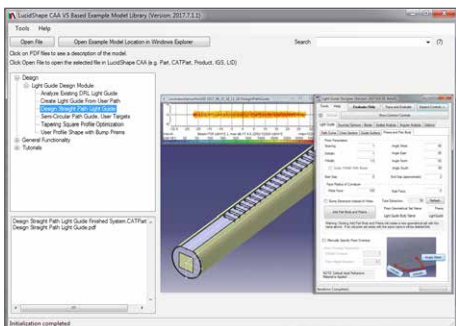
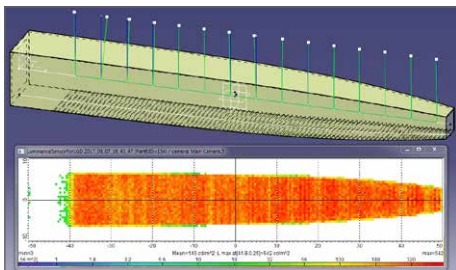
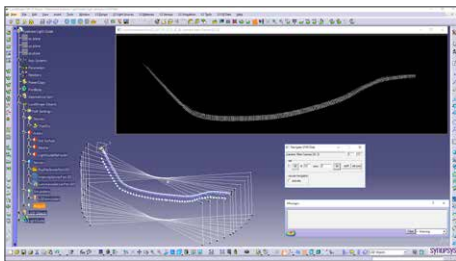
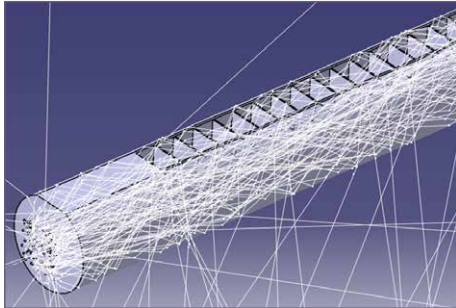


# LucidShape CAA V5 Based Light Guide Design Module



## Efficient Light Guides, Efficiently Designed

The LucidShape® CAA V5 Based Light Guide Design Module helps you accelerate the design of high-performance light guides that deliver:

- Optimized angular light distribution
- Optimized spatial light distribution (uniform or intentionally non-uniform)
- Automotive lighting products that meet performance, styling, visual branding and regulatory requirements

## Full-Featured Light Guide Design in the CATIA V5 Environment

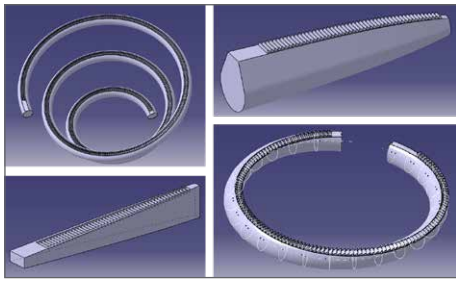
The LucidShape CAA V5 Based product is an interactive tool that allows designers to perform optical simulations and analyses of automotive lighting products within the CATIA V5 environment. Because of the tool's complete integration within CATIA V5, designers who are familiar with CATIA can easily leverage LucidShape's powerful features with a minimal learning curve.

In combination with the LucidShape CAA V5 Based product, the Light Guide Design Module allows you to create light guides with prismatic extractors and then optimize the size of the prisms and the prism face angles to achieve a desired (typically uniform) spatial distribution in specified light directions. With the LucidShape Test Tables feature, you can ensure that your design passes regulations for ECE, FMVSS, JIS, and more.

## Fast Geometry Creation

The Light Guide Design Module helps you quickly create and adjust model geometry.

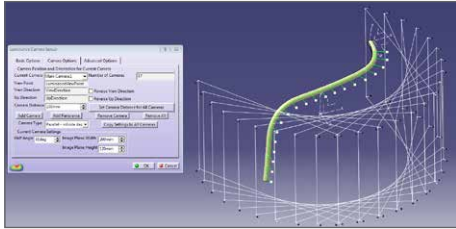
- Create a light guide starting with a path curve and selected profile. Built-in profiles (such as a partial circle and keyhole) are available, as are user-created shapes
- Specify the light direction targets, and profiles are automatically rotated to meet your specifications
- Rotate and scale geometry profiles in a profile data listing or directly in the model
- Choose additive (bump) or subtractive (hole) prisms and apply them to your light guide
- Choose from LucidShape's extensive library of pre-defined media that include measured dispersion and absorption data for precise spectral modeling



- Add LucidShape sources, sensors, and simulations to your CATIA model and perform analysis on the spatial and angular distributions of light exiting the light guide
- Adjust parameters using an intuitive Bézier interface
- Automatically add fillets to different prism edges
- Add curvature to prism faces

## Automatic Design Optimization

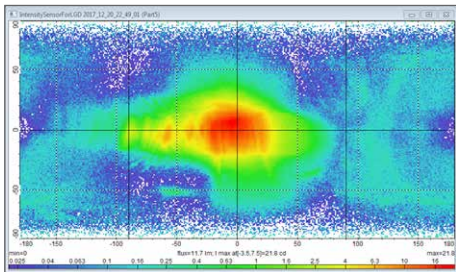
Automatically achieve outstanding light guide designs with the Light Guide Design Module's integrated optimization capability. Define your performance criteria and let the software find the design parameters to achieve the desired illumination output.



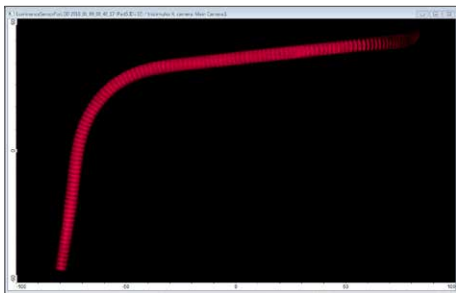
- Automatically optimize the size of prisms to provide a uniform (or intentionally non-uniform) spatial light distribution.
- Concurrently optimize the prism face angles to match angular pointing targets.

## Analyze and Refine Your Light Guide Design

The Light Guide Design Module provides interactive analysis and visualization features to help you examine the light guide's intensity and spatial luminance. You can then make final geometry adjustments and re-optimize the model to refine your design.



- Examine the intensity contributions from different regions along the length of your light guide.
- Use a luminance camera panorama to view spatial luminance from different directions.
- Apply smoothing to the size and angle of prisms.
- Specify a die pull direction and reference prism angles to that direction.



**For more information or to start your free 30-day evaluation, please contact Synopsys' Optical Solutions Group at (626) 795-9101, visit [synopsys.com/optical-solutions/lucidshape](http://synopsys.com/optical-solutions/lucidshape) or send an email to [optics@synopsys.com](mailto:optics@synopsys.com).**