

**The world premiere :  
Koito Intelligent AFS (Adaptive Front lighting Systems) on the market**

KOITO MANUFACTURING CO.,LTD. of Tokyo, headed by President Junsuke Kato, has become the world's first lamp maker to mass-produce Intelligent AFS.

The Intelligent AFS that Koito has developed and is now mass-producing is capable of automatically swiveling the headlamp low-beam unit in the horizontal directions according to steering angle and vehicle speed.

The Intelligent AFS of Koito achieves the illumination of a remarkably wide area in the direction of the vehicle's turn. Due to expansive field of vision obtained, the AFS secures greater safety while driving in bending roads and making turns at night.

Koito took its first AFS step when the company joined Japan's Advanced Safety Vehicle Project with automobile manufacturers under the sponsorship of the Japanese Ministry of Land, Infrastructure and Transport (MLIT) since 1990.

Taking advantage of the technologies cultivated in that project, Koito became the first company outside Europe in 1999 to be an official member of the AFS project,<sup>\*2</sup> a program of the EUREKA Project,<sup>\*1</sup> and has been conducting research and development.

In September 2001, Koito was the first automotive parts supplier having its Intelligent AFS prototype vehicles permitted by MLIT to perform running experiments on public roads.

In October 2002, the Appendices to the Safety Regulations under Japan's Road Vehicles Act were amended to legally recognize a category of "headlamps with adaptive lighting for bending roads" allowing AFS to be mounted on vehicles on a commercial basis.

Koito teamed with Toyota and Denso to mount the world's first Intelligent AFS on new TOYOTA HARRIER, which has just been put into the market on February 17, 2003.

Regarded as a promising preventive safety technology, AFS is expected to be introduced into many other mass-production car models within the near future.

For even greater safety, Koito plans to further evolve its AFS to bring about optimal headlamp lighting that can automatically adapt to different types of roads such as city streets, suburb roads and expressways, to different weather conditions such as rain and fog, and to changes in the vehicle speed.

\*1 EUREKA Project - An international joint research project in the telecommunication, environmental and transport technology fields with the participation of European governments, corporations and research institutes; agreed by the EU Council of Ministers in 1985.

\*2 AFS project - One of (project No. 1403) the programs within the EUREKA Project, aimed at the development and legislation of adaptive front lighting systems capable of automatically controlling the headlamp light distribution in response to changes in the conditions of roads, weather and other driving environment factors.

(Please see the next page for illustrations of AFS structure and features.)

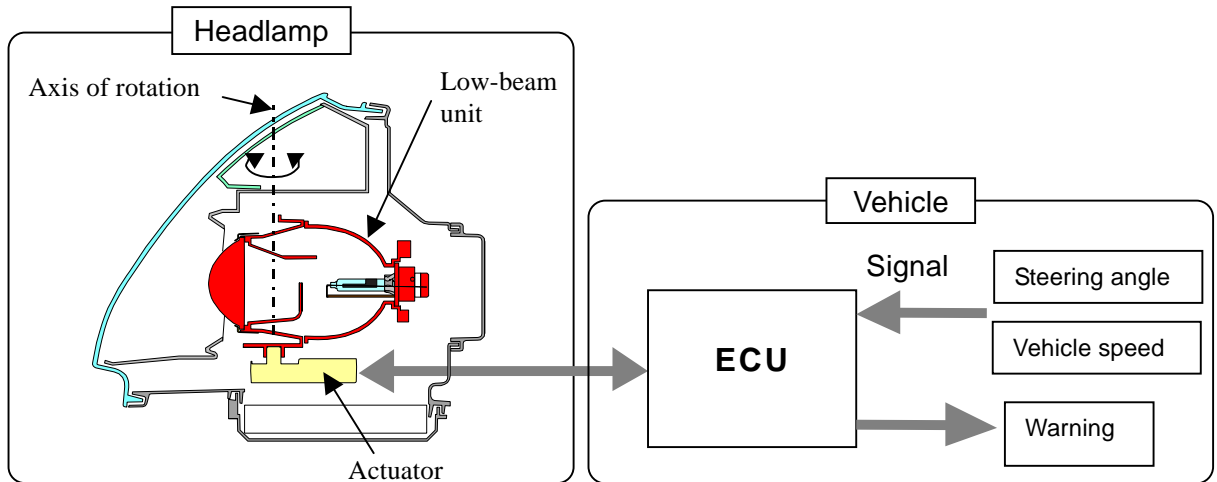
For more information, contact:

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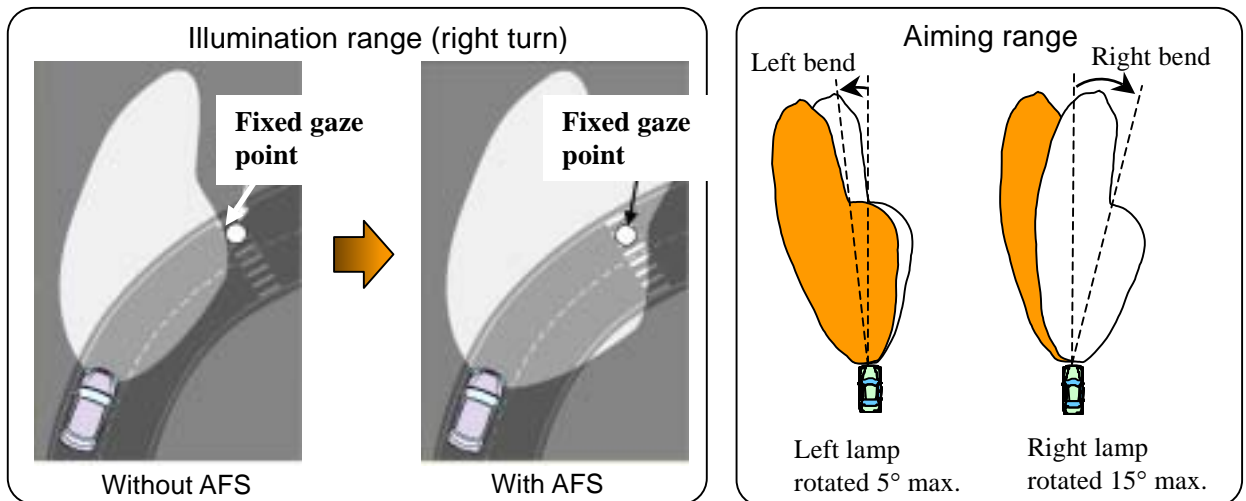
## Structure and Features of Intelligent AFS (Adaptive Front lighting System)

### 1. System Structure



The turn radius is calculated through signals from steering angle and vehicle speed, and the low-beam axis is rotated to right and left to provide the optimal illumination in the most appropriate direction.

### 2. Features



A wider illumination range in the direction of the vehicle's turn is secured by shifting the light beam towards the direction, enabling earlier detection for safer and prompt actions to prevent accidents.