Light & Vision

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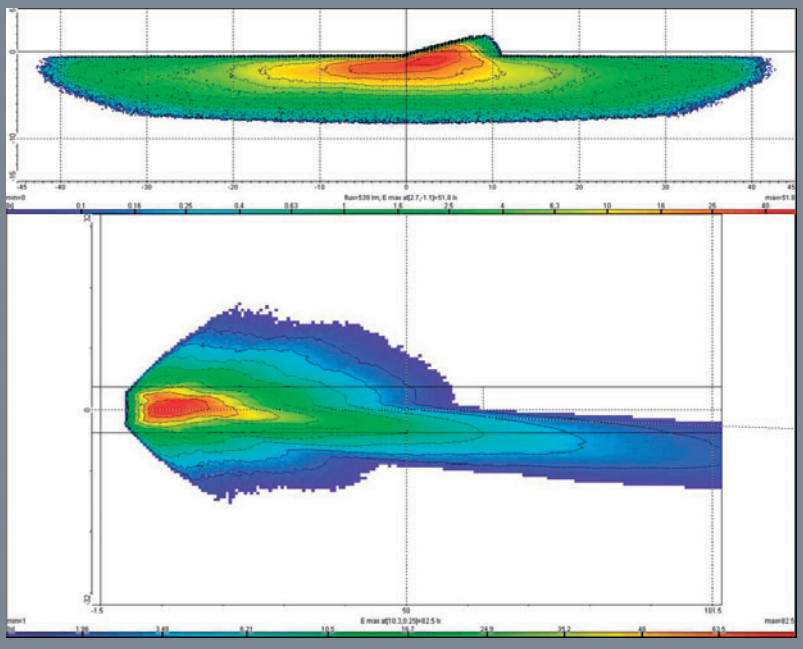
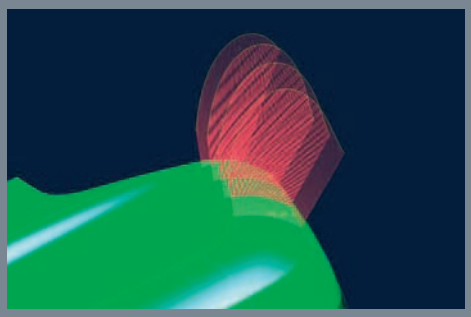
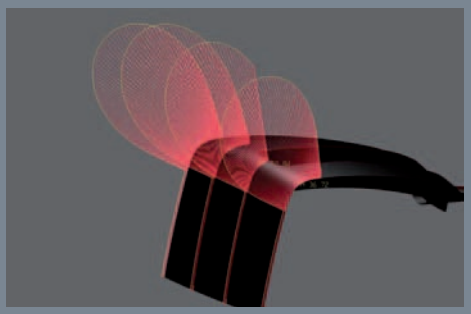
The Light & Vision department works on all aspects of lighting technology from head lamps to taillights as well as on vision components, such as mirrors and wiper systems. Our service profile covers the entire engineering process from concept formulation to production support. Including design harmonization, class-A surfacing, simulation, design engineering and vehicle integration, the spectrum extends through to on-vehicle validation, testing and field support for all lighting and vision components.



Employing over 3,000 staff across the globe, IAV is one of the leading providers of engineering services to the automotive industry. Our core competencies include powertrain, electronics and vehicle development. As a result, we can provide our clients with production-ready solutions for the entire vehicle on a one-stop shop basis. Our clients include all major automobile manufacturers and component suppliers.





The Light & Vision section develops and integrates various lighting components:

- Headlamps
- Taillights, indicator lights
- Interior illumination
- Mirror electrics
- Wipe/wash systems

Development is embedded in IAV's expertise in the overall vehicle. Working hand in hand with our package, DMU, exterior, interior, vehicle electrical system and algorithm development departments, we can provide you with support in projects from COP integration to system engineering.

Our service portfolio covers:

- Design harmonization and class-A surfacing
- Technology development and simulation
- Vehicle integration
- Rapid prototyping
- Production-ready development
- Validation and testing

The work we carry out in these fields is done using standard tools commonly found in the automotive industry. For example, class-A surfaces on headlamps and lights are developed and visualized as 3D models in ICEM Surf. Photorealistic renderings are furnished for design evaluation.

Optical components are simulated using LUCIDSHAPE. Isolux curves and simulated scenes of an illuminated road provide part of the basis for optimizing components.

Depending on requirements, we use CATIA V4 or V5 for designing all components and managing their package.

In the field of rapid prototyping, our model builders can draw on many years of experiences with state-of-the-art methods, such as stereo lithography, enabling us to produce demonstrators, light patterns, and prototypes in the short term.

In addition to assessing components photometrically at the validation and testing stage, we also run all other tests required for integrating them in the vehicle. Alongside this, we are developing innovative camera-based measuring techniques to speed up and improve the reliability of current test procedures.

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