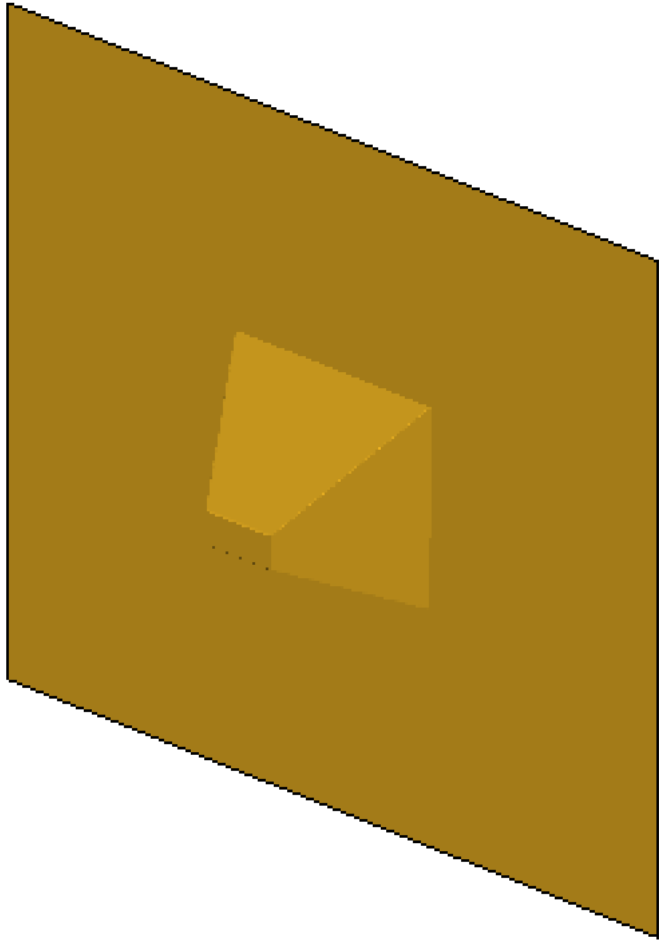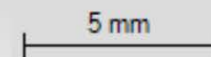# Construction of a Truncated Pyramid Surface

Abstract

For various practical applications it may be of interest to construct pyramid-like surfaces. In this example, we introduce how to construct such kind of surfaces by using programmable surfaces in VirtualLab Fusion. In the code example, users can specify the sizes of the base and the top of this truncated pyramid surface, in both x and y-directions. Note that the truncated pyramid structure has been included in the VirtualLab catalog and this example is used for illustration purposes.

Programming a Truncated Pyramid Surface

Task:
Construct an optical surface in the shape of a pyramid.

Global Parameters (user defined)		

Variable	Value	Allowed Range
double height	4 mm	0 – 1000 m
double BaseSizeX	6 mm	0 – 1000 m
double BaseSizeY	6 mm	0 – 1000 m
double TopSizeX	1 mm	0 – 1000 m
double TopSizeY	2 mm	0 – 1000 m

5 mm

Document Information

title	Construction of a Truncated Pyramid Surface
document code	CZT.0042
version	1.0
toolbox(es)	Starter Toolbox
VL version used for simulations	7.4.0.49
category	Feature Use Case
further reading	- How to Work with the Programmable Interface & Example (Spherical Surface) - Programming a Sinusoidal Surface - Programming a Truncated Cone Surface