1. Record Nr. UNINA9910783283803321

Autore	Rieke G. H (George Henry)
Titolo	Detection of light : from the ultraviolet to the submillimeter / / G.H. Rieke [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2003
ISBN	1-107-13439-0 1-280-42003-0 9786610420032 1-139-14835-4 0-511-17859-X 0-511-06518-3 0-511-05885-3 0-511-30582-6 0-511-60649-4 0-511-07364-X
Edizione	[Second edition.]
Descrizione fisica	1 online resource (xi, 363 pages) : digital, PDF file(s)
Disciplina	621.36/2
Soggetti	Optical detectors
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references (p. 342-355) and index.
Nota di contenuto	Cover; Half-title; Title; Copyright; Contents; Preface; 1 Introduction; 2 Intrinsic photoconductors; 3 Extrinsic photoconductors; 4 Photodiodes and other junction-based detectors; 5 Amplifiers and readouts; 6 Arrays; 7 Photoemissive detectors; 8 Photography; 9 Bolometers and other thermal detectors; 10 Visible and infrared coherent receivers; 11 Submillimeter-and millimeter-wave heterodyne receivers; 12 Summary; Appendix A Physical constants; Appendix B Answers to selected problems; References; Index
Sommario/riassunto	Detection of Light provides a comprehensive overview of the important approaches to photon detection from the ultraviolet to the submillimeter spectral regions. This expanded and fully updated second edition discusses recently introduced types of detector such as superconducting tunnel junctions, hot electron bolometer mixers, and

fully depleted CCDs, and also includes historically important devices such as photographic plates. Material from many disciplines is combined into a comprehensive and unified treatment of the detection of light, with emphasis on the underlying physical principles. Chapters have been thoroughly reorganised to make the book easier to use, and each includes problems with solutions as appropriate. This self-contained text assumes only an undergraduate level of physics, and develops understanding as it is needed. It is suitable for advanced undergraduate and graduate students, and will provide a valuable reference for professionals in astronomy, engineering and physics.