



9450 SW Gemini Drive
PMB 44671
Beaverton, OR 97008

March 24, 2022

BY EMAIL

Steven Weinstein, General Counsel
Farmers Insurance
steve.weinstein@farmers.com

Re: LED Headlights Are Unapproved

Dear Steven Weinstein,

The National Highway Traffic Safety Administration publishes the Federal Motor Vehicle Safety Standards. Standard 108, Lamps, Reflective Devices, and Associated Equipment, was written in 1966 and applies to electromagnetic human-visible light that is emitted with uniform energy. This type of light is called a point source.

After FMVSS-108 was written, a new type of light was developed called a surface source. Surface source light, such as LEDs and lasers, has non-uniform energy. NHTSA has never updated FMVSS-108 to include surface source light. Any vehicle using a surface source light such as LED for a vehicle headlight, taillight, brake light or turn signal is using an unapproved and illegal lighting device. This has significant implications for your company.

Neither NHTSA nor the Insurance Institute for Highway Safety have trained their staff on the difference between point source and surface source light, and therefore NHTSA and IIHS researchers are using invalid data and reaching invalid conclusions about LED headlights. NHTSA and IIHS are measuring LED brightness with the incorrect metric of luminous intensity and using invalid precision. The correct metric for LED brightness is luminance measured in near-field.

We have created a short video that explains in simple terms the reason why LED headlights are illegal and dangerous: <https://youtu.be/CA1gfgOmdY4>

Our petition to ban blinding LED headlights has tens of thousands of signatures: <https://www.change.org/p/u-s-dot-ban-blinding-headlights-and-save-lives>

We encourage your company to investigate the consequences of insuring vehicles with illegal LED headlights and to demand that IIHS use the proper measurement techniques for LEDs.

Sincerely,

Mark Baker

Mark Baker
President

Soft Lights Foundation
mbaker@softlights.org

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**YOU DON'T HAVE THE RIGHT
TO SHINE YOUR  LIGHT
IN MY **