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Photomask Fabrication Technology (Professional Engineering)



Synopsis

Photomasks are defect-free optical templates -- the printing masters for the fabrication of integrated circuits (ICs). When IC feature sizes fall below the exposure tool's source wavelength, photomask fabrication becomes difficult: very strict mask critical dimension (CD) and feature placement specifications, intensive capital equipment investment, unique raw materials and applications, and special expertise requirements for photomask fabrication technologists are necessary to fabricate modern microelectronics. Thus the rapid recent growth of the field and the need for this book. This text details the science and technology of industrial photomask production, including fundamental principles, industrial production flows, technological evolution and development, and state of the art technologies. Focusing on industrial applications rather than pure science, the goal of the book is to provide a comprehensive reference for any engineer developing microelectronic manufacturing processes

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Customer Reviews

Fabrication processing methods Quality control parameters Resolution enhancement techniques Defect reduction Photomask fabrication technologies and applications A must-have guide for engineers developing photomask manufacturing processes, Photomask Fabrication Technology fully explains the technology behind industrial photomask production, focusing on practical

applications. Readers will find complete details on fundamental principles, industrial production flows, technological evolution and development, and state-of-the-art advancements. Includes detailed coverage of: Data preparation methods and issues Pattern formation and transfer technology Metrology and finishing methods Resolution enhancement applications Next-generation lithography trends Gain the expertise required for modern photomask manufacturing with this definitive resource: Data preparation and design * Pattern generation * Pattern transfer * Photomask metrology * Defect control and finishing * Inspection, repair, and cleaning * Resolution enhancement techniques * Wafer fabrication issues * Future developments

Benjamin G. Eynon, Jr., is Senior Director of Product Marketing at KLA-Tencor Corporation. He has more than 18 years of experience in wafer and photomask industry technology. Banqiu Wu, Ph.D. is a Senior Staff Scientist at Photronics, Inc. He has expert-level photomask fabrication experience in the pattern transfer process.

Great intro book on photo-mask, development , manufacturing & history. That said, it needs to be updated.

Great product. Feels good in the hand. very good . i need it to change , good memory. delivery on time receive it next day .

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