FACT SHEET
MLA based Structured Light Projector

For 3D-sensing applications, MLA-based structured light projectors are used to generate a designed light pattern onto objects. This (usually NIR) light pattern, consisting of up to tens of thousands single dots, is distorted by the 3D geometry of the object. Subsequently, a camera records the distorted light pattern and algorithms calculate depth information about the object. temicon provides MLA-based structured light projectors in a variety of lens geometries and chip designs.

Advantages

- 10+ years of experience in MLA fabrication
- Highly precise galvanic processing of any lens geometry
- Competent consulting from lens & chip design to volume production
- Highest accuracy down to ≈5µm lens diameter
- Surface roughness Ra < 10nm
- Production conditions at clean room standard
- Confocal Microscopy and SEM available for Quality Control
- High vertical range of manufacture of all process steps
- High volume wafer-level-optics based production methods
- Fast and flexible throughput time

Technical specifications

<table>
<thead>
<tr>
<th>Lens Shape</th>
<th>Spherical / Aspherical</th>
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</thead>
<tbody>
<tr>
<td>Lens Diameter</td>
<td>5µm &lt; D &lt; 250µm</td>
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<tr>
<td>Lens Height</td>
<td>5µm &lt; h &lt; 70µm</td>
</tr>
<tr>
<td>Lens Layout</td>
<td>Square / Hexagonal / Random</td>
</tr>
<tr>
<td>Fill Factor</td>
<td>Up to 100%</td>
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<tr>
<td>Materials</td>
<td>Polymer on Glass, PMMA</td>
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</tbody>
</table>

Laser Scanning Confocal Microscopy (LSCM) image of a rectangular gapless MLA

Structured Light Projectors in Gel-Pak® vacuum release packaging

MLA creates point cloud pattern

Pictures: temicon, iStock-Vorstigt