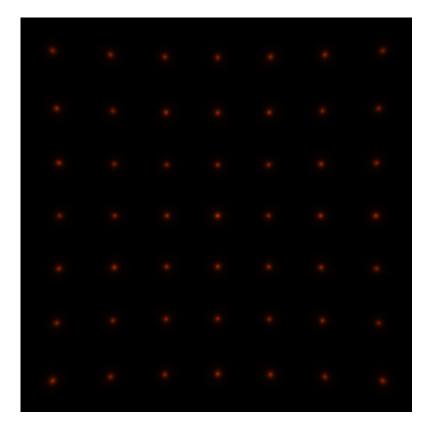


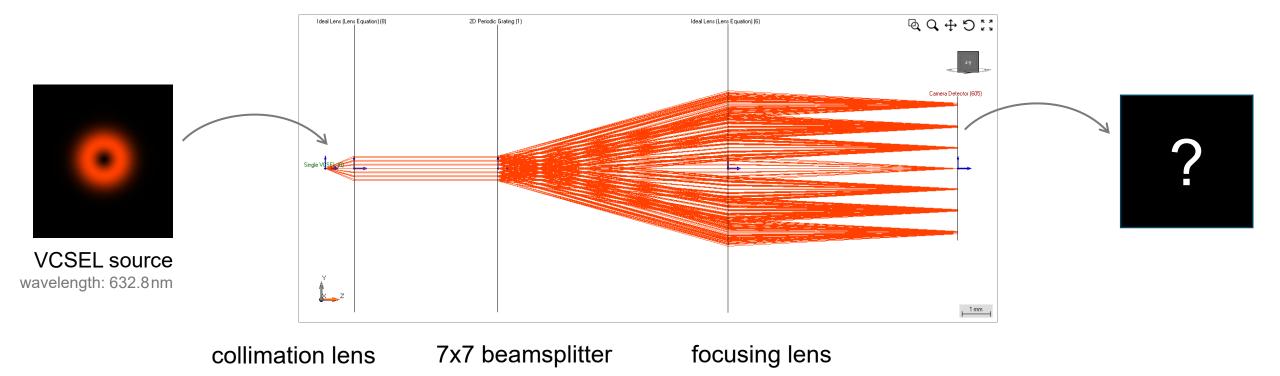
7x7 Beam Splitter in 2f Setup with a VCSEL Source

Abstract



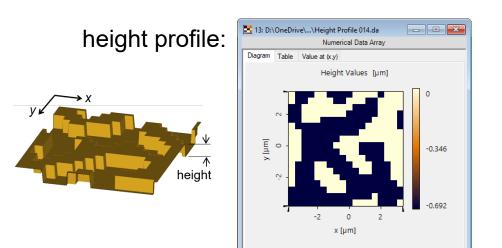
Diffractive elements like beam splitters can be modeled in complex optical systems. Efficiencies are evaluated rigorously, e.g. by Fourier Modal method (FMM) or RCWA, respectively. Physical optics enables the access to any kind of light information in the desired image plane.

Task: Beam Splitter in a Complex Optical System

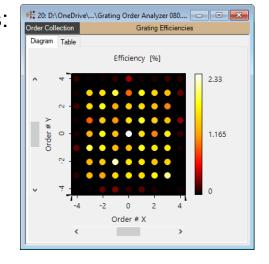


Parameters: 7x7 Beam Splitter

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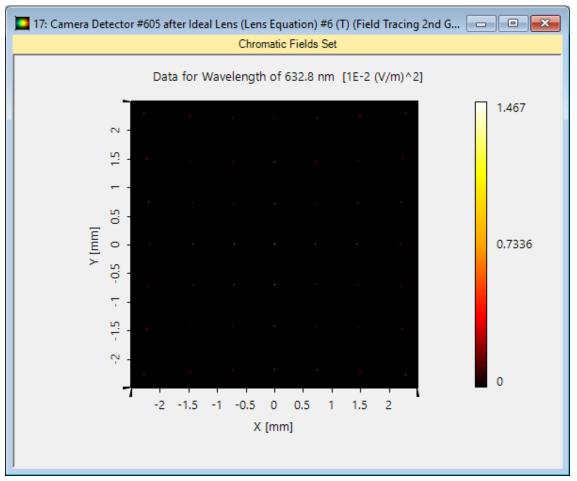
rigorously calculated efficiencies:



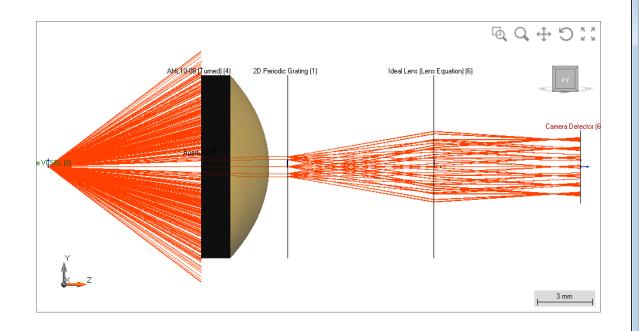
Results

real color perception: 🛄 17: Camera Detector #605 after Ideal Lens (Lens Equation) #6 (T) (Field Tracing 2nd G... 🔲 💷 📧 Chromatic Fields Set \sim ا.5 -0.5 ۲ [mm] 0 -0.5 5 -1.5 <u>N</u> . -2 -1.5 -1 -0.5 0 0.5 1 1.5 2 X [mm]

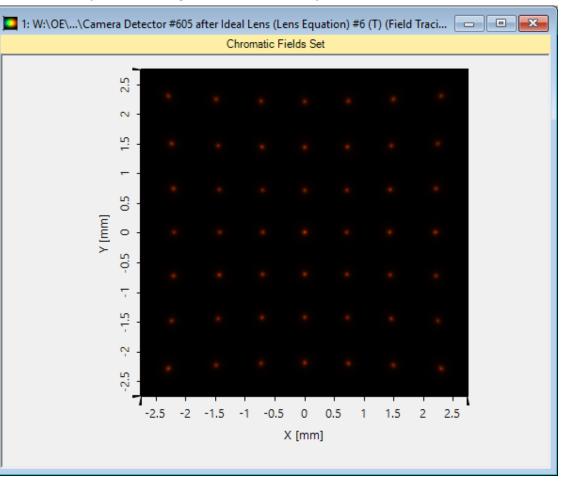
false color:



Now: Real Collimation Lens (Aspherical Lens)



Result: (including aberrations):





- Diffractive elements like beam splitters can be modeled in complex optical systems
- Efficiencies are evaluated rigorously, e.g. by Fourier Modal method (FMM), RCWA, respectively
- Physical optics and ray propagation techniques available for detailed investigations
- Physical optics enables the access to any kind of light information in the desired image plane

title	7x7 Beam Splitter in 2f Setup with a VCSEL Source	
document code	Demo.0002	
version	1.0	
VL version used for simulations	VirtualLab Fusion Summer Release 2019 (7.6.1.18)	
category	Demo	
further reading	 Design and Rigorous Analysis of Non-Paraxial Diffractive Beam Splitter Design of a 3x3 Beam Splitter 	