



Backgrounder

Contacts: Cindy Carey / Tina Sullivan Neal Zipser
 Bianchi Public Relations MEMA
 248-269-1122 919-406-8811
 ccarey@bianchpr.com nzipser@mema.org
 tbsullivan@bianchpr.com

ADAPTIVE FRONT LIGHTING SYSTEM FACT SHEET

The Adaptive Front Lighting System (AFS) is an intelligent lighting system that optimizes night-time illumination by using left and right headlamps and/or beam patterns. AFS automatically modifies the headlamp system in response to various changes in weather and driving and road conditions to provide the driver with optimum visibility. AFS technology is available with both Xenon and halogen lighting technologies.

AFS provides additional light on the road, significantly increasing driver visibility and reaction time to pedestrians, curbs, rails, road lines and signs. By minimizing the driver's workload, AFS enhances driver comfort by reducing fatigue and stress.

The Motor Vehicle Lighting Council – a coalition of the leading global automotive lighting and component manufactures and related education and research institution – is working to inform the motoring public about the benefits associated with this advanced lighting technology. For more information on AFS visit www.mvlc.info.

Features of AFS – Static and Dynamic Light:

Static bending light is comprised of **fixed side light sources** that are activated during **slow-speed sharp turns**.

- Light sources provide greater side visibility by illuminating the road in the direction the vehicle is turning
- Sensors that monitor vehicle speed and direction, such as steering wheel angle, automatically activate the light sources
- Some systems incorporate light sources in addition to the vehicle's standard headlamps

Dynamic bending light **moves** the headlamp **beam laterally right/left** when the vehicle is traveling at **high speeds on large radius curves**.

- Provides a narrow horizontal beam spread that increases driver seeing distance
- Sensors that monitor vehicle speed, steering wheel and road angle automatically activate the narrower beam pattern
- Dynamic bending light can be used with low- or high-beam headlamps

- More -



AFS Lighting Options:

Citylight:

- Lowers the headlamp aim and increases the horizontal spread of the light source to provide additional illumination of sidewalks, intersections, pedestrians and curbs in high traffic and poorly lit areas
- This feature is automatically activated at vehicle speeds below 37 mph

Motorway:

- Raises the headlamp beam pattern to improve driver seeing distance without increasing glare to on-coming traffic
- Sensors automatically activate this feature at speeds above 50 mph

Adverse weather:

- Lowers the headlamp aim to improve side lighting during inclement weather conditions such as rain, fog, snow and dust storms
- Activated with a manual control switch or through vehicle sensors

Appearance to On-Coming Drivers:

Due to the design limitations of the swiveling angles for the headlamps, AFS is not noticeable to oncoming drivers. Industry and government research studies show, that regardless of the direction the vehicle is turning, oncoming drivers have difficulty identifying whether or not the vehicle is equipped with AFS technology and that under most driving conditions, AFS reduces glare to oncoming drivers.

North American Vehicles Equipped with AFS:

2004

- Acura – RL
- Audi – A8
- BMW – 330C, 5 Series, 7 Series, X3, X5
- Lexus – LS430, RX330
- Mercedes – E Class, SLK, SLR
- Porsche – Cayenne

2005

- BMW – 6 Series

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