



LYNRED equips disruptive next-gen METOP-SG weather satellite

From tracking air pollution and greenhouse gases to forecasting extreme weather, the new European Metop-SG satellite, launched from Kuru, French Guyana, on August 12, 2025 at 9.37 p.m local time (August 13, at 02.37 a.m. Central European Time), is a game-changer for our understanding of climate change, and LYNRED is playing a key role at the core of the satellite.

Grenoble, August 13, 2025 - LYNRED, a leader in infrared imaging technologies, has supplied three of the four critical detectors onboard this new-generation satellite, which will orbit the Earth pole-to-pole to deliver near real-time data on the state of our atmosphere. The result? More accurate forecasts, better disaster preparedness, and a sharper view of the long-term effects of global warming. This programme is another concrete demonstration of the potential of infrared technologies for atmosphere and climate observation.

Seeing the invisible, from pollution to volcanic dust

LYNRED's infrared detectors (see technical features below) are embedded in key instruments aboard the Metop-SG satellite:

- Sentinel-5, which measures air quality and greenhouse gases like methane and carbon monoxide
- METImage, which monitors clouds, land surface, and temperatures
- 3MI, which analyzes atmospheric aerosols: fine particles that influence both climate and human health

These instruments provide critical insights for both climate scientists and public agencies. Data from Metop-SG will be used to issue storm warnings, track pollution episodes, monitor volcanic activity, and feed long-term climate models — ultimately helping governments, researchers, and citizens make informed decisions.

European-made tech for a global challenge

*"Whether it's droughts, fires or floods, the world needs sharper tools to understand and respond to climate change. At LYNRED, we're proud to provide the eyes that make that possible from space", said **Philippe Chorier, Space Business Development Manager at LYNRED**. "This launch confirms our role as a key supplier for the most ambitious earth observation missions in Europe and worldwide."*

Developed under European Space Agency (ESA) contract by a European industrial consortium led by Airbus Defence and Space, Metop-SG is the first satellite of EUMETSAT Polar System - Second Generation (EPS-SG). The programme will ultimately include six satellites, flying well into the 2040s, with LYNRED on board for the long haul.

Technical features:

- **Sentinel-5 (S5) is equipped with two NGP SWIR detectors:**
 - 1024 × 1024 pixels, 15 µm pitch
 - sensitive in the waveband 0.9 to 2.5 µm
 - integrated into a spectrometer covering two sub-bands: SWIR 1 (1590-1675 nm) and SWIR 2 (2305-2385 nm)
- **METImage includes:**
 - two custom-designed infrared detectors covering a total of 13 channels: 7 in the SWIR to MWIR range (1.24-4.07 µm) and 6 in the LWIR to VLWIR range (6.54-13.5 µm)
 - each channel is composed of 39 pixels (90 µm pitch) with a binning of 9 sub-pixels (30 µm pitch)
- **3MI is fitted with NEPTUNE SWIR detector (500×256 pixels, 30µm pitch) integrated in a multi-spectral optical radiometer for imagery in 4 SWIR bands : 0.91, 1.37, 1.65 and 2.13 µm**

The launch of Metop-SG marks another milestone in LYNRED's longstanding contribution to European and worldwide observation satellites, among which:

- [Sentinel 2 satellites series](#) with launches started in 2015
- Sentinel 5 precursor with TROPOMI instrument in 2017
- Flexible Combined Imager satellite (FCI) in 2022 as part of Meteosat Third Generation program
- [InfraRed Sounder \(IRS\) satellite](#) as part of Meteosat Third Generation program also in July 2025

About LYNRED

LYNRED, alongside its subsidiaries LYNRED USA, LYNRED Asia-Pacific and New Imaging Technologies (NIT), 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 sensors that covers the entire electromagnetic spectrum from near to very far infrared. Its 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.

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