Raytracing of Spherical Aberration in COMSOL Multiphysics® Compared with Third Order Theory

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Abstract

The Ray Tracing Module in COMSOL Multiphysics® is used to setup and simulate a lens and compare the longitudinal spherical aberration (LSA) with the third order theory in optics. Some Seidel coefficients will be investigated and the geometry or solver settings will be discussed. Also a lens design will be shown in the presentation in which the front and back surface are optimized according the Coddington shape factor.

Reference

D. O'Shea, J. Wiley & Sons, Elements of Modern Optical Design, p. 205 (1985)