

APPLICATIONS

P.29: Color-Sequential Image Capturing

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By using a monochrome camera and color-sequential object illumination with LEDs, a full-color image was restored. Advantages of this technique with respect to color flexibility, spatial resolution, camera sensitivity, and their consequences on the design of the system will be presented. A camera system based on this technique and its lighting control unit will be demonstrated and discussed in detail.

P.30: Accommodation Depth in 3-D Display System Using Two Stereoscopic Displays at Different Depths

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A display system that creates a 3-D image by overlapping two stereoscopic images displayed by two stereoscopic displays at different depths will be described. It presents the possibility of providing stereoscopic views without any contradiction between accommodation and the binocular convergence of the viewer's eyes.

P.31: Microdisplays As Aberration Correctors

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A microdisplay can modulate a wavefront either in phase or in amplitude. The feasibility of using a commercialized microdisplay as an aberration corrector for the human eye has been studied. A demonstration of this device will be presented.

P.32: LED Backlight System for Medical Imaging Using LCD Monitors

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Products with LED backlights are now entering the consumer and semi-professional markets where wide color gamut is essential. A new LED-backlight solution suitable for medical-imaging application will be described, where the requirements are mainly related to luminance and color accuracy and white-point tuning.

P.33: Driving Schemes for LED-Backlighting Large-Area LCDs

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Leading LED-driver architectures for backlighting large-area LCD televisions were compared. Design and cost considerations will be discussed for linear, boost, and buck-based LED drivers. The strengths and weaknesses of each architecture will be identified, and recommendations made on the type of application for which each is best suited.

P.200L: Late-News Poster: Sensing Touch by Sensing Force

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Directly measuring the force of physical touch on a touch screen eliminates the limitations of traditional touch technologies. Force-sensing touch devices heretofore have proven impractical. The challenges of force-based touch sensing, how these are overcome, and the capabilities thus offered to the design engineer will be discussed.

