

## **PROJECTION**

### **P.187: WITHDRAWN**

### **P.188: Single-Panel Spatial-Color and Sequential-Color LCOS Projectors Using LED Lamps**

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Two single-panel LCOS projectors using LED lamps will be compared. The 0.59-in. sequential-color LCOS microdisplay with integrated frame buffers can deliver 11 lm from a 4-W red, green, and blue LED. The 0.59-in. spatial-color LCOS microdisplay with white subpixels can deliver 14 lm from a 6-W white LED.

### **P.189: WITHDRAWN**

### **P.190: Method for Making Panels for Wedge Projection**

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Wedge projection displays can be made economically in small quantities by machining the wedge profile on a thick sheet of cast acrylic, by machining a constant thickness on a thin sheet of cast acrylic, and then by index-matching the two together. The resulting panels can have a smoothness almost as well as that of float glass and transparencies approaching that of plastic optical fiber.

### **P.206L: Late-News Poster: Low-Electric-Consumption 3.6-W Green SHG Laser Light Source Applicable to Laser Projection Systems**

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A highly efficient fully air-cooled green laser light source with a frequency-doubling module has been developed. As a result, 3.6 W of green laser light generation with an 8.6% wall-plug efficiency was achieved by using fully air-cooled RGB lasers. This includes green SHG (second-harmonic generation) laser and illumination optics for speckle noise reduction. A laser projection engine has been prototyped.

**P.207L: Late-News Poster: Spherical Glass Encapsulated LEDs for Display Light Sources**

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A glass material and a spherical glass encapsulation process for LEDs were developed. An LED encapsulated by spherical glass exhibits high directional characteristic and emits collimated lights. The spherical glass-encapsulated LEDs are suitable for light sources for displays for portable projection systems and for LCD back lights.

**P.208L: Late-News Poster: Liquid-Crystal Lasers for Projection Displays**

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The liquid-crystal laser presents itself as an interesting tool for projection displays, acting as the illumination source. Liquid-crystal lasers are fast becoming an interesting area of research within the liquid-crystal community. By integrating these systems with current LCD projection systems, novel designs can be envisioned.