NEWS RELEASE

Hesai and Lumentum Partner on Next-Generation LiDAR Solutions

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Collaboration yields the industry's first 200-meter, long-range VCSEL-based hybrid solid-state LiDAR solution for ADAS

SHANGHAI and SAN JOSE, Calif., Jan. 5, 2022 /PRNewswire/ -- Hesai ("Hesai"), a global leader in light detection and ranging (LiDAR) sensors, and Lumentum Holdings Inc. ("Lumentum"), a leading provider of vertical-cavity surface-emitting laser (VCSEL) arrays for 3D sensing and other applications, today announced their partnership on hybrid solid-state directional LiDAR solutions for advanced driver-assistance systems (ADAS).

LiDAR sensors are an essential part of autonomous vehicles (AVs). However, conventional LiDAR approaches have been challenged by high costs and poor manufacturability. Incorporating VCSEL array light sources can significantly improve LiDAR cost competitiveness and scalability.

"Lumentum has been the global leader in VCSELs for consumer electronics. As the automotive industry transitions from the testing phase for AVs to mass volume production phase for ADAS applications, cost and manufacturability are the biggest challenges the industry faces," said Dr. David Li, Co-founder and CEO of Hesai. "We are pleased to be collaborating with Lumentum on our hybrid solid-state LiDAR AT128 for ADAS applications, which contains an all-VCSEL-based design to achieve high-affordability, and automotive grade reliability and consistency requirements."

"We are excited to leverage our leading-edge multi-junction VCSEL array capabilities and manufacturing scale in working with Hesai to help enable innovative, cost-effective, and high-volume LiDAR solutions," said Lumentum President and CEO, Alan Lowe.

Over the past few years, more than a billion Lumentum VCSEL arrays have been deployed in mobile, consumer electronics, industrial, and other applications creating significant manufacturing economies of scale. At the same time, Lumentum's advancements in VCSEL array technology have resulted in record-breaking peak optical power densities and efficiencies, making Lumentum's VCSEL arrays suitable for high-performance ADAS and AV applications.

About the Product

Hesai's AT128 is a hybrid solid-state directional LiDAR that features a 200-meter range at 10% reflectivity, high point density (>1.5M points per second), and small form factor. Each AT128 incorporates 128 of Lumentum's high-power multi-junction VCSEL arrays emitting at 905 nm. Lumentum's multi-junction VCSEL arrays are built upon the manufacturing foundation developed over the past several years of high-volume VCSEL array shipments serving the consumer electronics market.

High-volume shipments of the AT128 into multiple existing ADAS OEM design-wins are expected to begin in 2022.

To learn more about Hesai's and Lumentum's latest advancements in technology, visit www.hesaitech.com and www.lumentum.com.

About Hesai

Founded in 2014, Hesai Technology is a global leader in LiDAR technology for autonomous driving and ADAS. Its vision is to empower robotics and elevate lives through high-performance, reliable, and low-cost 3D sensors. Hesai has developed exceptional R&D capabilities, accumulating deep expertise in optics, mechanics, electronics, and software. The company has been granted hundreds of patents globally for its industry-leading technologies, in areas such as proprietary LiDAR chips, functional safety, and interference rejection. Hesai's new manufacturing center for automotive production will commence operation in 2022, with a planned capacity of over 1 million units. Hesai has won customers spanning over 70 cities in 30 countries and regions, including leading autonomous driving developers, OEMs, Tier 1 suppliers, and robotics companies. For more information, visit www.hesaitech.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.

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