumentum Announces Latest Series of High-Performance Multi-Junction VCSEL Arrays for Advanced Mobility and Industrial Applications

2022-04-07

*Enabling flexibility and scalability with innovative LiDAR and 3D sensing solutions*

SAN JOSE, Calif., April 7, 2022 /PRNewswire/ -- Lumentum Holdings Inc. ("[Lumentum](#)"), a leading provider of vertical-cavity surface-emitting laser (VCSEL) arrays for light detection and ranging (LiDAR) and 3D sensing applications, today announced the M Series multi-junction VCSEL arrays for next-generation automotive, industrial LiDAR, and 3D sensing applications and availability of the first M Series product, the [M51-100](#) 905 nm 70 W multi-junction VCSEL array.

Lumentum's automotive qualified, high-performance M Series features peak powers suited for short- and long-range advanced mobility and industrial LiDAR applications. In addition to higher available power densities, extensive accelerated life testing of the multi-junction M Series has shown the same high reliability as single junction VCSEL devices already in volume production. The M Series is easily integrated into customer platforms and can replace edge-emitting lasers in existing mechanically scanned systems or arrayed into configurable illumination sources for addressable, solid-state electronic scanning LiDAR systems. VCSELs provide advantages in efficiency, scalability, and reliability that are essential to the accelerating rate of innovation in automotive and industrial LiDAR and 3D sensing applications.

"The Lumentum M Series enable automotive and industrial customers to accelerate the development of next-generation LiDAR systems," said Alex Ju, Product Line Manager for 3D Sensing at Lumentum. "The M51-100, with its extremely small size, is a versatile solution applicable to a wide range of customer systems. We are excited to deliver industry-leading VCSEL technology with proven quality and volume manufacturing capability into the advanced mobility space and enable a greater range of industrial applications."

"We are continuing to build upon our leadership in multi-junction technology that we have developed over the past several years," said Senior Director of R&D for 3D Sensing, Matt Peters. "The new M Series products provide customers with highly differentiated performance and reliability in devices that address a wide range of LiDAR system architectures."

LiDAR and 3D sensing are increasingly used in advanced mobility and industrial applications. Automotive LiDAR enables autonomy at multiple levels, from advanced adaptive cruise control capabilities to fully autonomous vehicles. In-cabin driver and occupant monitoring systems are becoming standard parts of vehicle safety systems and are continuously improving and adding new features, such as biometric recognition. In addition, LiDAR is advancing factory automation and being used to optimize performance, safety, and cost in industrial environments, including autonomous mobile robots, automated guided vehicles, and last-mile delivery vehicles.

## About the Products

The M51-100 905 nm 70 W multi-junction VCSEL array is a compact, highly reliable, power-dense solution optimized for next-generation LiDAR systems. The product is the first of Lumentum's high-performance M Series, which features flexibility across size, form factor, and peak power to suit short- and long-range LiDAR applications. AEC-Q102 qualified, the M51-100 leverages proven high-volume production and is easily integrated into customer automotive and industrial platforms. With high power output and a 0.19 mm<sup>2</sup> chip size, the M51-100 is an adaptable solution that can replace edge-emitting lasers in existing mechanical solutions or arrayed into configurable illumination sources for addressable, solid-state electronic scanning LiDAR systems.

Further M Series product releases are expected later in Q2, calendar 2022. The M52-100 is a 100 W multi-junction VCSEL array designed for line-scanning LiDAR solutions, and the M53-100 is a 400 W device tailored for flash LiDAR systems with unprecedented power from a VCSEL product. To sample the M51-100, or for more information on the M Series, contact [customer.service@lumentum.com](mailto:customer.service@lumentum.com).

## About Lumentum

Lumentum (NASDAQ: LITE) is a market-leading designer and manufacturer of innovative optical and photonic products enabling optical networking and laser applications worldwide. Lumentum optical components and subsystems are part of virtually every type of telecom, enterprise, and data center network. Lumentum lasers enable advanced manufacturing techniques and diverse applications including next-generation 3D sensing capabilities. Lumentum is headquartered in San Jose, California with R&D, manufacturing, and sales offices worldwide. For more information, visit [www.lumentum.com](http://www.lumentum.com) and follow Lumentum on [LinkedIn](#), [Twitter](#), [Facebook](#), [Instagram](#), and [YouTube](#).

### Contact Information:

**Investors:** Kathy Ta, 408-750-3853; [investor.relations@lumentum.com](mailto:investor.relations@lumentum.com)

**Media:** Sean Ogarrio, 408-546-5405; [media@lumentum.com](mailto:media@lumentum.com)

View original content: <https://www.prnewswire.com/news-releases/lumentum-announces-latest-series-of-high-performance-multi-junction-vcSEL-arrays-for-advanced-mobility-and-industrial-applications-301519700.html>

SOURCE Lumentum