

Optikos® is at the forefront of the automotive imaging evolution.

Optics On the Road

Automobiles today rely on more technology than ever before, and increasingly include optics-based active prevention technologies, such as:

- Pedestrian detection and avoidance
- Lane keeping systems
- Lane change assist
- Forward collision warning systems
- Lane departure warning systems
- Back up and parking aids
- Night vision systems
- Laser (LiDAR)

As new technologies emerge, stricter and more comprehensive regulations for safety and image quality are being issued by organizations such as the (US) National Highway Traffic Safety Administration (NHTSA), United Nations (UN Regulation No.46), and Autonomous Vehicle Safety Regulation World Congress. Many features offered as vehicle options now will become required life-saving technologies on all new vehicles.

Optikos® brings a legacy of creative optical engineering to these new opportunities. Our patented Meridian® technology is a key enabler for testing wide field cameras in a production environment. Our expert engineering teams have metrology experience with unique metrology problems like measuring the effects of stray light on camera performance when imaging through windshields and window glass. Whatever the application, Optikos® has a track record of providing creative and economically viable products and designs, including:

- Comprehensive analysis of automotive camera system and component performance.
- Compact camera metrology systems for high speed image quality assessment in production environments.
- Systems and accessories for testing the stray light performance of lenses and cameras.
- Custom test setups and systems for systems with unique applications with challenging metrology requirements, like LiDAR.

Production Level Glare Spread Function Camera Measurement



Meridian® Sunfield

A relatively new addition to the Meridian® Family, the Sunfield provides a fixed array of bright objects (Sol projectors) against a black background to enable Glare Spread Function (GSF) measurements in a production environment. Like the Starfield, the Sunfield is tailored to the specific requirements of each customer. It can be designed for one DUT type, or it can be designed to accommodate multiple DUT types with one system.

Automotive Products and Services

Automotive Camera Testing



Meridian® Family

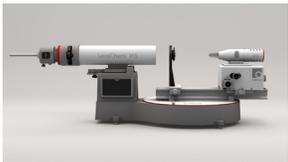
Heightened expectations regarding high quality imaging performance and the use of many wide FOV cameras in automotive safety systems have established a need for high performance test equipment for these devices that did not exist just a few years ago. Wide field cameras require wide test targets, and there comes a point at which placing enormous printed test targets at a large distance can no longer serve this need. The members of the Meridian® Family address this by generating fields of virtual objects in a compact space, and include testing flexible options for a variety of high throughput environments.



Long Wave Infrared Static Target Projector

This static target projector is the most recent addition to the Meridian® Family and has been designed specifically to serve the needs of the burgeoning automotive thermal camera industry. Although the projected object distance is fixed, this projector differs from the visible and NIR products by offering both user configurability and on-board controls. As is the case with the visible and NIR STP family, an array of LWIR STPs may optionally be configured by Optikos® in a Starfield mount at field angles specified by the customer.

Automotive Lens Testing



LensCheck™

Leading automotive manufacturers are relying heavily on cameras to improve vehicle performance and safety, especially in challenging environments with reduced visible illumination or stray light contamination. The LensCheck™ system is the ideal metrology tool for measuring automotive camera lenses, both in the visible and long wave infrared ranges. Stray light and GSF testing can be added to the VIS LensCheck™ with the optional Stray Light Kit to provide accurate testing of automotive lenses in a variety of challenging situations.



TM-1010 Thermal Module

Automotive cameras are subject to extreme temperature fluctuations, which means testing lenses over temperature is critical for proper lens validation. The TM-1010 Thermal Module option for LensCheck™ is specifically designed to test small aperture automotive lenses with fields of view up to 160° over temperature from -30° to +100° C. The TM-1050 and TM-1065 are also chambers for the LensCheck™ for testing larger VIS and NIR lenses.

Learn More



at [optikos.com](https://www.optikos.com)

v1.0



The Optical Engineering Experts®

Anywhere Light Goes®

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