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Applied Optics

A Guide to Optical System Design/Volume 2

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Preface

The overall goals of *Applied Optics* have already been stated in the first volume. Here I merely summarize these briefly, adding a few remarks specific to this volume.

Applied Optics is meant to serve a dual purpose: to permit self-study by the graduate engineer and to serve as a handbook to the experienced practitioner. Thus step-by-step derivations of all important results are included whenever consistent with space restrictions and, on the other hand, a concerted effort was made to include, in condensed form, a large amount of physical data, in the many graphs and 125 tables.

Here, even more than in the first volume, I have tried to summarize in individual chapters the results of many disciplines, such as photoelectric detection and photographic techniques usually treated in separate texts. Even peripheral topics, such as calculating the position of sun and stars, have been included in the chapter on atmospheric optics since this information is important in practice and often not readily available to the engineer.

Many of the topics treated here are in a state of rapid development, even more than most of those discussed in the first volume—the term “integrated optics” had not even been coined when I wrote the first volume, and a major part of a chapter had to be devoted to it in the second! This implies that the information is here scattered throughout the periodical literature even more—and this accounts for the delay in the completion of this volume despite my diligent efforts.

This volume, too, has benefited from discussions with many colleagues, impossible for me to enumerate. I feel, however, compelled to thank those who have reviewed complete chapters of the finished manuscript: Dr. M. Menat (Israel Defense Department), Chapters 12 and 16; Dr. J. Bodenheimer (Jerusalem College of Technology), Chapter 15; Dr. H. Arbel (National Physics Laboratory of Israel), Chapter 16; Dr. M. Goldman (Berke-Pathe-Humphries, Israel), Chapter 17; and Prof. A. Friesem (Weizmann Institute), Chapter 19. I also wish to thank Prof. H. Mandelbaum (Jerusalem), for reading Section 12.3.4, and Drs. J. J. McCann and W. E. Kock for supplying me with original prints of Figs. 15.20a and 19.14, respectively.

Again, I happily conclude with the acknowledgment of my wife's cheerful moral support through the many years when most of my spare time was taken up by the burden of writing this volume whose size exceeded our anticipations, by far.

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