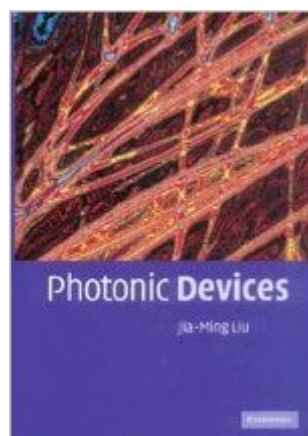


The book was found

Photonic Devices



Synopsis

Covering every major photonic device, this textbook strikes a careful balance between theoretical and practical concepts. The devices it covers include optical fibers, couplers, electro-optic devices, magneto-optic devices, lasers, and photodetectors. The book is well-suited as a text for senior undergraduate and graduate courses, as well as a device-driven engineering reference for professionals.

Book Information

Hardcover: 1104 pages

Publisher: Cambridge University Press (May 30, 2005)

Language: English

ISBN-10: 0521551951

ISBN-13: 978-0521551953

Product Dimensions: 6.8 x 2.4 x 9.7 inches

Shipping Weight: 4.4 pounds

Average Customer Review: 3.0 out of 5 stars [See all reviews](#) (5 customer reviews)

Best Sellers Rank: #1,933,098 in Books (See Top 100 in Books) #125 in [Books > Engineering & Transportation > Engineering > Electrical & Electronics > Electronics > Optoelectronics](#) #822 in [Books > Science & Math > Physics > Optics](#) #8205 in [Books > Politics & Social Sciences > Social Sciences > Linguistics](#)

Customer Reviews

I used this book for a semiconductor material and optical devices course (at the graduate level). I like the book because it has many examples throughout the chapter and several questions at the end of the chapter to test your understanding of the material. The chapters that I have familiarity with are chapter(s) 2, 12, 13, and 14. The book is very rich in text and tries to use plots and graphs only out of absolute necessity. There are also many equations throughout each of the chapters and thus the problem arises that the same variable can be used to describe two or more different physical process. There is an extensive list in the front of the book explaining each variable, but some confusion can arise for the reader if not extremely careful. All in all, I highly recommend the book for physicists and engineers alike who want a detailed description of the major topics in photonics all in one book. However, please note that photovoltaics is not covered in this text (S.O. Kasap's "Optoelectronics and Photonics: Principles and Practices" covers photovoltaic basics very well).

(This review covers Chapters 1-6+9, which covers dielectric waveguides, gratings, couplers, electro-optics, nonlinear optics. Other chapters include magneto-optics, acousto-optics, semiconductor physics, lasers)

PROS Good physical explanations of phenomena- For example, goes through derivation of dielectric planar step-index waveguide. General results derived here apply to all dielectric waveguides. Good from device perspective- Covers all basic device principles and the devices themselves, from which larger and more complicated configurations can be made. Gives what seems to be just the right level of math.- When realistically designing photonic devices, Liu knows that one would use a computer for simulation, not crazy mathematical expressions (though this book does have some of those, but not to an overwhelming extent). Thus, he gives the math necessary if one were to write simulations (in the sense of, the simulation would solve the wave equation or the derived expression he gives).- Section on nonlinear optics is EXCELLENT! Whereas other books are highly confusing on how to organize mathematics of nonlinear optics (which is very thick, considering the large number of elements in the tensors and the coupled equations), this one gives you a formula that always works: (1) Determine the frequencies involved. (2) Write the polarization of that frequency. (3) Use symmetries to reduce the number of independent elements (intrinsic, full and Kleinman). (4) Write the coupled equations. (5) Solve. Additionally, he spends a lot of time on phase matching, which is crucial for all processes where phase matching is not "automagically" (Liu himself used this word!) satisfied.

CONS Needs his lecture.- He is a professor of Electrical Engineering at UCLA, and his lecture emphasizes the big picture, while clarifying subtle facts. Without that, one might see the trees without seeing the forest.

The book titled "Photonic Devices" by Jia-Ming Liu is good subject matter, an authority. I trust and respect the author. But the book is being used as a con by some sellers professing to have very high star rating. I bought this book as advertised on "Item 1. Photonic Devices 2 Part Set by Jia-Ming Liu". Guess what! the seller sent me only the first part of the two set book...chapters 1-9 only. Not sure if they know English or it was shipping error or it was deliberate, but I felt bad for not being able to receive the full advertised material. I was referred this book by a colleague of mine and I just wanted to refer a few chapters, those unfortunately were in the 2nd part. I travelled a lot when the order was made and received therefore I was unable to verify and get back to within the 30 day period. After that period, there is no return, so here I am, booked with part 1. I can't even sell it back because the whole is a 2 set, not individual. At this point I am just looking for a single part 1 buyer, hopefully to recover the cost I paid for it.

the express is killing me! so slowwwwwwwwwwwwwwwwwwwwwwwwww, quite disappointed. But the books look fine, no damage. Although I have not open them yet....

Physics of Photonic Devices Photonic Devices Photonic Crystals: Molding the Flow of Light, Second Edition Selective Photonic Disinfection: A Ray of Hope in the War Against Pathogens (IOP Concise Physics) Photonic Crystals: Molding the Flow of Light Photonic Structures Inspired by Nature (Springer Theses) US Army Technical Manual, ARMY DATA SHEETS FOR CARTRIDGES, CARTRIDGE ACTUATED DEVICES AND PROPELLANT ACTUATED DEVICES, FSC 1377, TM 43-0001-39, 1991 Advanced Mos Devices (Modular Series on Solid State Devices, Vol 7) ISO 14971:2007, Medical devices - Application of risk management to medical devices Echo: The Simple User Guide How to Program Echo Fast (Echo 2016,user manual,web services,by ,Free books,Free Movie,Alexa Kit) (Prime, smart devices, internet Book 5) Fire Stick: The Ultimate Guide With Instructions To Unlock The True Potential Of Your Fire Stick (Streaming Devices, Fire TV Stick User Guide, How To Use Fire Stick) Create Your Own Operating System: Build, deploy, and test your very own operating systems for the Internet of Things and other devices USB Mass Storage: Designing and Programming Devices and Embedded Hosts Mixed-signal and DSP Design Techniques (Analog Devices) Digital Signal Processing in Vlsi (Analog Devices Technical Reference Books) Fire Stick: How To Unlock The True Potential Of Your Fire Stick - Plus Amazing Tips And Tricks! (Streaming Devices, Fire TV Stick User Guide, How To Use Fire Stick) Fire TV Stick User Guide: Support Made Easy (Streaming Devices Book 2) Fire Stick: The Ultimate Fire Stick User Guide To TV, Movies, Apps, Games & Much More! Plus Advanced Tips And Tricks! (Streaming Devices, ... TV Stick User Guide, How To Use Fire Stick) Fire Stick: The Comprehensive User Guide With Advanced Tips And Tricks To Unlocking The True Potential Of Your Device! (Streaming Devices, Fire TV Stick User Guide, How To Use Fire Stick) Fire Stick: The Ultimate Fire TV Stick User Guide - Start Using Fire TV Stick Like A Pro! (Streaming Devices, How To Use Fire Stick, Fire TV Stick User Guide)

Dmca