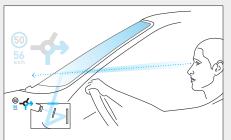
FACT SHEET

Micro-optical components for classical head-up displays





In current head-up displays, a virtual image of an intermediate image plane is projected onto the windshield. This intermediate image plane requires precise optical elements that are supplied by temicon. Potential products by temicon are mold inserts or other tools, injection molded parts or structured films with corresponding optical properties.



Function principle of a HUD



Molded part for intermediate image plane



Mold insert

Custom specific or off-the-shelf solutions

- Holographic diffusers with high transmission, continuous and elliptical FWHM adjustment, tuning of grain size to desired granularity and surface homogeneity
- Microlenses and microlens arrays with spherical, aspherical or lenticular lenses

Specifications

- Parts from PC, PMMA, COC, etc.
- Mold inserts with diffusers, lenses, MLA, etc.
- Sizes up to 7"

- Gapless arrays of lenses
- Antireflective structures (moth eye) to reduce reflectivity down to 0.2%
- Hierarchical combination of diffuser and AR-structure to enhance overall transmission
- Aperture array aligned to lens array
- Diffusers with FWHM from 1° to 125° providing circular or elliptical scattering
- Transmission >90% for diffusers used in HUD
- MLA with pitch from 10μm to 100μm



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