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| Nota di contenuto | Foreword by T. Hänsch, Nobel Price in Physics -- Part A: Basic Principles and Materials -- Part B: Fabrication and Properties of Optical Components -- Part C: Coherent and Incoherent Light Sources -- Part D: Selected Applications and Special Fields -- About the Authors -- Subject Index. |
| Sommario/riassunto | The Springer Handbook of Lasers and Optics provides fast, up-to-date, comprehensive and authoritative coverage of the wide fields of optics and lasers. It is written for daily use in the office or laboratory and offers explanatory text, data, and references needed for anyone working with lasers and optical instruments. Each chapter or section is authored by respected experts and contains the basic principles, applications and latest information in the field. Among the subjects covered are geometrical and wave optics, linear and nonlinear optics, optical materials and components, detectors, incoherent and all essential types of coherent light sources, generation of ultrashort pulses, spectroscopic techniques, laser safety as well as current trends in such modern areas as quantum optics, femto- and attosecond physics, and nanooptics as well as optics beyond the diffraction limit. The 21 chapters are grouped into four parts which cover basic principles and materials, fabrication and properties of optical components, coherent and incoherent light sources, and, finally, selected applications and special fields such as terahertz photonics, X- |

ray optics and holography. The handbook is written and compiled for physicists, engineers and other scientists at universities and in industrial research who develop and use optical techniques. With a Foreword by Nobel Laureate T.W. Hänsch Key Topics Basic Optics Principles Coherent and Incoherent Light Sources Ultrafast Physics and Spectroscopies Optical Materials and Their Properties Fabrication and Properties of Optical Components Selected Applications and Special Fields: Nanooptics, Quantum Optics, X-Ray Optics, Terahertz Photonics and Holography Features Contains over 980 two-color illustrations. Includes over 120 comprehensive tables with properties of optical materials and light sources. Emphasizes physical concepts over extensive mathematical derivations. Chapters with summaries, detailed index and fully searchable CD-ROM guarantee quick access to data. Delivers a wealth of up-to-date references.