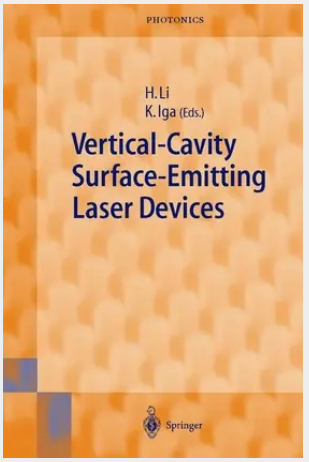
Li / Iga

Vertical-Cavity Surface-Emitting Laser Devices



This book concerns one of the most important developments of the last years in laser physcis, vertical cavity surface emitting lasers. They have a high potential for useful applications, ijn fact. vertical-cavity surface-emitting lasers (VCSELs) are one of the most promising new developments in laser physics. The basics, theory, design, fabrication and operation of such lasers are explained in detail. this book is the first of its kind to provide readers with a comprehensive account of the latest technological developments in VCSEL devices. In fact, all the chapters are written by pioneers and key experts who have exclusive access to the most up-to-date innovations in their respective fields. Thus, readers not only learn of the crucial aspects of VCSEL devices, including simulations and experiments, but also the underlying theory.

The vertical cavity surface emitting laser (VCSEL) is a relatively new se- conductor laser device, especially applicable to ?ber-optic networks in the 21st century. About 25 years have passed since its invention, and devices for Gigabit Ethernet are now being mass-produced. It is expected that VCSELs will open up a new era of very-high-speed ?ber-optic networks and a wide range of application areas. VCSEL have many advantages, such as: (i) monolithic and high-yield f- rication; (ii)extremelylowthresholdandsmallpowerconsumption;(iii)hi-speedmodulationcapabilityatlowdrivingcurrentlevels;(iv)easypackaging, and so on. The emission spectra have been extended from 850nm toward the visible and infrared regions. We can expect reasonably high-power output, enough for most applications, and extremely high powers in some engineered arrayed devices. This book project was initiated to provide important information on VCSELs, edited by Prof. Herbert Li. Very regrettably, while editing this book he passed away. After some time, the present editor succeeded him. Due to this reason the publication of this book was delayed, and the editor would like to thank the contributors for their patience. This book includes the basic concepts, device technology, and application areas of VCSELs, and can be read not only by scientists and engineers in the ?eld, but also by graduate course students who wish to start their research or to get an introduction to the vast knowledge on semiconductor lasers.

213,99 €
199,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9783540678519
Medium: Buch
ISBN: 978-3-540-67851-9
Verlag: Springer
Erscheinungstermin: 22.10.2002
Sprache(n): Englisch
Auflage: 2002
Serie: Springer Series in Photonics
Produktform: Gebunden
Gewicht: 1650 g
Seiten: 386
Format (B x H): 160 x 241 mm