

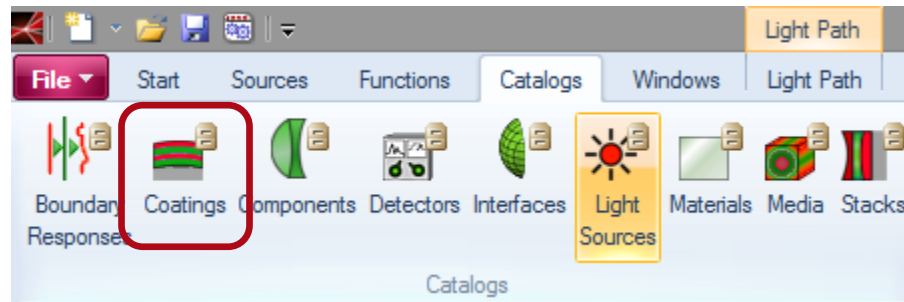
UseCase.0018 (1.0)

## Coating Catalog

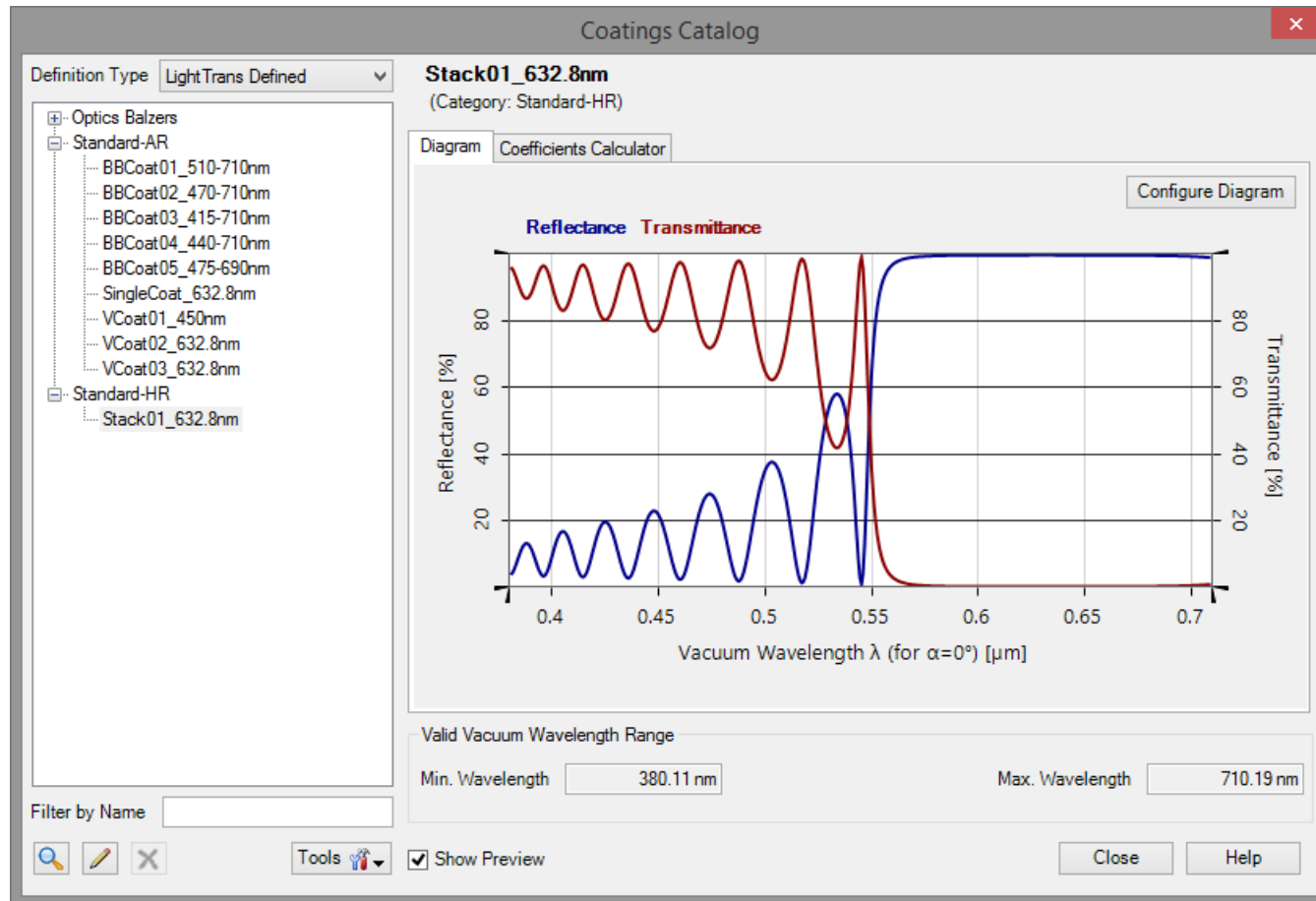
**Keywords:** layer, anti-reflection, high-reflection, material, stack

# Description

- This use case demonstrates the usage of the coating catalog.
- It contains pre-defined coatings from different vendor catalogs.
- The usage of the preview of a coating will be shown
- The coating catalog can be accessed by the corresponding item in the catalog ribbon.

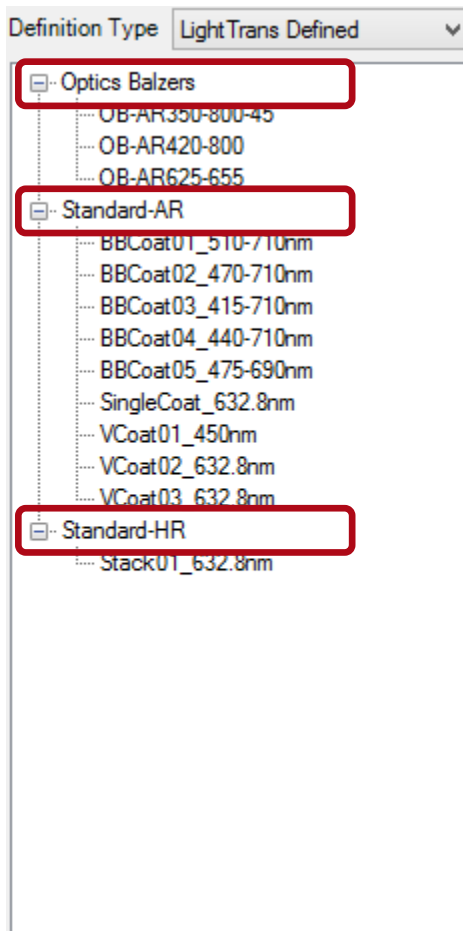


# Coating Catalog



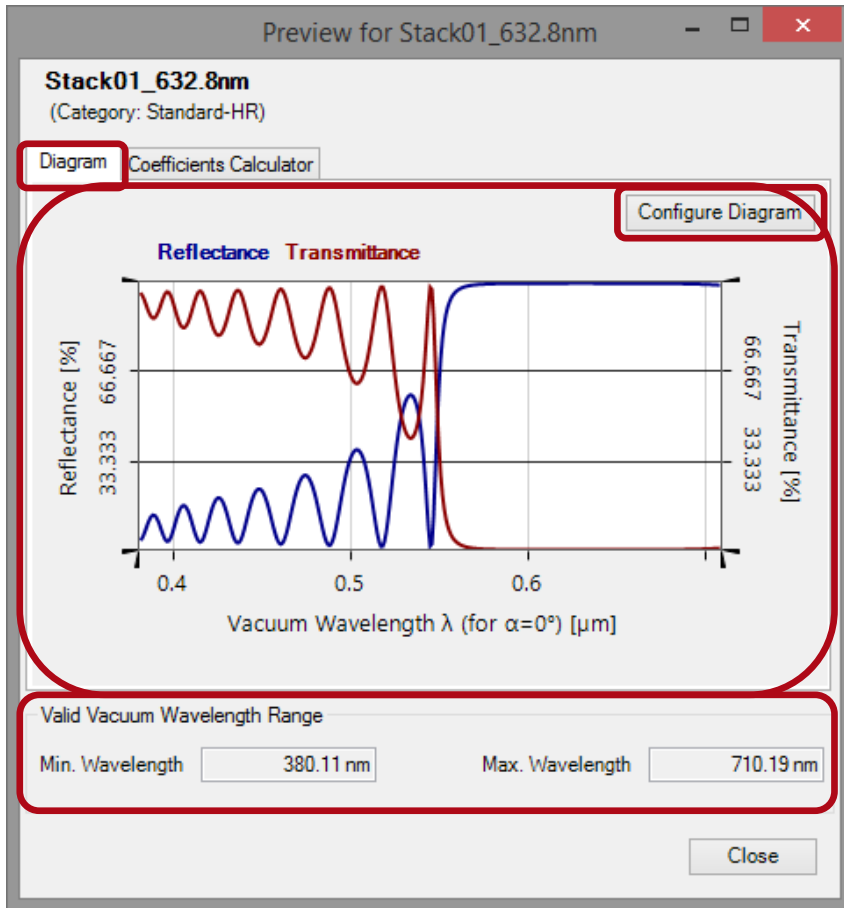
Coatings contain a specification of a layer stack.  
The layers are described by a thickness and a material.

# Available Items within the Coating Catalog



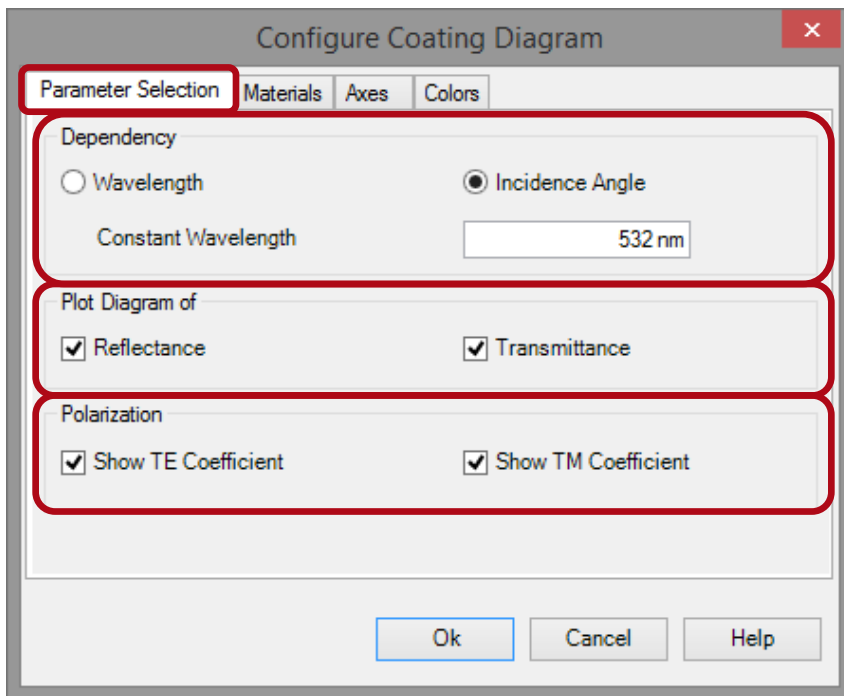
- Within the LightTrans-defined catalog the user can access several pre-defined coatings.
- Pre-defined coatings are available from the vendor Optics Balzer and also for standard anti- and high-reflecting coatings.

# Coating Preview - Diagram



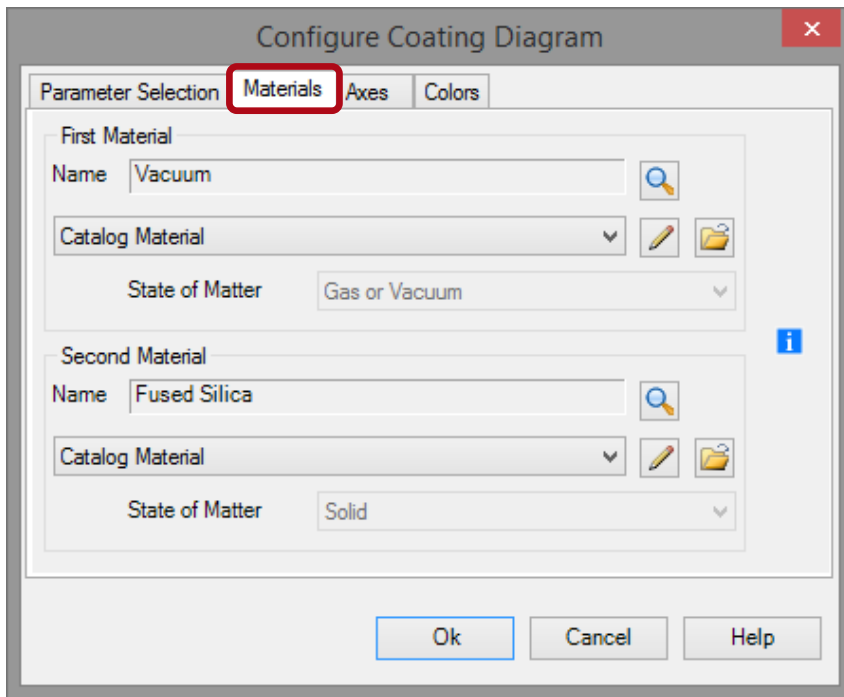
- At the bottom of the preview the user can find the minimum and maximum wavelength for which the coating is defined.
- The preview of the coating shows a diagram, visualizing the reflectance and the transmittance of the selected coating.
- The diagram options can be configured in a separate dialog.

# Coating Preview – Diagram Options



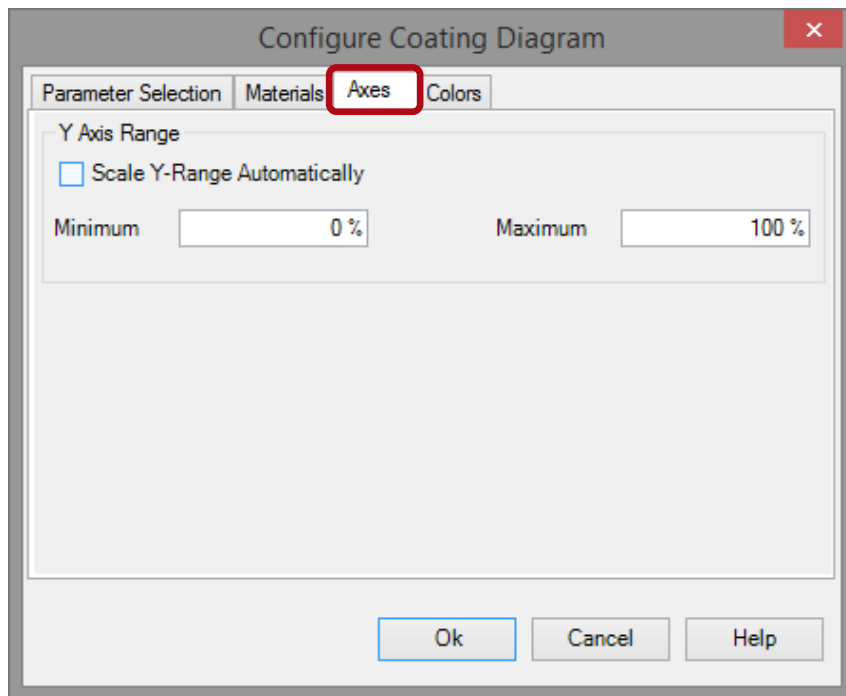
- The user can define whether reflectance and/or transmittance shall be shown.
- The user can select whether to use the
  - Wavelength
  - Incident Angle
- In case of incident angle regard, the user can select the display of TE/TM coefficients.

# Coating Preview – Diagram Options



- For the evaluation of transmittance and reflectance it is necessary to know the material before and after the coating to be analyzed/viewed.
- This can be done on the Material tab page.
- The user can use the material catalog to define these materials.

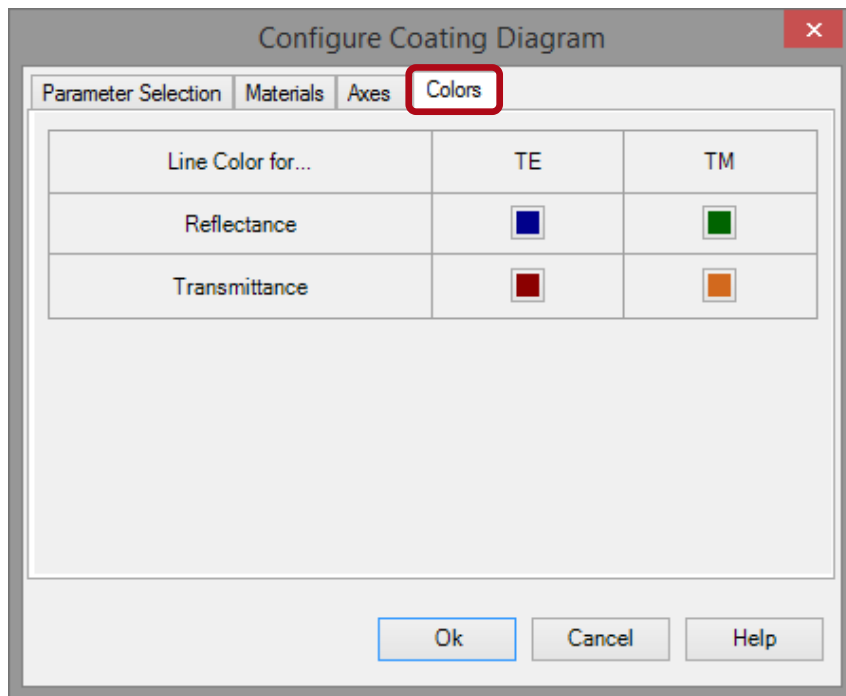
# Coating Preview – Diagram Options



- Additionally the user can define whether automatic scaling for the y axis shall be used.
- The user can define minimum and maximum for the range of the y axis in case of manual scaling selection.

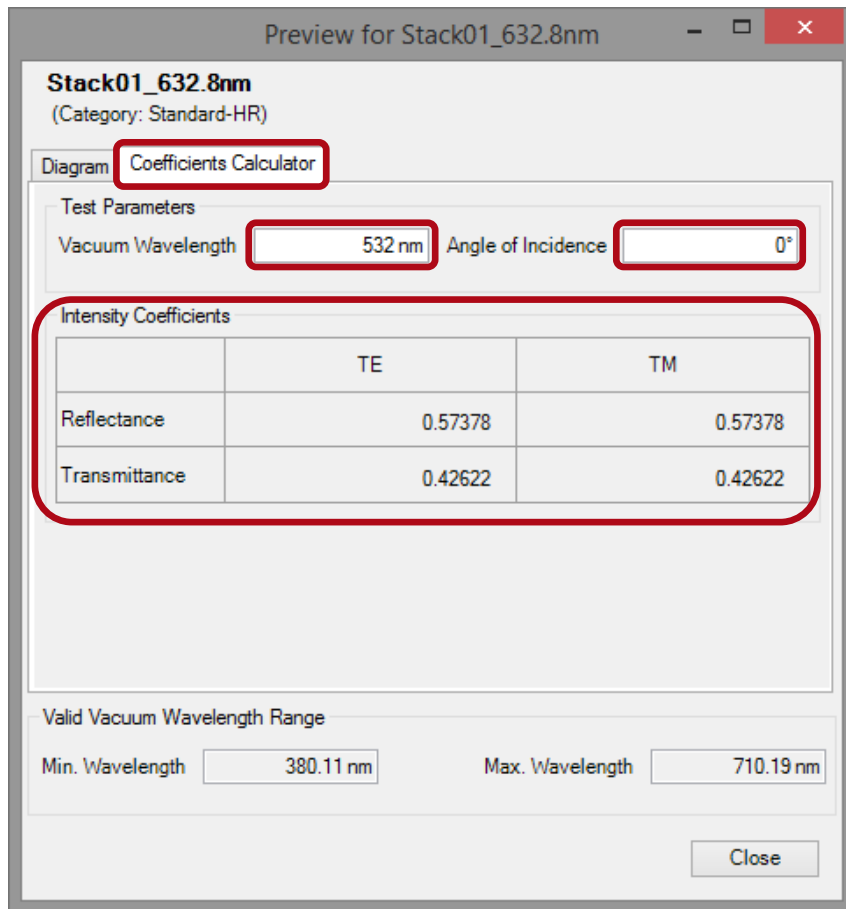


# Coating Preview – Diagram Options



- The user can define the colors which shall be used to visualize the parameters of the coating.
- For the different quantities different colors can be specified.

# Coating Preview – Coefficients Calculator



- The coefficients calculator can be used to calculate specific values for the reflectance and transmittance of user defined input parameters.
- The user can specify
  - Wavelength
  - Angle of incidentsto evaluate intensity coefficients.

# Summary

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- Apart from pre-defined coatings the user can configure own coatings and store them within a separate database as user-defined entries (in separate user-defined catalog files).
- This allows a standardize way to use and specify coatings at wherever needed in VirtualLab.
- Coatings are typically used as addition on optical surfaces.