Tetrahedral Lattice Graph

nTopology

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Description

Generates a tetrahedral lattice graph with closed cells and no open beams within the lattice design space. The lattice design space is a reduced variant of the lattice design space that has been negatively offset by half the beam thickness distribution value (radius value), allowing for the downstream thickening process to create thickened lattice beams that meet the profile of the original lattice design space. The input beam thickness value for this block should match the input beam thickness value of the downstream thicken block. The input beam length value is a targeted value and the expected beam length result is a distribution within range of the targeted value.

Input Descriptions

Lattice Design Space	*Volume to be filled with a tetrahedral lattice.*
Beam Thickness	*Desired beam diameter distribution of the lattice structure.*
Beam Length	*Desired beam length distribution of the lattice structure.*
Voxel Size	*Voxel size used to generate the reference surface mesh. Lower values allow for higher profile fidelity at the cost of increased computation time.*