



Handbook of Optical Metrology: Principles and Applications, Second Edition

From CRC Press

Download now

Read Online 

Handbook of Optical Metrology: Principles and Applications, Second Edition From CRC Press

Handbook of Optical Metrology: Principles and Applications begins by discussing key principles and techniques before exploring practical applications of optical metrology. Designed to provide beginners with an introduction to optical metrology without sacrificing academic rigor, this comprehensive text:

- Covers fundamentals of light sources, lenses, prisms, and mirrors, as well as optoelectronic sensors, optical devices, and optomechanical elements
- Addresses interferometry, holography, and speckle methods and applications
- Explains Moiré metrology and the optical heterodyne measurement method
- Delves into the specifics of diffraction, scattering, polarization, and near-field optics
- Considers applications for measuring length and size, displacement, straightness and parallelism, flatness, and three-dimensional shapes

This new **Second Edition** is fully revised to reflect the latest developments. It also includes four new chapters?nearly 100 pages?on optical coherence tomography for industrial applications, interference microscopy for surface structure analysis, noncontact dimensional and profile metrology by video measurement, and optical metrology in manufacturing technology.

 [Download Handbook of Optical Metrology: Principles and Appl ...pdf](#)

 [Read Online Handbook of Optical Metrology: Principles and Ap ...pdf](#)

Handbook of Optical Metrology: Principles and Applications, Second Edition

From CRC Press

Handbook of Optical Metrology: Principles and Applications, Second Edition From CRC Press

Handbook of Optical Metrology: Principles and Applications begins by discussing key principles and techniques before exploring practical applications of optical metrology. Designed to provide beginners with an introduction to optical metrology without sacrificing academic rigor, this comprehensive text:

- Covers fundamentals of light sources, lenses, prisms, and mirrors, as well as optoelectronic sensors, optical devices, and optomechanical elements
- Addresses interferometry, holography, and speckle methods and applications
- Explains Moiré metrology and the optical heterodyne measurement method
- Delves into the specifics of diffraction, scattering, polarization, and near-field optics
- Considers applications for measuring length and size, displacement, straightness and parallelism, flatness, and three-dimensional shapes

This new **Second Edition** is fully revised to reflect the latest developments. It also includes four new chapters?nearly 100 pages?on optical coherence tomography for industrial applications, interference microscopy for surface structure analysis, noncontact dimensional and profile metrology by video measurement, and optical metrology in manufacturing technology.

Handbook of Optical Metrology: Principles and Applications, Second Edition From CRC Press Bibliography

- Sales Rank: #182504 in Books
- Published on: 2015-04-09
- Original language: English
- Number of items: 1
- Dimensions: 2.10" h x 7.20" w x 10.00" l, .0 pounds
- Binding: Hardcover
- 919 pages

 [Download Handbook of Optical Metrology: Principles and Appl ...pdf](#)

 [Read Online Handbook of Optical Metrology: Principles and Ap ...pdf](#)

Editorial Review

Review

"... a good reference book for engineers and scientists in general and particularly for those who are not experts in the field of optical metrology. The broad collection of metrology applications and the introductory descriptions of the principles make the book a good one to have on hand for those who are frequently searching for technical solutions for their applications both in research and in industry."

?Dong Chen, Bruker Nano Surfaces, Tucson, Arizona, USA

"... distinguishes itself with its collective array of practical applications. While individual applications may be scattered in the many professional journals, these topics are cohesively assembled in this handbook."

?Albert S. Kobayashi, University of Washington, Seattle, USA

"The material of this book is written at an introductory level that should be understandable to anyone with an engineering background. The book starts with a very useful background section on optical component technology that helps to set the stage for subsequent chapters on optical techniques. The discussion of optical metrology techniques focuses on the practical implementation and instrumentation rather than the science and research areas that would be beyond the scope of those without specific background in each area. In doing so, the book focuses on practical understanding of the methods rather than theory. ... This book presents both a background of technology in optical components and metrology on a general scale, as well as a practical overview of a wide range of optical instrumentation methods. It is written at a level that could be understood by an operator to better guide the use of commercial optical metrology instrumentation. In this regard, this book could be a valuable resource for company metrology labs as a guide and training tool for new employees."

?Kevin Harding, Past President and Fellow of the International Society for Optics and Photonics (SPIE)

"Overall it is a great book ... includes both theory and experimental and engineering experience. Authors summarized new techniques, algorithms as well as error analysis."

?Sen Han, University of Shanghai for Science and Technology

"This book covers a wide range of optical metrology methods and applications. And the contributors are all well known in their particular fields. This book should be a great reference book to engineers and researchers."

?Song Zhang, Purdue University, West Lafayette, Indiana, USA

"Readers with a technical background, but with little experience in optics, will easily follow this book and use it as a resource for developing optical or electro-optical systems. It is especially handy because it presents much useful information in one source."

?IEEE *Electrical Insulation*, September/October 2016

About the Author

Toru Yoshizawa received his BS, MS, and doctorate of engineering from the University of Tokyo, Japan. After ten years of research and educational works at Yamanashi University, Kofu, Japan, he moved to Tokyo University of Agriculture and Technology, Japan, where he was professor in the Department of Mechanical

Systems Engineering for 25 years. After retirement from the university, he worked in industry for three years, and then moved to Saitama Medical University, Japan to explore medical and biomedical fields using optical techniques. Currently he is director at Non-Profit Organization 3D Associates, Yokohama, Japan, and professor emeritus at Tokyo University of Agriculture and Technology.

Users Review

From reader reviews:

Tanya Minor:

As people who live in the particular modest era should be update about what going on or details even knowledge to make these keep up with the era which is always change and make progress. Some of you maybe will probably update themselves by looking at books. It is a good choice to suit your needs but the problems coming to an individual is you don't know what one you should start with. This Handbook of Optical Metrology: Principles and Applications, Second Edition is our recommendation to cause you to keep up with the world. Why, because this book serves what you want and want in this era.

Daria Gertz:

Now a day those who Living in the era wherever everything reachable by match the internet and the resources inside can be true or not need people to be aware of each facts they get. How a lot more to be smart in getting any information nowadays? Of course the solution is reading a book. Reading through a book can help individuals out of this uncertainty Information mainly this Handbook of Optical Metrology: Principles and Applications, Second Edition book as this book offers you rich facts and knowledge. Of course the info in this book hundred per cent guarantees there is no doubt in it you may already know.

Mary Kidd:

The e-book with title Handbook of Optical Metrology: Principles and Applications, Second Edition has lot of information that you can find out it. You can get a lot of advantage after read this book. This book exist new understanding the information that exist in this publication represented the condition of the world today. That is important to yo7u to find out how the improvement of the world. This kind of book will bring you throughout new era of the syndication. You can read the e-book in your smart phone, so you can read the item anywhere you want.

Shirley Eagle:

Reading a book to be new life style in this 12 months; every people loves to go through a book. When you learn a book you can get a lots of benefit. When you read textbooks, you can improve your knowledge, mainly because book has a lot of information upon it. The information that you will get depend on what kinds of book that you have read. If you wish to get information about your review, you can read education books, but if you want to entertain yourself read a fiction books, these us novel, comics, and soon. The Handbook of Optical Metrology: Principles and Applications, Second Edition will give you a new experience in reading through a book.

**Download and Read Online Handbook of Optical Metrology:
Principles and Applications, Second Edition From CRC Press
#EXVKPM6AR3I**

Read Handbook of Optical Metrology: Principles and Applications, Second Edition From CRC Press for online ebook

Handbook of Optical Metrology: Principles and Applications, Second Edition From CRC Press Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Handbook of Optical Metrology: Principles and Applications, Second Edition From CRC Press books to read online.

Online Handbook of Optical Metrology: Principles and Applications, Second Edition From CRC Press ebook PDF download

Handbook of Optical Metrology: Principles and Applications, Second Edition From CRC Press Doc

Handbook of Optical Metrology: Principles and Applications, Second Edition From CRC Press Mobipocket

Handbook of Optical Metrology: Principles and Applications, Second Edition From CRC Press EPub

EXVKPM6AR3I: Handbook of Optical Metrology: Principles and Applications, Second Edition From CRC Press