1. Record Nr. UNINA990001334860403321

Autore	Szaniawski, Klemens
Titolo	On science, inference, information and decision making : selected essays in the philosophy of science / Klemens Szaniawski
Pubbl/distr/stampa	Dordrecht [etc.] : Kluwer, c1998
ISBN	0-7923-4922-9
Descrizione fisica	xiv, 242 p. : ill. ; 25 cm
Collana	Synthese Library ; 271
Disciplina	001.42
Locazione	MA1
Collocazione	C-25-(271
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. 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.]
Descrizione fisica	1 online resource (570 p.)
Altri autori (Persone)	JohnsonR. Barry
Disciplina	681.42 681.423
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 Materials1.3.1 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 Surface; 2.3.1 Program for a Computer

2.4. Some Useful Relations2.4.1 The Spherometer Formula; 2.4.2 Some Useful Formulas; 2.4.3 The Intersection Height of Two Spheres; 2.4.4 The Volume of a Lens; 2.4.5 Solution for Last Radius to Give a Stated uprime; 2.5. Cemented Doublet Objective; 2.6. Ray Tracing at a Tilted Surface; 2.6.1 The Ray Tracing Equations; 2.6.2 Example of Ray Tracing through a Tilted Surface; 2.7. Ray Tracing at an Aspheric Surface; Chapter 3: Paraxial Rays and First-Order Optics; 3.1. Tracing a Paraxial Ray; 3.1.1 The Standard Paraxial Ray Trace; 3.1.2 The (y - nu) Method; 3.1.3 Inverse Procedure
3.1.4 Angle Solve and Height Solve Methods3.1.5 The (l, lprime) Method; 3.1.6 Paraxial Ray with All Angles; 3.1.7 A Paraxial Ray at an Aspheric Surface; 3.1.8 Graphical Tracing of Paraxial Raysat Finite Heights and Angles; 3.1.9 Matrix Approach to Paraxial Rays; 3.2. Magnification and the Lagrange Theorem; 3.2.1 Transverse Magnification; 3.2.2 Longitudinal Magnification; 3.3. The Gaussian Optics of a Lens System; 3.3.1 The Relation between the Principal Planes; 3.3.2 The Relation between the Two Focal Lengths; 3.3.3 Lens Power; 3.3.4 Calculation of Focal Length
3.3.5 Conjugate Distance Relationships3.3.6 Nodal Points; 3.3.7 Optical Center of Lens; 3.3.8 The Scheimpflug Condition; 3.4. First-Order Layout of an Optical System; 3.4.1 A Single Thick Lens; 3.4.2 A Single Thin Lens; 3.4.3 A Monocentric Lens; 3.4.4 Image Shift Caused by a Parallel Plate; 3.4.5 Lens Bending; 3.4.6 A Series of Separated Thin Elements; 3.4.7 Insertion of Thicknesses; 3.4.8 Two-Lens Systems; 3.5. Thin-Lens Layout of Zoom Systems; 3.5.1 Mechanically Compensated Zoom Lenses; 3.5.2 A Three-Lens Zoom; 3.5.3 A Three-Lens Optically Compensated Zoom System
3.5.4 A Four-Lens Optically Compensated Zoom System

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