

Road Safety: LYNRED launches CAPT640, Europe's first thermal imaging sensor for the automotive industry

This innovation will be unveiled at the AutoSens trade show in Barcelona from September 22 to 24, 2026 (Booth 152)

Grenoble, France, September 21, 2026 - According to the World Health Organization, [traffic accidents cause more than one million deaths worldwide each year, 53% of which are vulnerable road users \(VRUs\)](#). Faced with this major public safety challenge, automakers are working every day to improve their obstacle detection systems in order to reduce the number of collisions, particularly at night when visibility is poor.

Alongside them, LYNRED, the European leader in infrared imaging, offers a concrete solution to these challenges: facilitating the integration of thermal imaging into driver-assistance systems. Today, the company is launching its first thermal imaging sensor compatible with the needs of automotive applications: the CAPT640.

Where a visible-light camera is hindered by darkness, headlight glare, backlighting, rain, or fog, thermal imaging detects the heat emitted by living beings and objects to reliably identify the presence of pedestrians, cyclists, animals, or obstacles, regardless of lighting conditions or weather.

With more than twenty years of expertise in microbolometers and research partnerships, notably with CEA-LETI, LYNRED is now applying this proven technology to the automotive sector with the goal of promoting its adoption by automakers.

Microbolometers: technological masterpieces now available to the automotive market

CAPT640 expands the range of thermal imaging components available on the market for "night vision" applications. This 12-micron pixel pitch detector enhances the perception capabilities of driver-assistance systems. This technology thus ensures reliable detection of obstacles in the vehicle's path, without requiring lighting and while consuming very little energy.

It converts naturally emitted thermal energy, focused by an optical system, into a high-quality digital image thanks to its VGA resolution (640x480). Combining a wide dynamic range with high NETD (thermal sensitivity), the result is exceptionally rich in detail and enables reliable long-range detection.

While the existing market consists mainly of thermal imaging modules, the CAPT640 stands out because it is marketed as a bare die, allowing it to be easily manufactured and integrated in very large volumes.



A solution that meets the automotive industry's most demanding quality standards

With CAPT640, LYNRED has taken a strategic step forward by offering a component that complies with the automotive industry's two main standards.

As a reminder, in late 2025, LYNRED became the first European thermal imaging manufacturer to obtain a certificate of compliance with the IATF 16949 automotive standard, a true mark of quality for product design and manufacturing, which the CAPT640 now meets. This enables LYNRED to provide customers with a "Production Part Approval Process" (PPAP) that complies with automotive industry standards.

CAPT 640 is also part of the very select group of products certified to AEC-Q100 Grade 3 (-40 to +85°C), an international standard attesting to its robustness and reliability under the thermal, mechanical, and electrical stresses encountered in vehicles. The product has successfully passed more than thirty tests across various production batches, covering a

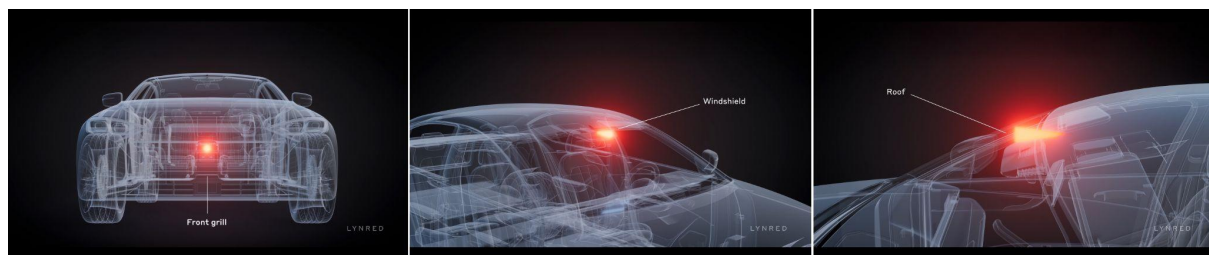
total of approximately 3,000 components, including, notably, temperature cycling tests at extreme temperatures, both during operation and when powered off.

This dual certification serves as a true mark of confidence for automotive suppliers and manufacturers, with whom LYNRED is already engaged in several projects.

Paving the way for future generations of safer autonomous vehicles

Suitable for use in night vision systems, the CAPT640 is already paving the way for much broader applications.

When combined with other sensors (visible-light cameras, RADAR, LIDAR, etc.), it can help improve automatic emergency braking (AEB) systems, advanced driver-assistance features, and future autonomous vehicles.



The CAPT640 can be mounted in a camera located on the front grille, the windshield or the roof.

It will also enable manufacturers to anticipate regulatory changes currently in the works (FMVSS 127, Euro NCAP, UNECE, GB, etc.), particularly in the United States, Europe, and Asia.

“With CAPT640, we are taking a major step forward in our growth strategy for the automotive market. For several years, LYNRED has been investing to adapt its long-standing expertise in infrared imaging to the extremely high demands of this industry. This launch represents a significant growth driver for our company and is accompanied by major industrial investments.

More than 100 million euros have been allocated to the expansion and modernization of our Campus in Grenoble in order to double our cleanroom capacity and meet the future mass-production needs of automakers.” - Nadia Souhami, Director of Microbolometer Products at LYNRED.

About LYNRED

LYNRED, together with its subsidiaries LYNRED USA and New Imaging Technologies (NIT), is a global leader in the design and manufacture of high-quality infrared technologies for the aerospace, defense and commercial markets. Its extensive portfolio of infrared sensors covers the electromagnetic spectrum from near infrared to very long-wave infrared. Its products are at the heart of numerous military programmes and applications and are key

components in many leading brands of commercial thermal imaging equipment sold across Europe, Asia and North America.

LYNRED is the leading European manufacturer of IR detectors deployed in space.

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