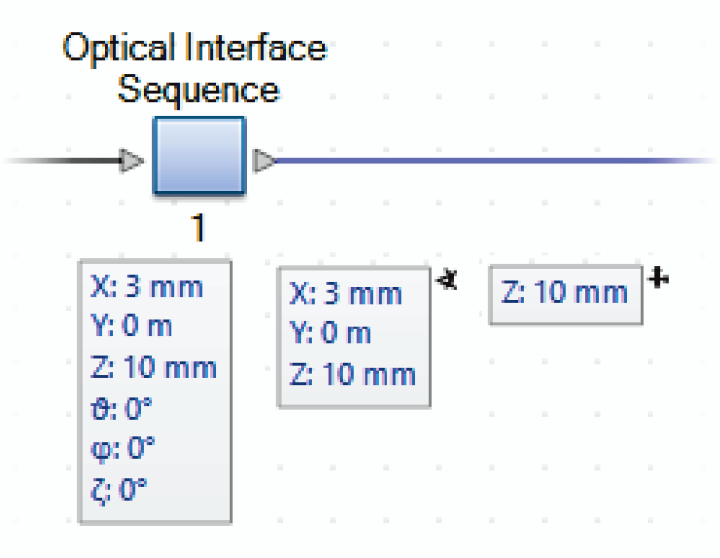
Position and Orientation Information Display Control

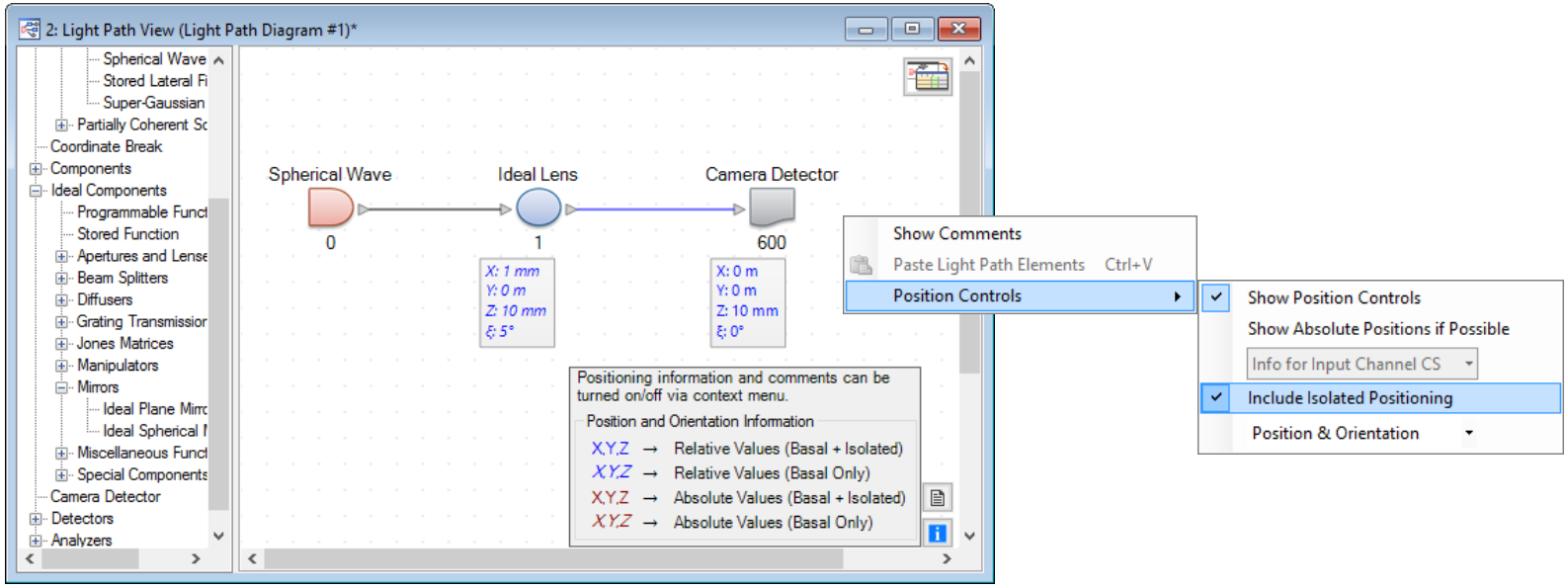
Abstract



In VirtualLab Fusion, users can select which information of position and orientation to be shown. When user selects a compact display version, small icons appear when other terms of position and orientation, which are not displayed, are setted. This use case shows how to set up the position and orientation information display in a Light Path View. Different display options will be discussed and presented.

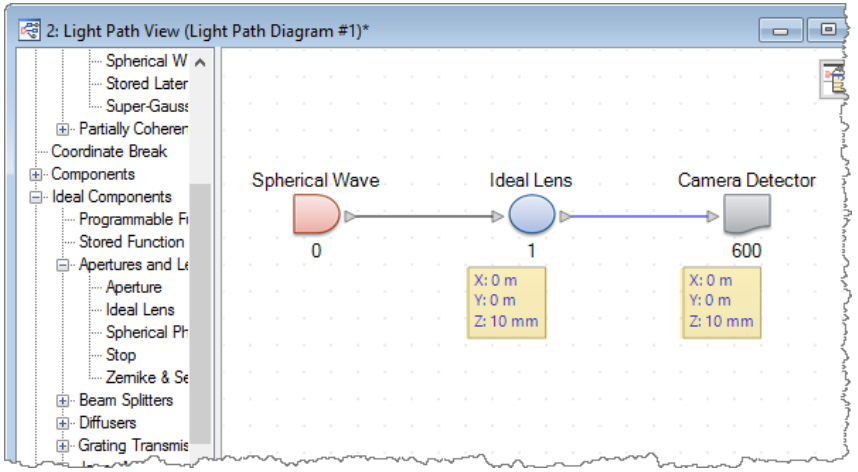
Modeling Task

- how to set up the position and orientation information display in a Light Path View.



Basal Position Display

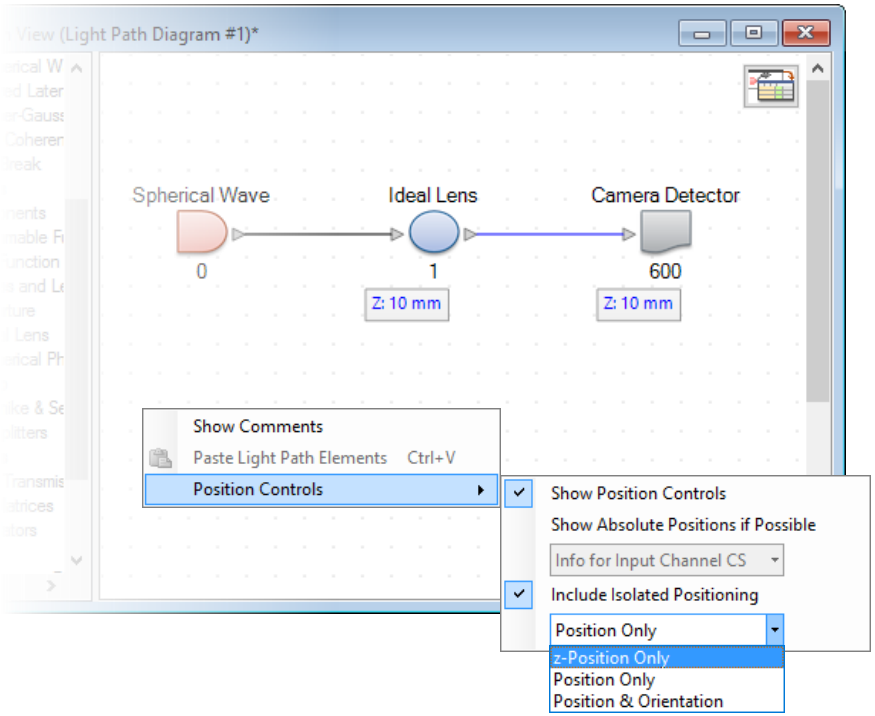
- On-axis situation
  - Build up an on-axis system with a spherical wave source, an ideal lens for collimation, and a camera detector at the end.



For such an on-axis situation, it may be superfluous to see the full 3D position information

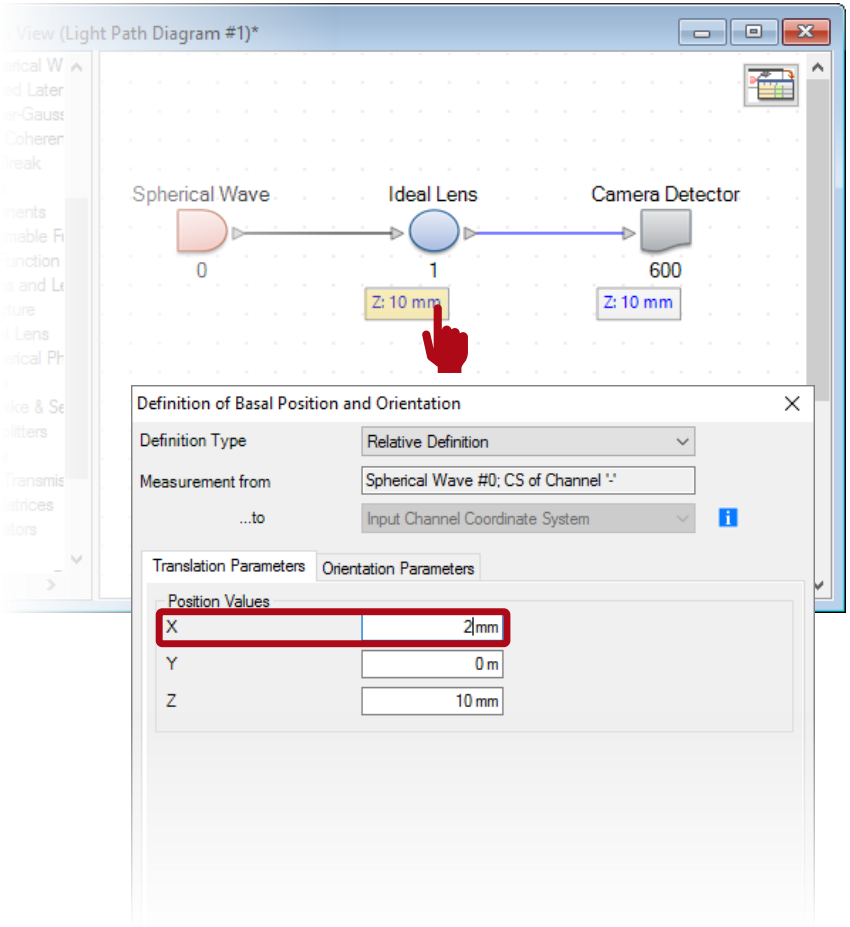
Basal Position Display

- On-axis situation
  - Build up an on-axis system with a spherical wave source, an ideal lens for collimation, and a camera detector at the end.
  - To leave only the on-axis position information for display, right click on the empty area in the LPD, go to *Position Controls* and select *z-Position Only.*



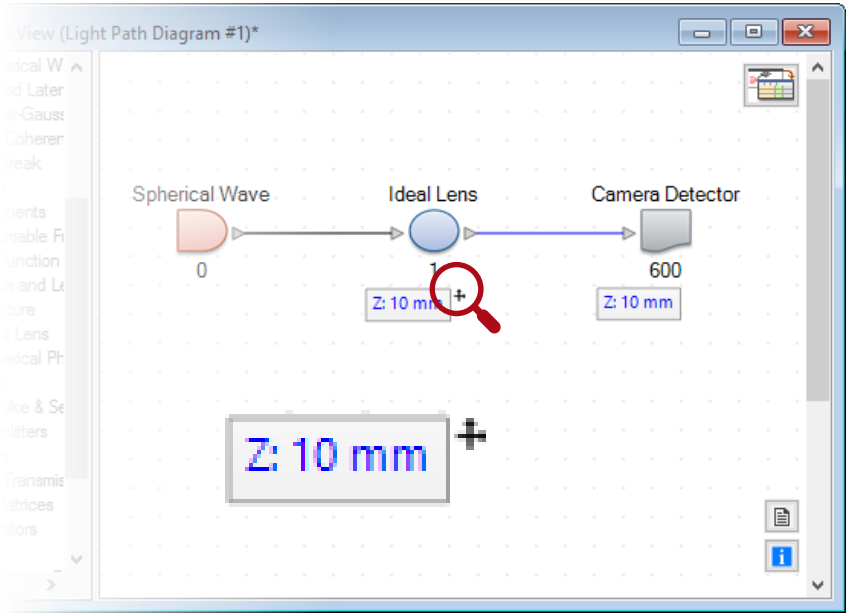
Basal Position Display

- Off-axis situation
  - Click on the position tab below the Ideal Lens, and give a 2mm shift along x-axis.



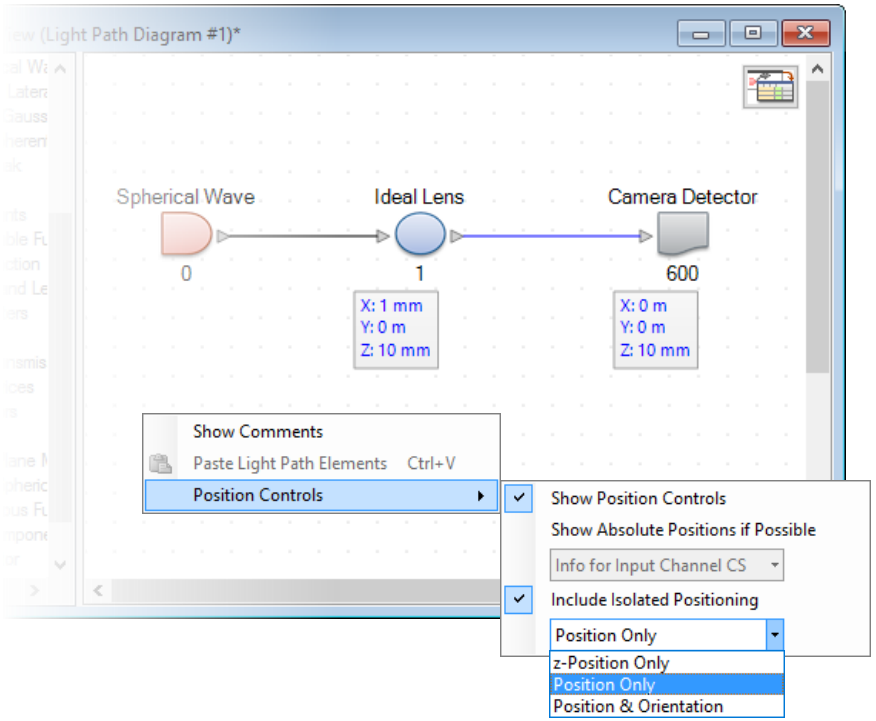
Basal Position Display

- Off-axis situation
  - Click on the position tab below the Ideal Lens, and give a 2mm shift along x-axis.
  - Then, a small axes icon is displayed alongside the z-position value, which indicates extra position information other than that in z-direction.



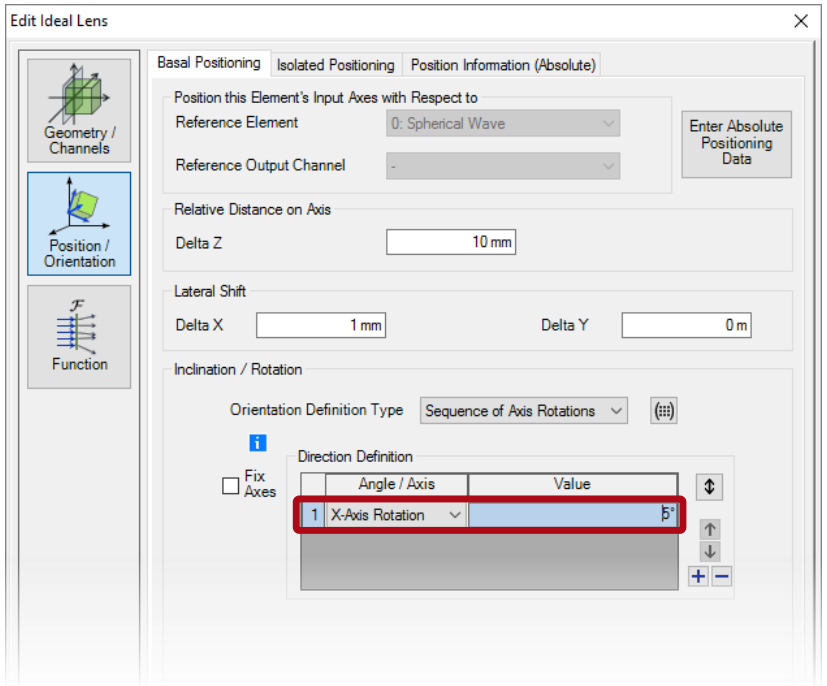
Basal Position Display

- Off-axis situation
  - Click on the position tab below the Ideal Lens, and give a 2mm shift along x-axis.
  - Then, a small axes icon is displayed alongside the z-position value, which indicates extra position information other than that in z-direction.
  - Switch back to full 3D position, the small icon disappears.



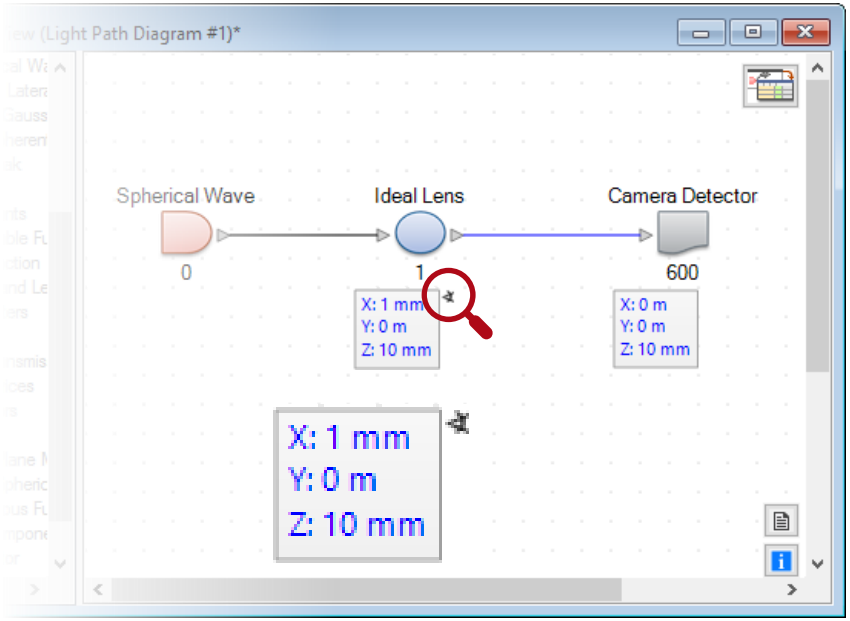
Basal Orientation Display

- Tilted Component
  - Enter the edit window of the Ideal Lens, in the Position/Orientation tab, we set a rotation of 5° around x-axis.



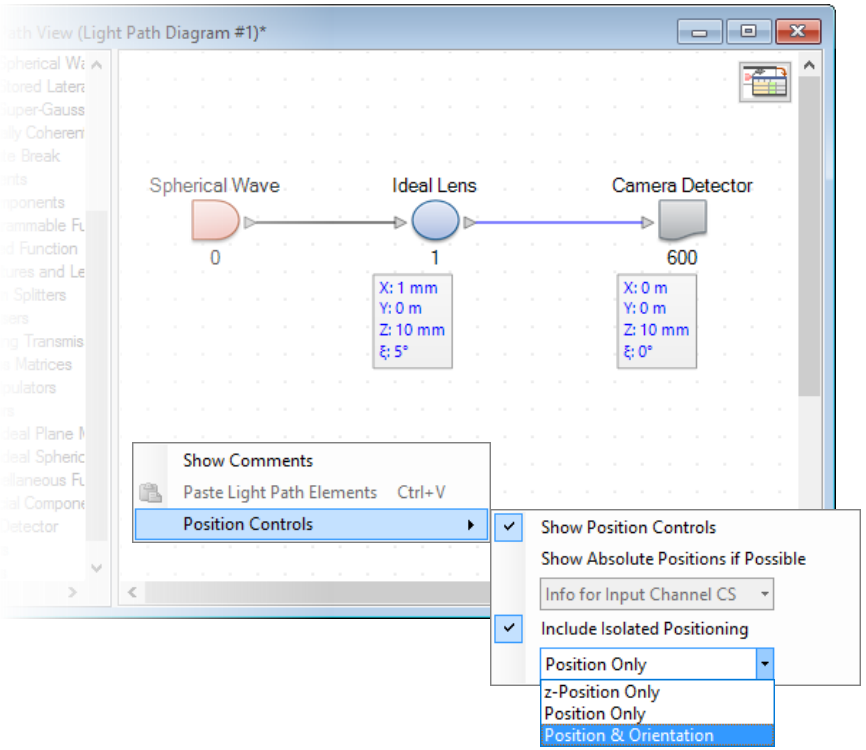
Basal Orientation Display

- Tilted Component
  - Enter the edit window of the Ideal Lens, in the Position/Orientation tab, we set a rotation of 5° around x-axis.
  - Then, a small “rotation” icon appears alongside the position tab of the Ideal Lens.



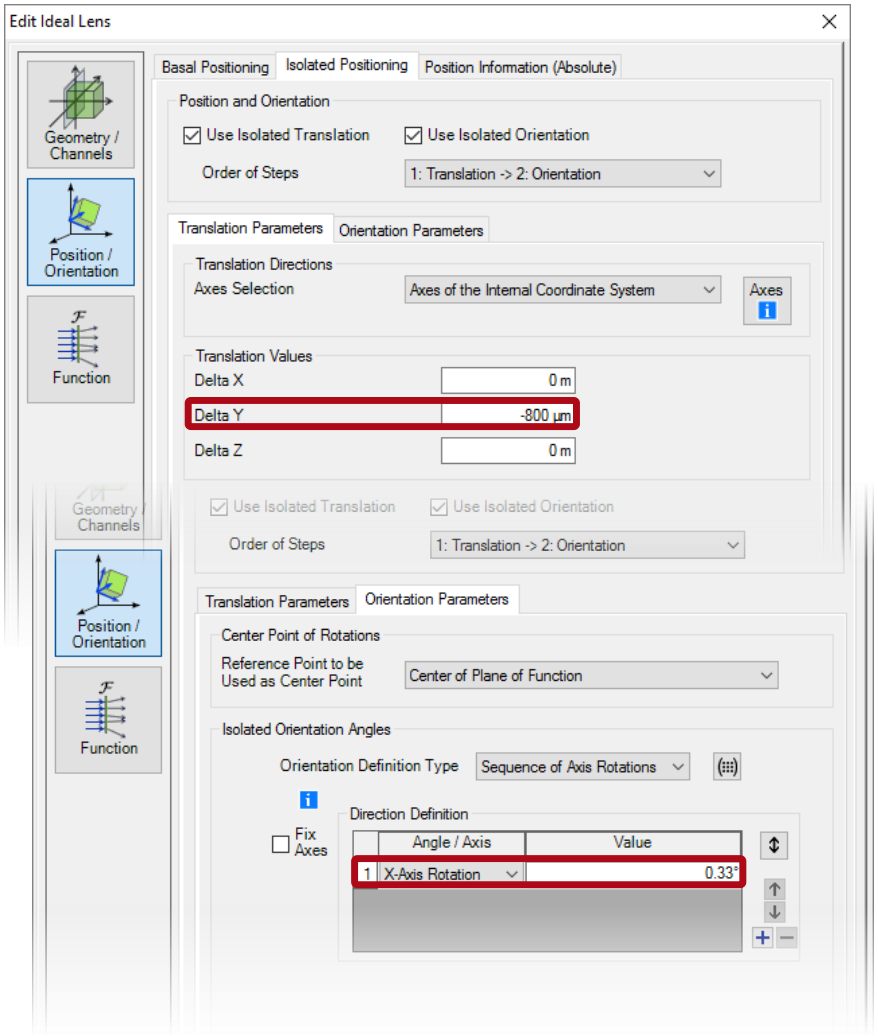
Basal Orientation Display

- Tilted Component
  - Enter the edit window of the Ideal Lens, in the Position/Orientation tab, we set a rotation of 5° around x-axis.
  - Then, a small “rotation” icon appears alongside the position tab of the Ideal Lens.
  - In Position Controls, we switch to Position & Orientation, then the small icon disappears and full information shows up.



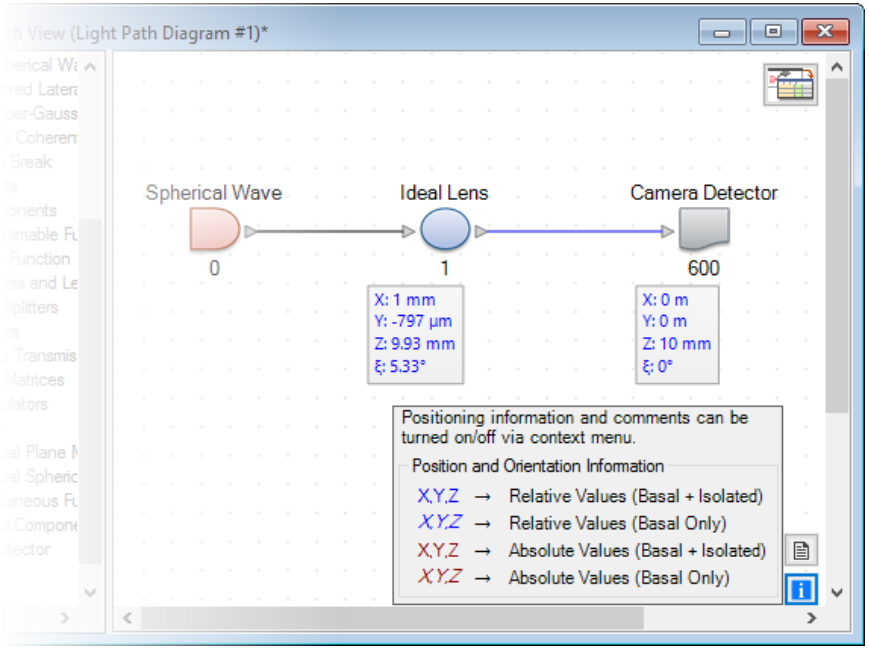
Isolated Position and Orientation

- Basal + Isolated
  - In addition to basal position/orientation, it is often useful to set up additional isolated ones for the purpose of e.g. tolerancing.
  - Under Isolated Positioning tab, we set a translation *Delta Y* equal to -800 µm, and a *X-Axis Rotation* of 0.33°.



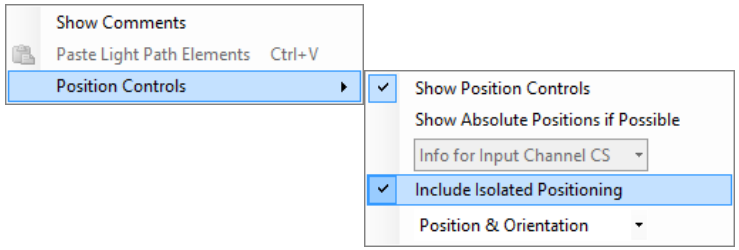
Isolated Position and Orientation

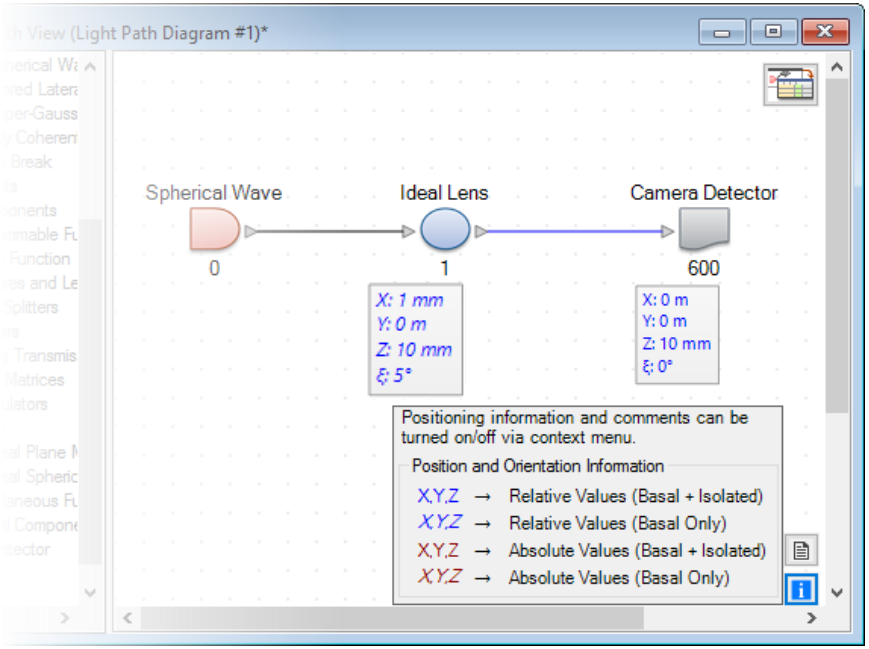
- Basal + Isolated
  - In addition to basal position/orientation, it is often useful to set up additional isolated ones for the purpose of e.g. tolerancing.
  - Under Isolated Positioning tab, we set a translation Delta Y equal to -800 µm, and a rotation of 0.33° along x-axis.
  - Then, the combined effects will be displayed.



Isolated Position and Orientation

- Basal + Isolated
  - For the display, it is possible to switch off the influence from isolated position by uncheck the option *Include Isolated Position*.
  - Then, VirtualLab displays the position information of the ideal lens in italic, to indicate Basal Only.





Document Information

title	Position and Orientation Information Display Control
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VL version used for simulations	7.0.3.4
category	Feature Use Case