

# SmartOptics™ for Pro/ENGINEER

Radical productivity improvement for your Pro/ENGINEER implementation

## What is SmartOptics?

SmartOptics is software developed for Pro/ENGINEER that automates all aspects of design and simulation of optical paths directly in the Pro/ENGINEER assembly.

SmartOptics guides the user through the definition of the part properties or surfaces (i.e. refraction index, mirror property, etc.) in a user friendly graphical user interface. It then computes all resulting optical paths and shows them graphically in the Pro/ENGINEER window. Furthermore, SmartOptics is not restricted to simple geometrical base elements, so even the optical behavior of mirrors or lenses with free-form surfaces can be calculated.

SmartOptics considers the following optical properties of parts:

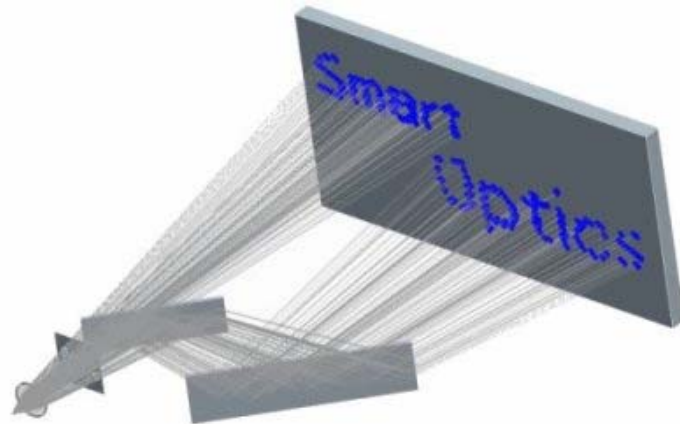
- Reflection
- Refraction
- Total reflectance
- Light diffusion
- Loss of intensity

## Key Features

- Automatic creation of optical paths in Pro/ENGINEER assemblies.
- Interactive graphical definition of optical elements
- Automatic creation of resultant geometry (curves or points)
- ASCII file output of resultant data

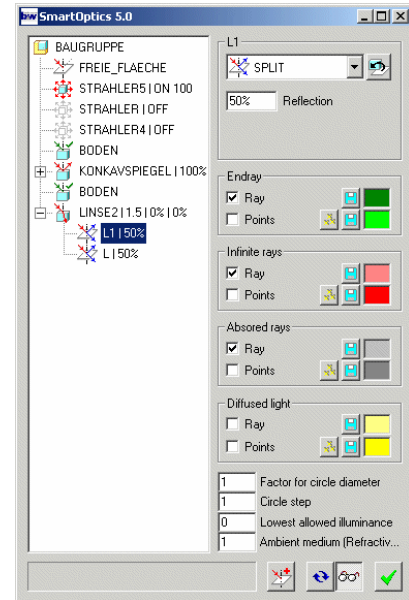
## How It Works

- Define the properties of the parts or surfaces (i.e. refraction index, mirror property, etc.) in a user friendly graphical user interface.
- With a simple mouse click, SmartOptics computes all the resulting optical paths and show them graphically in the Pro/ENGINEER window.
- Optionally, resultant geometry can be created.
- Optionally, all resultant data can be exported.



## Typical Applications

- Construction of optical components like lenses and mirrors
- Determination of discontinuities in optical assemblies
- Inspection of the field of vision
- Calculation and visualization of luminosity



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