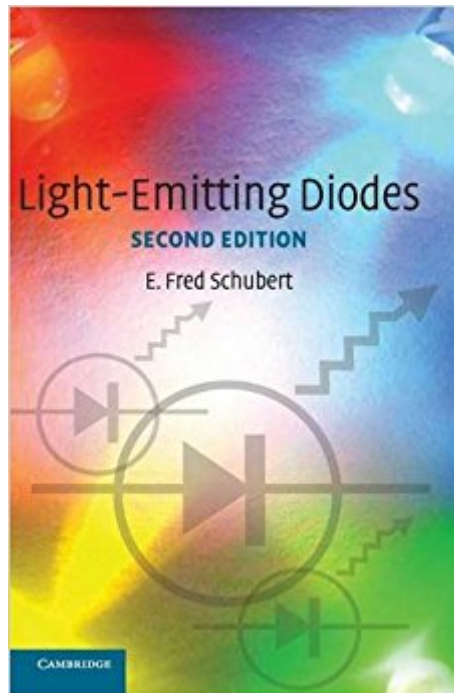




The book was found

Light-Emitting Diodes



Synopsis

Revised and fully updated, the second edition of this graduate textbook offers a comprehensive explanation of the technology and physics of LEDs such as infrared, visible-spectrum, ultraviolet, and white LEDs made from III-V semiconductors. Elementary properties such as electrical and optical characteristics are reviewed, followed by the analysis of advanced device structures. With nine additional chapters, the treatment of LEDs has been vastly expanded, including new material on device packaging, reflectors, UV LEDs, III-V nitride materials, solid-state sources for illumination applications, and junction temperature. Radiative and non-radiative recombination dynamics, methods for improving light extraction, high-efficiency and high-power device designs, white-light emitters with wavelength-converting phosphor materials, optical reflectors, and spontaneous recombination in resonant-cavity structures are discussed in detail. With exercises, solutions, and illustrative examples, this textbook will be of interest to scientists and engineers working on LEDs and graduate students in electrical engineering, applied physics, and materials science.

Book Information

Hardcover: 434 pages

Publisher: Cambridge University Press; 2 edition (June 19, 2006)

Language: English

ISBN-10: 0521865387

ISBN-13: 978-0521865388

Product Dimensions: 6.8 x 0.9 x 9.7 inches

Shipping Weight: 2.2 pounds (View shipping rates and policies)

Average Customer Review: 4.1 out of 5 stars 12 customer reviews

Best Sellers Rank: #1,095,630 in Books (See Top 100 in Books) #75 in [Books > Engineering & Transportation > Engineering > Electrical & Electronics > Electronics > Optoelectronics](#) #186 in [Books > Engineering & Transportation > Engineering > Electrical & Electronics > Electronics > Semiconductors](#) #369 in [Books > Science & Math > Physics > Solid-State Physics](#)

Customer Reviews

'Light-Emitting Diodes is an excellent examination of the physics and technology of semiconductor LEDs. The narration is simple and direct, and the book is well referenced for those seeking a deeper understanding of the topic.' Physics Today

Revised and fully updated, the second edition of this textbook is dedicated to the technology and

physics of LEDs including infrared, visible-spectrum, ultraviolet, and white LEDs. With nine more chapters, the subject matter has been vastly expanded. Suitable for scientists, engineers, and graduate students. Contains exercises, solutions and illustrative examples.

Schubert (RPI) has written an excellent book on LEDs that manages to explain and derive simple quantitative models for many phenomena of current interest. He tackles issues such as resonant cavity LEDs, reliability/surface recombination issues, current spreading theory, etc. Many monographs are a compendium of results in the field with hundreds of references to papers, which are briefly discussed, and are written by several authors. In contrast, Schubert, while giving copious references, is the sole author, leading to a coherent presentation well suited to learning. There are plentiful and good figures and drawings, as well as many exercises and solutions integrated into the text. There are no back of chapter problems, but this is not really a text for lower level undergraduates.

A really good book for anyone working with LEDs. Has the basic solid state physics, electrical and optical information you might need especially for the design engineer. Will not be that helpful if you are trying to design a LED luminaire. More helpful for scientific and instrumentation applications and for creating LED modeling or equations. I regret not purchasing it sooner.

This book provides the details on LED physics that I sought. It describes how key parts of the LED structure contribute to overall performance, and how LED's have been improved over the years. It is well written. I do not intend to use most of the equations included in this book, still I found it relatively easy to understand. I am already familiar with many of the silicon based technologies having worked on manufacturing processes and tools for IC's, TFT's, and solar cells (PV). This book was recommended to me by a technologist working on LED's. I recommend this book to the serious technologist who's trying to understand how to improve LED's and their use.

Great book that covers both the fundamental physics of LEDs, as well as gives the reader just the right amount of insight into their origin. The topics covered are very broad and in my mind a must own for people who are trying to enter the LED industry.

Solid book all around. Only reason for not giving 5 stars is the pictures are all black and white, which seems ridiculous especially when showing color mixing diagrams etc..

It is a good book about Light Emitting Diodes (LEDs). It provides very good info and it is a good reference for engineers who work in LED field.

In its Second Edition - this book is much improved and far more up-to-date, with plenty of practical advice as well theory/design. But still no discussion of band-structure in any detail - which I feel is a weakness of this text. Some valuable material on Nitrides is now included. Overall - this is now arguably the best LED book in the market-place at this time.

I think, the book contains all the basic information about the LEDs. It contains very helpful information regarding to the structure of LEDs, their design, the optimization of the LED performance, colorimetry, etc. I think the only negative point related to this book is that sometimes the variables/parameters in the equations are not given clearly. Therefore reader should look at the previous pages to understand these parameters/variables.

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

Light-Emitting Diodes Principles and Applications of Organic Light Emitting Diodes (OLEDs) (Woodhead Publishing Series in Electronic and Optical Materials) Introduction to Light Emitting Diode Technology and Applications Day Light, Night Light: Where Light Comes From (Let's-Read-and-Find-Out Science 2) Light Therapy: Teach Me Everything I Need To Know About Light Therapy In 30 Minutes (Light Therapy - Season Affective Disorder - SAD - Vitamin D) The Right Light: Photographing Children and Families Using Natural Light Studio Anywhere 2: Hard Light: A Photographer's Guide to Shaping Hard Light Light from Light: An Anthology of Christian Mysticism (Second Edition) Goblin Slayer, Vol. 1 (light novel) (Goblin Slayer (Light Novel)) Serpent of Light: Beyond 2012 - The Movement of the Earth's Kundalini and the Rise of the Female Light, 1949 to 2013 Cooking Light Volume 1 (Complete Boxed Set): With Light Cooking, Freezer Recipes, Smoothies and Juicing Understanding and Using the Light Microscope: Introduction and QuickStart Guide to Using Compound Light Microscopes Light Is the New Black: A Guide to Answering Your Soul's Callings and Working Your Light LOUISE PENNY • SERIES READING ORDER (SERIES LIST) • IN ORDER: HOW THE LIGHT GETS IN, THE BEAUTIFUL MYSTERY, A TRICK OF THE LIGHT, THE HANGMAN, BURY YOUR DEAD, STILL LIFE & MANY MORE! Catching the Light: The Entwined History of Light and Mind The Collected Works of Edwin Arnold: Buddhism & Hinduism Writings, Poetical Works & Plays: The Essence of Buddhism, Light of the World, The Light of Asia, ... The Japanese Wife, Death--And Afterwards| Collected

Works of Edwin Arnold: Buddhism and Hinduism Studies, Poetry & Plays (Illustrated): The Essence of Buddhism, Light of the World, The Light of ... The Japanese Wife, Death--And Afterwards~| Introduction to Light: The Physics of Light, Vision, and Color (Dover Books on Physics) Light Therapy: Teach Me Everything I Need to Know About Light Therapy in 30 Minutes Goblin Slayer, Vol. 3 (light novel) (Goblin Slayer (Light Novel))

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)