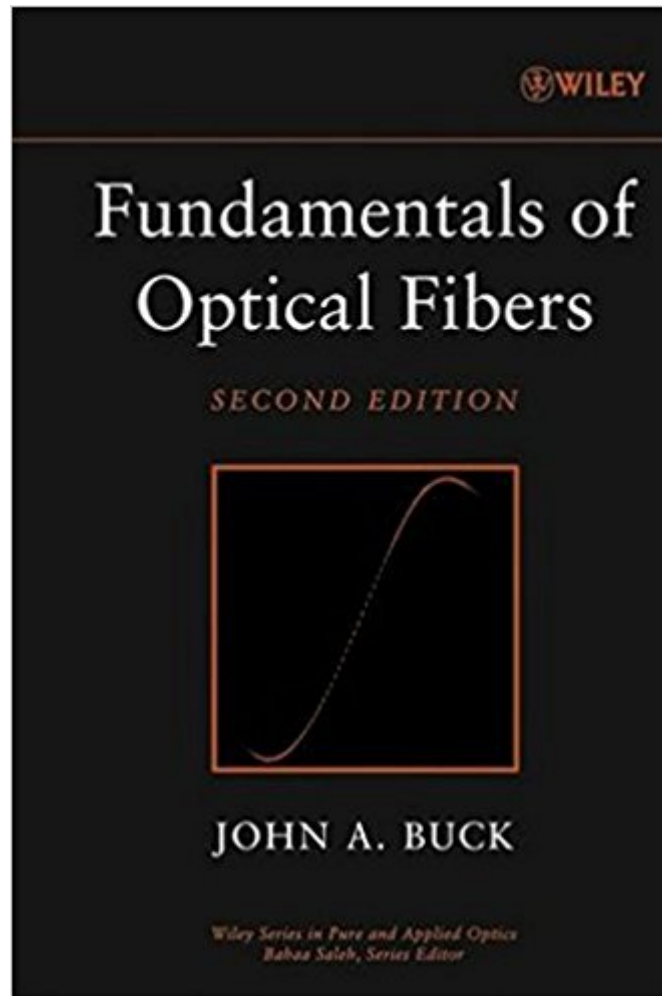




Ebook Directory
the best source of ebook

The book was found

Fundamentals Of Optical Fibers



Synopsis

Fundamentals of Optical Fibers, Second Edition offers readers a timely and consistent introduction to the fundamental principles of light propagation in fibers. In it, the author reviews, in depth, fundamental wave guiding concepts, the influence of various fiber structures and materials on light transmission, nonlinear light propagation effects occurring in fibers, and various measurement techniques. Since the chief application of optical fibers is in communication systems, throughout the book the focus is on topics, which pertain to that domain.

Book Information

Hardcover: 352 pages

Publisher: Wiley-Interscience; 2 edition (April 27, 2004)

Language: English

ISBN-10: 0471221910

ISBN-13: 978-0471221913

Product Dimensions: 6.4 x 0.8 x 9.4 inches

Shipping Weight: 1.4 pounds (View shipping rates and policies)

Average Customer Review: 4.5 out of 5 stars 4 customer reviews

Best Sellers Rank: #1,532,920 in Books (See Top 100 in Books) #56 in [Books > Engineering & Transportation > Engineering > Electrical & Electronics > Fiber Optics](#) #309 in [Books > Science & Math > Physics > Waves & Wave Mechanics](#) #594 in [Books > Science & Math > Physics > Optics](#)

Customer Reviews

The purpose of this book is to provide the reader with a balanced account of the basics of light propagation in fibers. Includes the current level of technology in optical fiber design, along with measurement techniques and nonlinear effects. Provides a thorough treatment of the basic topics in optical fiber transmission and includes scores of examples and end-of-chapter problems. --This text refers to an out of print or unavailable edition of this title.

Fundamentals of Optical Fibers offers students a timely, pedagogically consistent introduction to the fundamental principles of light propagation in fibers. In it, Professor John A. Buck reviews, in depth, fundamental waveguiding concepts, the influence of various fiber structures and materials on light transmission, nonlinear light propagation effects occurring in fibers, and various measurement techniques. Since the chief application of optical fibers is in communication systems, throughout the

book the focus is on topics which pertain to that domain. In the first part of the text, the author lays the groundwork for later discussions with a detailed review of the relevant electromagnetic principles and how they apply to the analysis of wave propagation. He also introduces basic field equations and delineates the fundamental principles of dielectric wave-guides. In the second part, he explores the limitations of fiber transmission, paying particular attention to the problems of loss and dispersion. He reviews fabrication procedures and alternative fiber designs as they relate to minimizing loss and dispersion. And he presents field analysis methods for single mode and multimode fibers having graded index profiles. In the last part, Professor Buck reviews the basics of nonlinear optics and discusses the origins of nonlinear effects and the conditions under which they appear in fibers. This section also features a discussion of fiber amplifiers, along with a review of the fundamentals of light amplification by stimulated emission. Offering a well-balanced presentation of the basics of light propagation in fibers, and including real-world examples and end-of-chapter problems, *Fundamentals of Optical Fibers* is an excellent text for senior- to graduate-level courses in electrical engineering or physics. It is accessible to anyone who has taken at least a one-semester course in electromagnetics at the undergraduate level.

Adequate in its explanations, but not outstanding. I still had to google a lot of things that were imprecisely or obliquely explained, but that seems to be the nature of engineering pubs these days -- maybe Sal Khan is the only one left in the world who can provide good explanations (?)

This book is incredibly thorough. Really hits what you need to know. Lot of equations, but each one has an explanation. Definitely a great resource to have on your shelf. Provides a very indepth description of nonlinear optics as well, in relation to fibers. Excellent.

This covers its topic very well. It presents the main ideas intuitively and either outlines the proof or cites references for those who want to explore at greater depth. It may not be up to date, but it is surely a good introduction.

Great book.

[Download to continue reading...](#)

Sustainable Composites: Fibers, Resins and Applications (Engineering With Fibers) Fundamentals of Optical Fibers Single-Mode Fibers: Fundamentals (Springer Series in Optical Sciences) (Volume 57) Optical Thin Films: User's Handbook (Macmillan Series in Optical and Electro-Optical

Engineering) Optical Solitons: From Fibers to Photonic Crystals Specialty Optical Fibers Handbook
Optics and Lasers: Including Fibers and Optical Waveguides (Advanced Texts in Physics) Lasers
and Optical Fibers in Medicine (Physical Techniques in Biology and Medicine) Resolution
Enhancement Techniques in Optical Lithography (SPIE Tutorial Texts in Optical Engineering Vol.
TT47) Optical Design for Visual Systems (SPIE Tutorial Texts in Optical Engineering Vol. TT45)
Electro-Optical Displays (Optical Science and Engineering) Handbook of Organic Materials for
Optical and (Opto)Electronic Devices: Properties and Applications (Woodhead Publishing Series in
Electronic and Optical Materials) Handbook of Optical and Laser Scanning, Second Edition (Optical
Science and Engineering) optical communication and splicing: optical networks Creative Cloth Doll
Faces: Using Paints, Pastels, Fibers, Beading, Collage, and Sculpting Techniques Fabric for
Fashion: The Complete Guide: Natural and Man-made Fibers Asbestiform Fibers: Nonoccupational
Health Risks A Dyer's Garden: From Plant to Pot, Growing Dyes for Natural Fibers A Garden to Dye
For: How to Use Plants from the Garden to Create Natural Colors for Fabrics & Fibers A Weaver's
Garden: Growing Plants for Natural Dyes and Fibers

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)