

Ford developing advanced illumination system and Spot Lighting

July 20 2015, by Nancy Owano



Ford is working on advanced lighting technologies to make night driving safer. These are advancements that make use of a regular camera and an infrared camera to detect cyclists, animals such as dogs and deer, and pedestrians on or near the roadway, and to determine whether the car is getting close to an intersection or a roundabout.

To be sure, driving at night on roads that are unfamiliar and unlit can be an unsettling experience. Road safety reports show that on unlit roads there is a significantly increased likelihood of [accidents](#), and that such

accidents could involve personal injuries, or fatalities, said Ford.

"[Many](#) people who drive at night have had to quickly react to someone or something suddenly appearing in the road – as if from nowhere," said Ken Washington, vice president, Ford Research and Advanced Engineering.

Ford is working on two new advancements, (1) Camera-Based Advanced Front Lighting System and (2) Spot Lighting.

First, Camera-Based Advanced Front Lighting: Camera-Based Advanced Front Lighting System was developed at Ford's European Research and Innovation Centre in Aachen, Germany. The system can widen the beam at junctions and roundabouts. At roundabouts, for example, the system helps the driver to see the exits and check if cyclists and pedestrians are crossing the road, said Michael Koherr, research engineer, Lighting Systems, Ford of Europe. Also, the system interprets traffic signs to better illuminate hazards that are not in the direction of travel.

The system uses GPS information to illuminate bends and dips on a route. "Where GPS information is not available, a video camera detects lane markings and predicts the road's curvature. When next the driver uses the same road again, the headlights adapt to the course of the road automatically," said the company. Ford also said they expect the technology to be available for customers "in the near term."

Spot Lighting, meanwhile, the second piece to the lighting picture to come, is in the "pre-development phase" at Aachen. The system uses an infra-red camera in the front grille to locate and track people and bigger animals at up to 120 meters, said Ford. The system spotlights hazards for the driver with a spot and a stripe on the [road](#) surface. Also, highlighted objects are displayed on the screen inside the car. The highlighted objects are marked in a red or yellow frame, according to the proximity

of the object and level of danger.

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