Projection Displays, 2nd Edition
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DESCRIPTION

Projection is a technology for generating large, high resolution images at a price point end users can afford. This allows it to be used in a wide variety of large-screen markets such as television and cinema. In addition, there are emerging small screen markets where a pocketable miniaturized projector can display images from mobile information devices such as smart phones or portable media players.

Fully revised, this second edition of Projection Displays provides up-to-date coverage of the optical and mechanical systems in electronic projection displays. It takes into account major new developments in the many technologies needed to manufacture a projector display system. It presents a comprehensive review of projector architectures, systems, components and devices. Key new and updated features include:

• new material on light sources for projection displays;
• updated information on the human factors of projection displays including color gamuts, resolution and speckle;
• coverage of new image generating systems including LCOS and scanned laser systems;
• up to date information on front and rear projection screens;
• practical examples of projection display applications;

• models for predicting the performance of optical and mechanical systems

This book is aimed at practicing engineers and researchers involved in the research, development, design and manufacture of projection displays. It includes key aspects from the many technologies contributing to projection systems such as illumination sources, optical design, electronics, semiconductor design, microdisplay systems and mechanical engineering. The book will also be of interest to graduate students taking courses in display technology and imaging science, as well as students of the many other engineering, physics and optics disciplines that lead into the field of projection displays.

The Society for Information Display (SID) is an international society, which has the aim of encouraging the development of all aspects of the field of information display. Complementary to the aims of the society, the Wiley-SID series is intended to explain the latest developments in information display technology at a professional level. The broad scope of the series addresses all facets of information displays from technical aspects through systems and prototypes to standards and ergonomics.

ABOUT THE AUTHOR

Matthew S. Brennesholtz, Insight Media, Pleasantville, NY
Dr Brennesholtz is currently a Senior Analyst at Insight Media in the USA. In this position, he works on a variety of topics relating to display systems, including supply chain issues, emerging display technologies and new applications for microdisplay technology. He has also headed research projects on illumination systems for projection displays, covering lasers and conventional lamps, and on a new type of liquid crystal on silicon (LCoS) backplane. In addition to this, he has authored 18 conference and journal papers, and the first edition of Projection Displays (Wiley, 1998) with Edward Stupp. Previous to his employment at Insight Media, Dr Brennesholtz has had positions at Philips and General Electric, and he currently holds 23 patents.

Edward H. Stupp, Stupp Associates, Display Consultation, Jackson, NJ
Edward Stupp currently runs his own consulting company, advising on display technology for industry. He authored the first edition of Projection Displays (Wiley, 1998) but is not directly contributing to the revision of the second edition. He will be listed as a co-author due to his involvement in the first edition.