

Note: Certain results and explanations are intentionally withheld to maintain the novelty of this project and to prevent duplication.

VCSEL with subwavelength focusing and airy beam generation.

Implementation:

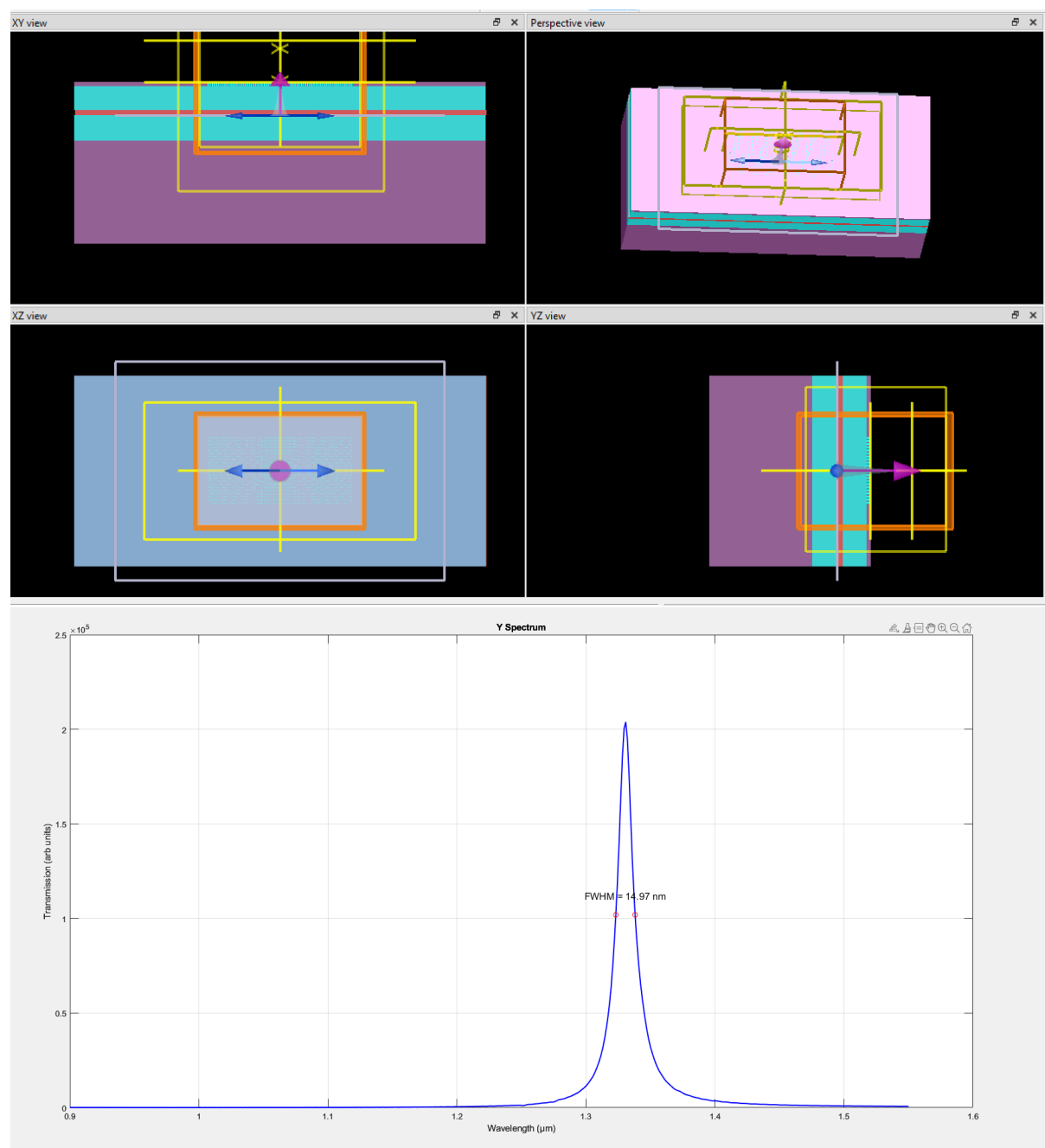
1. VCSEL integrated with METALENS

Requirement: Subwavelength focus i.e. $\text{FWHM} < \lambda$

Results:

FWHM: 14.97nm

FWHM $< \lambda$ (1310nm): **Accomplished Subwavelength focusing.**

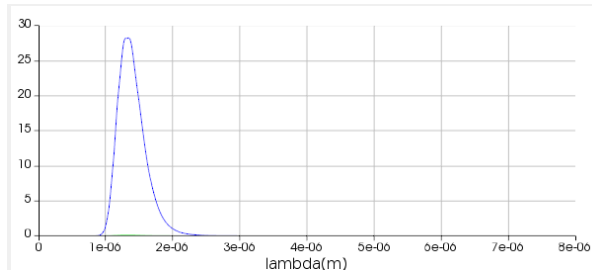


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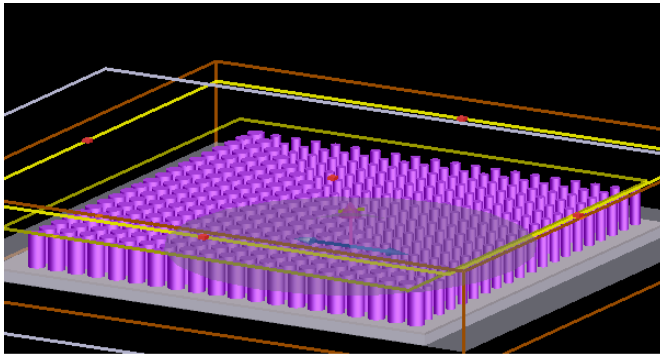
2. AIRY BEAM

1.Wavelength

Source: Gaussian Beam (1310nm)



Metasurface for airy beam generation



Airy beam propagation

