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## Press Release

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### Seeing Machines and ams Partner to Develop Optimized VCSEL Illumination for Cabin Interior Monitoring Systems

**CANBERRA – 18 February 2021** – Seeing Machines, the advanced computer vision technology company that designs AI-powered operator monitoring systems to improve transport safety, announces results of an ongoing partnership with ams, a leading worldwide supplier of high-performance sensor solutions, to refine and optimize infra-red illumination solutions for interior monitoring.

ams is recognized globally as a lead supplier of Vertical Cavity Surface Emitting Laser devices (VCSELs), which is an active illumination technology that is present in today's smartphones. VCSEL devices are set to appear in many future automotive interiors where they are able to deliver highly controlled pulses of infra-red energy required for interior monitoring safety solutions. The devices have an inherent advantage over Light-Emitting Diodes (LEDs) due to their narrow-band emission spectrum that is also highly immune to temperature drift. This allows for more selective sunlight immunity, reducing overall illumination system power while improving the ability of cameras to operate with glasses and sunglasses.

However, VCSELs remain an emerging technology for automotive applications where characterization for different use-cases is still ongoing. Working with Seeing Machines optics engineers, ams was able to fine-tune its next-generation VCSEL component (the TARA2000-AUT) for high-temperature automotive interior illumination. In particular, Seeing Machines provided critical design feedback on infrared pulse handling requirements, allowing the device to be ideally matched to Seeing Machines optimized camera system-optics.

**John Noble, SVP of Innovation at Seeing Machines** commented: *"Seeing Machines has been evaluating VCSEL illumination technology for over three years in our labs, exploring candidate device efficacies for illumination of cabin interiors. Our detailed understanding of the technical pros and cons of VCSEL technology has progressed, particularly with regards to thermal efficiency characteristics, which is always a major challenge for vehicle interiors. We have worked with several suppliers and we recommend ams VCSELs to our customers".*

**Bétina Bebey, Product Manager for High-Power Flood Illuminators at ams**, added: *"The partnership with Seeing Machines demonstrates the increased value that VCSEL technology brings to optical driver monitoring systems compared to established illumination technologies. By driving this technology together, ams and Seeing Machines expect to gain valuable insight and bring our joint customers into the demanding automotive environment solutions to make driving safer and more comfortable."*

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#### **About Seeing Machines (LSE: SEE)**

Seeing Machines Ltd., is an industry leader in vision-based monitoring technology that enable machines to see, understand and assist people. Seeing Machines' technology portfolio of AI algorithms, embedded processing and optics, power products that need to deliver reliable real-time



understanding of vehicle operators. The technology spans the critical measurement of where a driver is looking, through to classification of their cognitive state as it applies to accident risk. Reliable “driver state” measurement is the end-goal of Driver Monitoring Systems (DMS) technology. Seeing Machines develops DMS technology to drive safety for Automotive, Commercial Fleet, Off-road and Aviation. Founded in 2000 and headquartered in Australia, the Company has offices in Australia, USA, Europe and Asia, and supplies technology solutions and services to industry leaders in each market vertical. [www.seeingmachines.com](http://www.seeingmachines.com)