



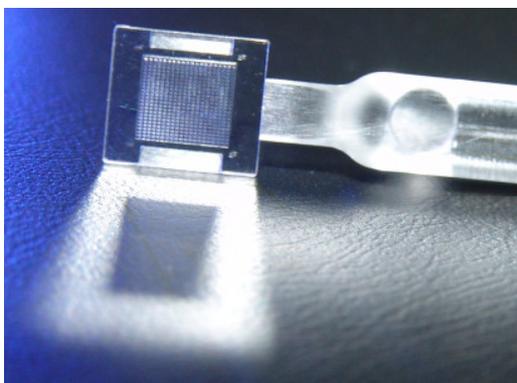
High Efficiency Micro-Optics for Illumination Projection Systems

In close cooperation with Microoptics Business Unit the Optoelectronics Systems Business Unit developed a double-sided microlens array in plastic. Due to a unique proprietary tooling this array can be reproduced for series production.

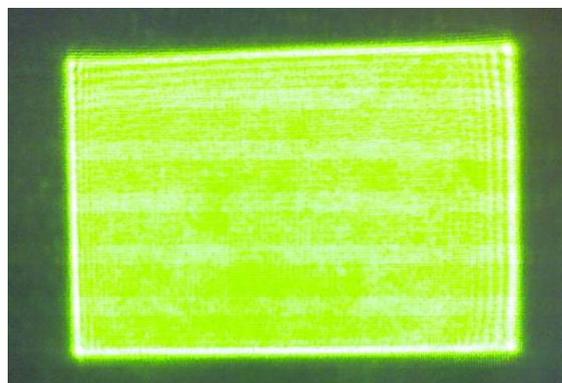
A double-sided microlens array enables, among others, homogenization of laser sources as well as beam guidance in laser projection systems. The new technology allows for an array precisely aligned front-to-back in the sub- μ -area.

This development reacts to increasing demands for micro projectors in the consumer markets, which are used, for example, for mini beamers in laptops and mobile phones. The use of plastics for these micro arrays enables an economic production and makes these components ideal for applications on the broad consumer market. Various customer demands have opened up different areas of applications for the use of the double-sided lens array; in the fields of automotive, lighting & energy, health care and life science and sensors.

With injection molding it is possible to design mounting and alignment features as an integral part of the optical component to aid in packaging and system assembly. The Optoelectronics Systems Business Unit has the capabilities to attend and to realize projects with double-sided microlens arrays from design to series production.



Double-sided microlens array (9x7mm)



Far-field pattern from a double-sided microlens array