Versatile Prisms from 3M Precision Optics Enable Maximum Brightness Uniformity And Design Flexibility for Rear-Projection Televisions

The latest technology for rear-projection televisions from 3M Precision Optics Inc. - the Vikuiti total internal reflection (TIR) prism from 3M - not only is a vital component in the design of compact Texas Instruments digital light processing technology light engines, but offers additional benefits when used in multiple configurations.

3M's patented technology uses Vikuiti TIR prisms to achieve maximum brightness, uniformity and excellent contrast. In addition, use of a Vikuiti TIR prism in the optical engine permits a significantly simplified system design when compared to systems without Vikuiti TIR prism-based designs. Here's how it works: the illumination light enters the prism and travels through the prism to illuminate the Digital Micromirror Device (DMD). The image reflects off the DMD, then passes again through the prism and is imaged onto the screen with the projection lens.

Vikuiti TIR prism technology is both simple to implement and flexible in its use. In one configuration, the various elements and prism are configured such that light is reflected by total internal reflection prior to being imaged. In a 'reverse' prism design, the light travels in the opposite direction. The various configurations can be used to achieve different internal cabinet layout of electronics and light engine designs.

Carving cost out of the system is important for the industry as customers continue to broaden their rear-projection, microdisplay-based television offerings. "Working with customers early in their design phase helps them realize the full benefit of the prism," said Chris Nitz, marketing manager, 3M Precision Optics. "Our engineering team works closely with customers, not only to optimize the prism design based on their illumination system design, but to drive toward standardization while reducing their costs."

Vikuiti TIR prisms are available in a variety of configurations, including cost-competitive solutions for under $20, depending on actual design and quantity purchased. For more information about the new Vikuiti projection display components for rear-projection televisions, contact (513) 943-5627, or e-mail http://www.3m.com/profile/pressbox/media_contacts.jhtml

About 3M Precision Optics Inc.

3M Precision Optics Inc., a subsidiary of 3M, supplies a broad range of products enhancing the performance of CRT and microdisplay-based projection displays and is engaged in the commercialization of next-generation components and systems enabling high-performance, long-life, and thin microdisplay projection televisions. 3M Precision Optics operates globally and reports through 3M Optical Systems Division headquartered in St. Paul, Minn.

About 3M - A Global, Diversified Technology Company

Every day, 3M people find new ways to make amazing things happen. Wherever they are, whatever they do, the company's customers know they can rely on 3M to help make their lives better. 3M's brands include Scotch, Post-it, Scotchgard, Thinsulate, Scotch-Brite, Filtrete, Command and Vikuiti. Serving customers in more than 200 countries around the world, the company's 67,000 people use their expertise, technologies and global strength to lead in major markets including consumer and office; display and graphics; electronics and telecommunications; safety, security and protection services; health care; industrial and transportation. For more information, including the latest product and technology news, visit http://www.3M.com.

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