Product

The Trixel® by TriLite Technologies is an AR/VR/MR enabling laser beam scanner. Trixel’s® core technology is backed by a strong IP portfolio focused on reducing size, weight and cost of display units.

With the selection and mastery of the laser technology for the Trixel® in combination with its unique software solution, TriLite Technologies enables the smallest form factor laser beam scanner for projectors in AR / VR / MR and other applications.

The Trixel® offers a higher image brightness, a larger color spectrum, use of only one lens and a larger, in particular also a configurable Field of View (FOV) compared to conventional matrix-based micro displays.

TriLite Technologies Trixel® - core advantages in summary:

• Smaller size
• Less weight
• Higher brightness
• Larger color gamut
• Use of only one lens
• Larger Field of View (FOV) than other systems
• Configurable Field of View (FOV) via proprietary software

The Trixel® product portfolio sets new standards for laser-based display technologies and also allows for specific customer adaptations.

Company & Know-How

TriLite Technologies is an image display company based in Vienna, Austria, and Palo Alto, California, developing patented ultra-small RGB laser beam scanners to be used in AR/MR/VR Head-Mounted-Devices, Head-Up Displays, and other projections such as Pico or Smart Home applications.

TriLite Technologies benefits in particular from their deep technological know-how, underpinned by our own patents and strong partnerships. This fact gets expressed through:

• Deep inhouse knowledge of light module, MEMS mirror & optic combiner technologies
• Strong patent portfolio including proprietary laser beam scanner assembly & driving technologies
• Strong relationships with all necessary component suppliers

Customization & Services

As a result of the in-depth specialist know-how and international setup, TriLite Technologies particularly distinguishes itself by our ability to act as a global one-stop shop for your laser-beam scanner requirements.

As such, TriLite Technologies is the only company worldwide who has the know-how and capability to design, integrate and manufacture any customer specific setup of light module, MEMS mirrors and optical combiners from prototyping to mass production.

The entire spectrum of Trixel’s® flexibility for customization as well as the required range of consultancy service from TriLite Technologies includes:

• Laser die bonding, wire bonding, active lens alignment, hermetic sealing
• Laser module packaging
• MEMS mirror selection based on individual laser settings
• Opto-mechanic MEMS design
• Active MEMS mirror alignment
• Laser & MEMS driving electronics
• Video input interface
• Design of optical combiners in cooperation with leading suppliers from waveguides to holographic reflectors
• Prepare production including Q&A

See our Website for ordering information and contacts!
TriLite Technologies GmbH / Product Brochure Trixel® / Contact via sales@trilite-tech.com
Realization of customer projects

Our cooperation model is characterized by aligning TriLite Technologies know-how and capabilities with customer-specific requirements. TriLite Technologies usually proceeds according to the following project flow:

• Discussion of Trixel® technical data sheet and capabilities
• Align with specific customer requirements
• Execute common design workshop
• Align on customization and service amount
• Agree on commercial offer based on work packages
• Execute project for prototyping
• Finalize pilot phase
• Prepare mass production

Manufacturing be implemented either with TriLite Technologies as the end-to-end supplier or by customers directly through licensing agreements.

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