Luxene Introduces Guidance Light Lines: active road markings for improved visibility in rain and darkness.

Eindhoven, The Netherlands, 10 March 2026

When rain, snow and darkness cause traditional road markings to fade, road users lose one of their most important safety references: clear visual guidance. At Intertraffic Amsterdam 2026, Dutch deep-tech company Luxene presents its Guidance Light Lines, a new class of intelligent, actively illuminated road markings designed to remain visible and reliable when conventional markings fail.

The Luxene Guidance Light Lines are embedded road markings that actively deliver and control light from a centralized roadside unit through durable guidance lines integrated into the pavement. One central unit can power up to approximately 400 metres of Guidance Light Lines. Unlike reflective paint or photoluminescent coatings, they do not depend on headlights or stored light. Unlike LED-based concepts embedded in the road, they contain no electronics in the pavement, ensuring long-term reliability, safe installation and simple maintenance.

"*Roads become most dangerous precisely when visibility is at its worst,*" says Maarten Tobias, CEO and co-founder of Luxene. "*The Guidance Light Lines give road users something they can always rely on: a continuous visual reference that remains visible in rain, darkness and snow, without putting fragile electronics into the asphalt.*"

For more than a century, road safety has depended on passive reflectivity. Painted lines bounce back headlight beams, but in wet or low-angle lighting conditions this effect breaks down as a thin water layer scatters the light, causing markings to disappear. Luxene overcomes this limitation by making the road marking itself an active, intelligent guidance element. Light is generated and controlled in a centralized unit safely away from the carriageway and delivered through the Guidance Light Lines, creating a continuous, clearly visible reference independent of vehicle headlights or surface reflections.

By keeping all active components off the road surface, Luxene combines the performance of an active lighting system with the durability and serviceability required for large-scale road infrastructure.

The Guidance Light Lines are engineered for deployment by road authorities and infrastructure operators. Centralized light and control enable dynamic brightness and intelligent operation. The absence of electronics in the road ensures resistance to moisture, vibration, frost and heavy traffic. Continuous linear guidance improves orientation compared to paint, road studs or reflectors, while compatibility with standard road marking layouts allows integration into both new and existing roads.

Throughout 2026, Luxene will deploy the Guidance Light Lines in multiple real-life pilot projects with municipalities, infrastructure owners and development partners in the Netherlands and beyond. These pilots will validate performance in environments such as cycling corridors, rural roads, curves, bridges and complex intersections. Based on these deployments, commercial release of the Guidance Light Lines is planned for Q4 2026.

"*Our goal is not to make roads brighter,*" Tobias adds. "*It is to make them clearer. Guidance is what saves lives when visibility disappears.*"

Where to see Luxene at Intertraffic 2026

Luxene will be exhibiting the Guidance Light Lines at Intertraffic Amsterdam 2026 in two locations:

- Luxene booth, ITSUP Start-up Zone, Hall 3, stand 0.300K
- TPaint booth, Hall 7, stand 2.30

About Luxene

Luxene develops intelligent, energy-efficient linear guidance systems for road and infrastructure applications. Its flagship product, the Guidance Light Lines, deliver actively controlled light through embedded road markings while keeping all electronics off the road surface. Luxene's mission is to improve orientation, safety and sustainability by providing reliable visual guidance exactly where and when it is needed most.

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