Disconnected Waveguide
Last Updated: August 2019

Description

This component is a non-physical component that represents a broken or unterminated waveguide when simulated in Lumerical Interconnect. This component models what happens for a blunt waveguide ending (500 x 220 nm). Such a disconnect is identified as an error during layout verification, however, this effect is included in the Library for completeness to understand what happens when a port is left disconnected.

This model is automatically used to simulate what happens when a component's pins are not terminated (see Terminator) or otherwise connected. INTERCONNECT assumes that there is no reflection from disconnected ports; the assumption is that there is a perfect matching between the component and whatever is outside (perfectly absorbing). This isn't physically correct. To account for the reflections from disconnected ports, the SiEPIC PDK in KLayout automatically adds this component to every disconnected port found in the layout.

Model Name

ebeam_disconnected_te1550 & ebeam_disconnected_tm1550

Compact Model Information

- Support for TE and TM polarization using their respective models
- Operating at 1550 nm wavelength
- One port

Additional Details

- Design tools & methodology:
  - Modelled by 3D FDTD with data saved as S11 parameters