

What's New in Headlight Tech? Quite a Bit, Actually

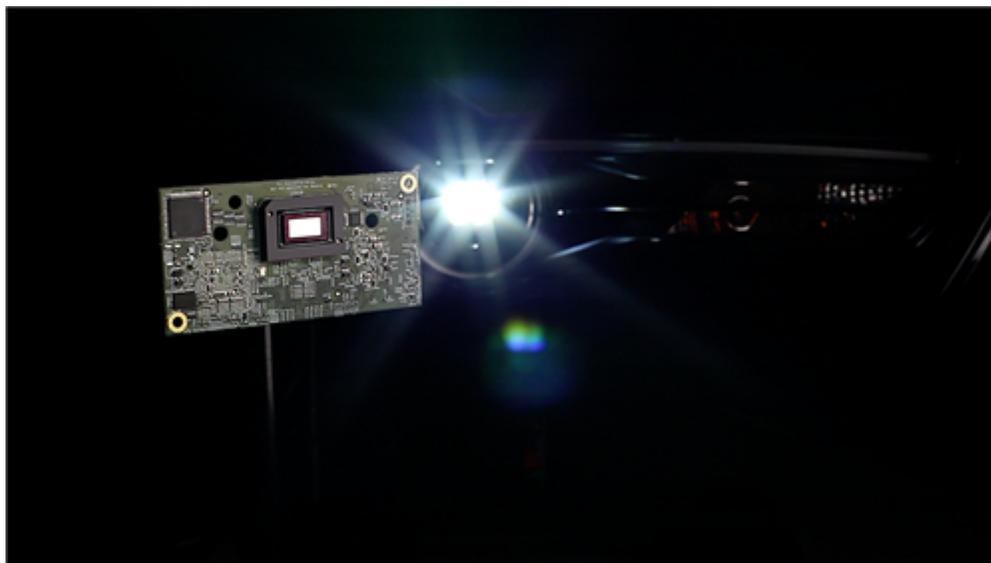


Brian Ballard

A lot has changed in the automotive industry in the last 100 years, but headlight systems have essentially served the same purpose since their inception. This trend has begun to change with the advent of adaptive driving beam (ADB) technologies.

At TI, we recognize the game-changing potential that ADB solutions could have on the future of automotive. That's why we have combined our [deep expertise in automotive technology](#) with our pioneering know-how in [TI DLP® technology](#) to develop a new generation of headlight systems that can do more than simply shine a beam of light brightly in one direction.

I believe we can bring added functionality to the way vehicles illuminate the road ahead. We are currently working on a new, fully programmable solution for headlight systems that offers the highest resolution available with more than one million addressable pixels per headlight – easily exceeding the resolution of existing ADB technologies by more than 10,000 times.



TI DLP technology allows developers to create lighting solutions that can be programmed to do things like project symbols and animations, or turn the beam to match hills and curves on the road. Customers can also develop solutions that partially or fully dim individual pixels, which could lead to headlight systems that allow drivers to keep their high beams on while operating their vehicle in all conditions without impacting other drivers.

Best of all, thanks to the flexibility of DLP technology, these headlights can be illuminated from either LED or laser light sources, while using less power and taking up about the same footprint as existing ADB solutions.

The driving factors leading this evolution are the automakers and suppliers who are looking to technology companies like TI for ways to differentiate their products. We are proud of our existing portfolio of automotive solutions and look forward to sharing more details about our next-generation high resolution headlight systems soon.

Right now, we have select customers sampling and designing with DLP technology for high resolution headlight systems. The high-resolution DLP5531-Q1 chipset will be more broadly available later this year (2018). Until then, I encourage you to visit our [website](#) to learn more about our capabilities with this exciting technology.

Additional resources:

- Explore [DLP technology](#) for automotive solutions, including head-up displays (HUDs)
- Read our blogs on [augmented reality HUD](#) and [aftermarket HUD systems](#)
- Learn more about how automotive lighting systems are changing with ADB technology on our [blog](#)
- Discover TI's innovative analog and embedded processing portfolio that customers can use to design differentiated [body electronics and lighting systems](#) for any type of vehicle

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