

Optical Shape Design

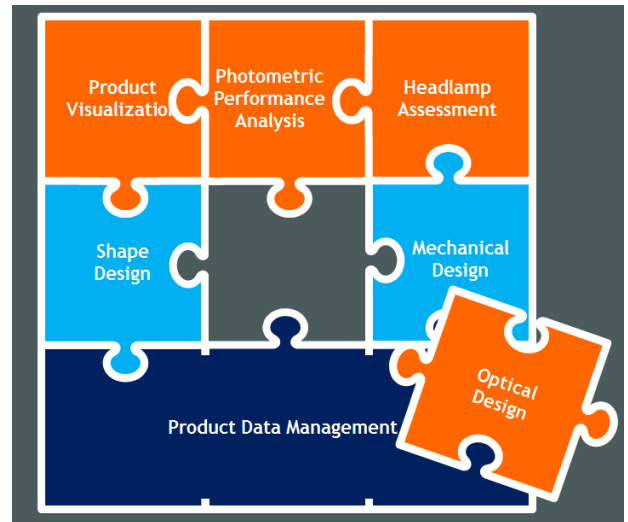
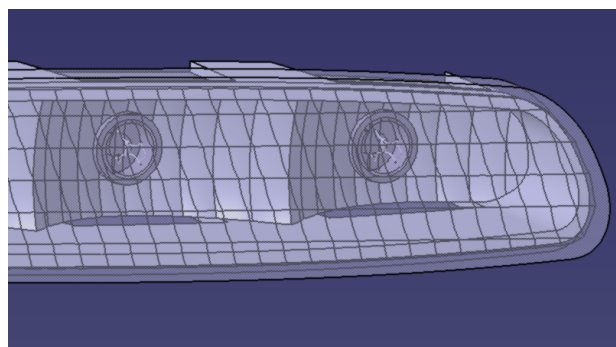
SPEOS CAA V5 BASED



Like for any industrial products, design of optical and lighting systems have to be integrated in the Product Lifecycle Management to support mechanical design completion, security storage, concurrent engineering, versioning...

However, lighting system design requires dedicated and specific functionalities not available in standard CAD packages in order to create optical shapes that achieve photometric performances and style requirements.

Optical Shape Design completes SPEOS simulation and analysis product line (Light Modeling, Visual Ergonomics and VRXperience) with geometrical modeling capabilities dedicated to optical and lighting system design within CATIA V5.



Keys benefits:

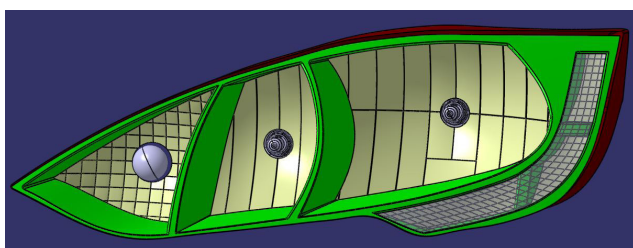
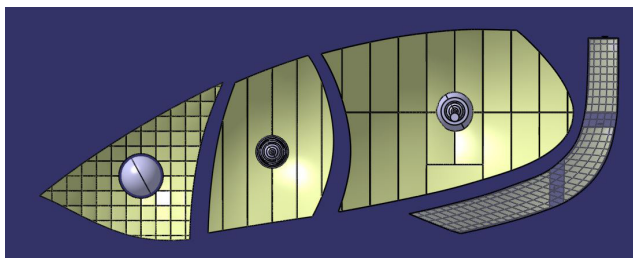
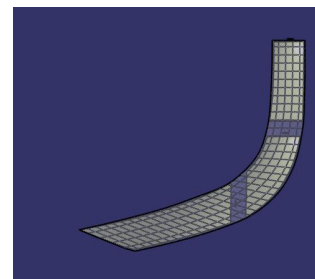
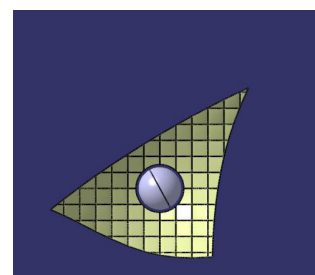
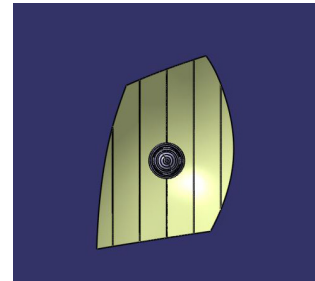
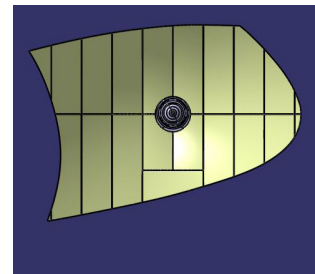
- Provides unique solution for optical and lighting system design within CAD/PLM environment.
- Supports the full design process from early conceptual phase up to production go
- Widens lighting concepts investigation spread by being usable by industrial designers.
- Shortens engineering development by increasing optical engineer productivity
- Facilitates communication between customer and supplier by using the language of 3D.

SPEOS-OSD provides an intuitive and powerful suite of tools to create lighting components such as reflectors, lenses, light guides... from both mechanical and optical specifications. It complements CATIA V5 geometric workbenches with functionalities:

- To create innovative surfaces having specific optical behavior (sharp cutoff , ...)
- To automate design of complex components having many optical sub-elements (optical facets, pillows optics, stripes, prisms,...)

Being fully integrated in CATIA V5, **SPEOS-OSD** cancels transfer tasks via neutral file format and their associated drawbacks (failures, accuracy losses, waste of time). Beyond this, it takes advantage of the standard capabilities of modern CAD tools such as:

- Features associativity enabling a rapid propagation of design changes
- Capture of design intent limiting manual reworking during design iteration
- Solids management removing time-consuming trimming operation tasks.



From the early conceptual phase, **SPEOS-OSD** enables designers without advanced optical knowledge to quickly and easily investigate different style options even before the identification of the supplier:

- Saving time and cost of subcontracting multiple alternatives study.
- Giving back to the OEM the opportunity to master the lighting signature of their products

SPEOS-OSD is also fully interoperable with SPEOS product family:

- SPEOS-Light Modeling for photometric performances analysis
- SPEOS-Visual Ergonomics for lit/unlit appearance simulation
- VRXperience for virtual assessment of headlamps providing both:
 - Performances results to optimize the optical*
 - Aesthetic simulation results to support style decisions*