Lynred demonstrates smallest thermal imaging sensor for future Automatic Emergency Braking Systems (AEB) at AutoSens Europe

Prototype 8.5 µm pixel pitch technology that shrinks by 50% the volume size of thermal cameras is designed to help automotive OEMs meet tougher future AEB system requirements, particularly at night

Grenoble, France, October 1, 2024 – Lynred, a leading global provider of high-quality infrared sensors for the aerospace, defense and commercial markets, today announces it will demonstrate a prototype 8.5 µm pixel pitch sensor during AutoSens Europe, a major international event for automotive engineers, in Barcelona, Spain, October 8 – 10, 2024. The 8.5 µm pixel pitch technology is the smallest infrared sensor candidate for future Automatic Emergency Braking (AEB) and Advanced Driver Assistance Systems (ADAS).

The prototype, featuring half the surface of current 12 µm thermal imaging sensors for automotive applications, will enable system developers to build much smaller cameras for integration in AEB systems.

Following a recent ruling by the US National Highway Traffic Safety Administration (NHTSA), AEB systems will be mandatory in all light vehicles by 2029. It sets tougher rules for road safety at night.

The NHTSA sees driver assistance technologies and the deployment of sensors and subsystems as holding the potential to reduce traffic crashes and save thousands of lives per year. The European Traffic Safety Council (ETSC) also recognizes that AEB systems need to work better in wet, foggy and low-light conditions.

Thermal imaging sensors can detect and identify objects in total darkness. As automotive OEMs need to upgrade the performance of AEB systems within all light vehicles, Lynred is preparing a full roadmap of solutions set to help achieve this compliance. Currently gearing up for high volume production of its automotive qualified 12µm product offer, Lynred is ready to deliver the key component enabling Pedestrian Automatic Emergency Braking (PAEB) systems to work in adverse conditions, particularly at night, when more than 75% of pedestrian fatalities occur[1].

Lynred is among the first companies to demonstrate a longwave infrared (LWIR) pixel pitch technology for ADAS and PAEB systems that will optimize the size to performance ratio of future generation cameras. The 8.5µm pixel pitch technology will divide by two the volume of a thermal imaging camera, resulting in easier integration for OEMs, while successfully maintaining the same performance standards as larger-sized LWIR models.

[1] US Department of Transportation: Traffic Safety Facts 2019, Pedestrians Data, p.6 (DOT HS 813 079, published May 2021)

"Lynred is excited to show the automotive community at AutoSens Europe its prototype 8.5 µm pixel pitch thermal imaging sensor. It cuts in half the volume of a thermal camera, allowing for smaller lenses and other elements. With no trade-offs in performance, we believe that this 8.5 µm pixel pitch technology will represent an attractive option for future AEB systems," said Quentin Noir, product manager at Lynred.

Lynred will run a live demonstration showing the prototype QVGA 8.5 µm pixel pitch thermal imaging sensor embedded in a demo camera at AutoSens, booth #356.

About Lynred
Lynred, alongside its subsidiaries, Lynred USA and Lynred Asia-Pacific, is a global leader in designing and manufacturing high quality infrared technologies for aerospace, defense and commercial markets. It has a vast portfolio of infrared detectors that covers the entire electromagnetic spectrum from near to very far infrared. The Group's products are at the center of multiple military programs and applications and are key components in many top brands in commercial thermal imaging equipment sold across Europe, Asia and North America. Lynred is the leading European manufacturer for IR detectors deployed in space. www.lynred.com

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