1. Record Nr. UNINA9911006505403321 Autore Kingslake Rudolf Titolo Lens design fundamentals / / Rudolf Kingslake, R. Barry Johnson Pubbl/distr/stampa Oxford,: Academic Press, 2010 **ISBN** 9786612540950 9781282540958 1282540955 9780080921563 0080921566 Edizione [2nd ed.] 1 online resource (570 p.) Descrizione fisica Altri autori (Persone) Johnson R. Barry 681.42 Disciplina 681.423 Soggetti Lenses - Design and construction Optical instruments - Design and construction Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Front Cover; Lens Design Fundamentals; Copyright Page; Dedication; Contents; Preface to the Second Edition; Preface to the First Edition; A Special Tribute to Rudolf Kingslake; Chapter 1: The Work of the Lens Designer; 1.1. Relations Between Designer and Factory; 1.1.1 Spherical versus Aspheric Surfaces; 1.1.2 Establishment of Thicknesses; 1.1.3 Antireflection Coatings; 1.1.4 Cementing; 1.1.5 Establishing Tolerances; 1.1.6 Design Tradeoffs; 1.2. The Design Procedure; 1.2.1 Sources of a Likely Starting System; 1.2.2 Lens Evaluation; 1.2.3 Lens Appraisal; 1.2.4 System Changes 1.3. Optical Materials 1.3.1 Optical Glass; 1.3.2 Infrared Materials; 1.3.3 Ultraviolet Materials; 1.3.4 Optical Plastics; 1.4. Interpolation of Refractive Indices; 1.4.1 Interpolation of Dispersion Values; 1.4.2 Temperature Coefficient of Refractive Index; 1.5. Lens Types to be Considered; Chapter 2: Meridional Ray Tracing; 2.1. Introduction; 2.1.1 Object and Image; 2.1.2 The Law of Refraction; 2.1.3 The Meridional Plane; 2.1.4 Types of Rays; 2.1.5 Notation and Sign Conventions; 2.2. Graphical Ray Tracing: 2.3. Trigonometrical Ray Tracing at a Spherical

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Sommario/riassunto

Thoroughly revised and expanded to reflect the substantial changes in the field since its publication in 1978Strong emphasis on how to effectively use software design packages, indispensable to today's lens designerMany new lens design problems and examples - ranging from simple lenses to complex zoom lenses and mirror systems - give insight for both the newcomer and specialist in the field Rudolf Kingslake is regarded as the American father of lens design; his book, not revised since its publication in 1978, is viewed as a classic in the field. Naturally