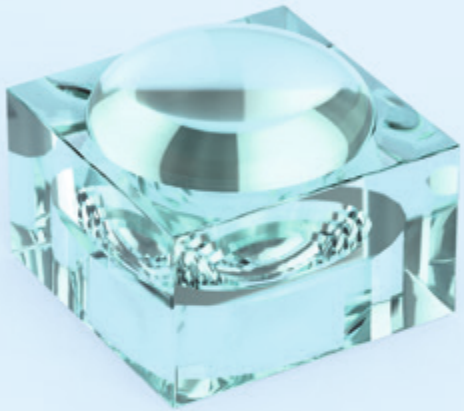


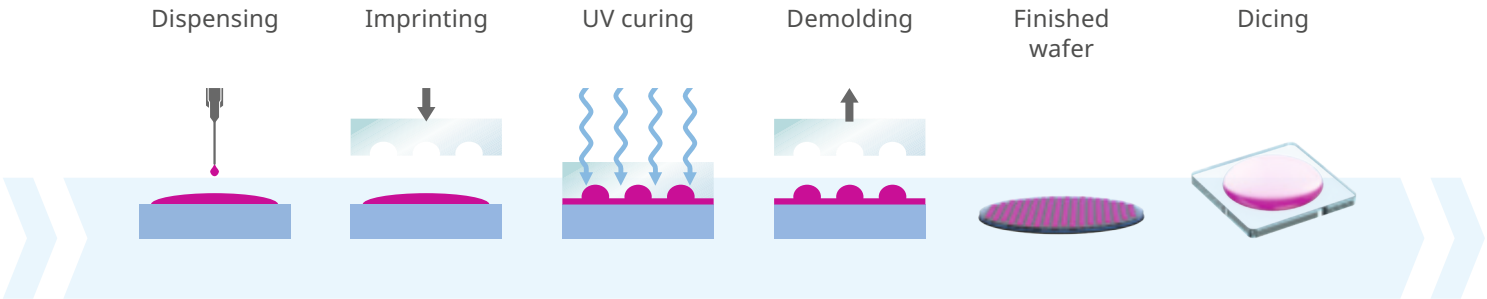
OPTICAL-GRADE POLYMERS
for lensimprint

Materials for consumer electronics applications

Microlenses based on DELO's wide range of optical-grade polymers are essential elements in miniaturized optical devices such as endoscopes, time-of-flight sensors, smartphone cameras or miniature flashlights, where they act as imaging elements or simply increase the optical efficiency of a device. They can be either manufactured monolithically or as polymer-on-glass, where the lens is imprinted on a rigid glass substrate.

Imprint process

The imprint process, also known as nanoimprint lithography (NIL), allows for efficient and high-quality replication of optical elements directly at wafer-level. With the ability to fabricate 2.5D structures in a single process step, wafer-level imprinting is a versatile and cost-effective mass-manufacturing process especially suited for miniaturized optics with high functionality and dense packaging.

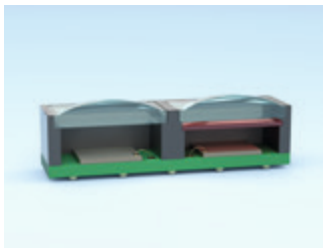


(Adhesives / polymers are represented in magenta in all illustrations)

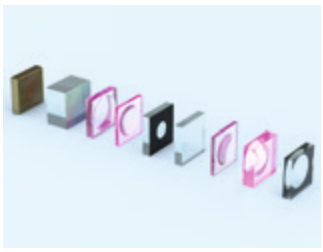
Discuss your project and your requirements with our experts:
wlmo-experts@DELO.de

Applications

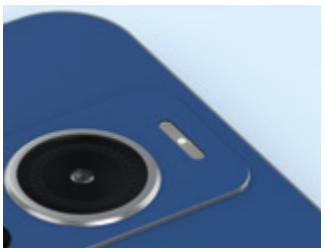
Ambient sensing



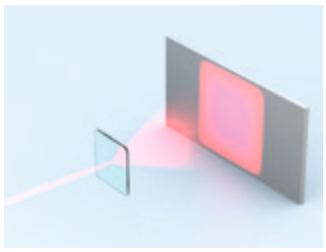
Compact camera module

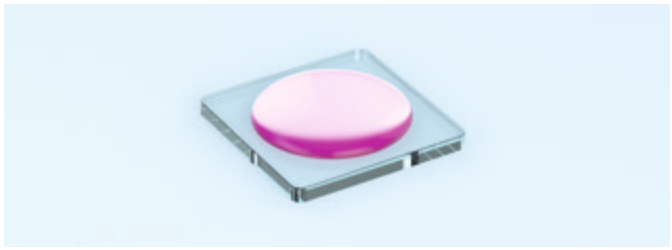


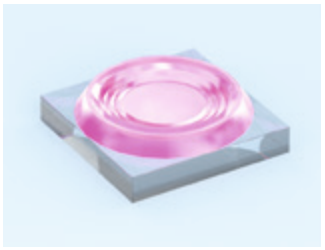
Miniature flashlights

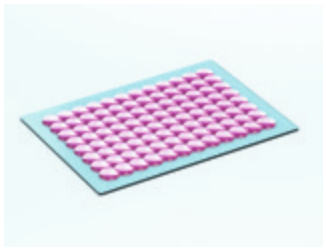


Flood illumination







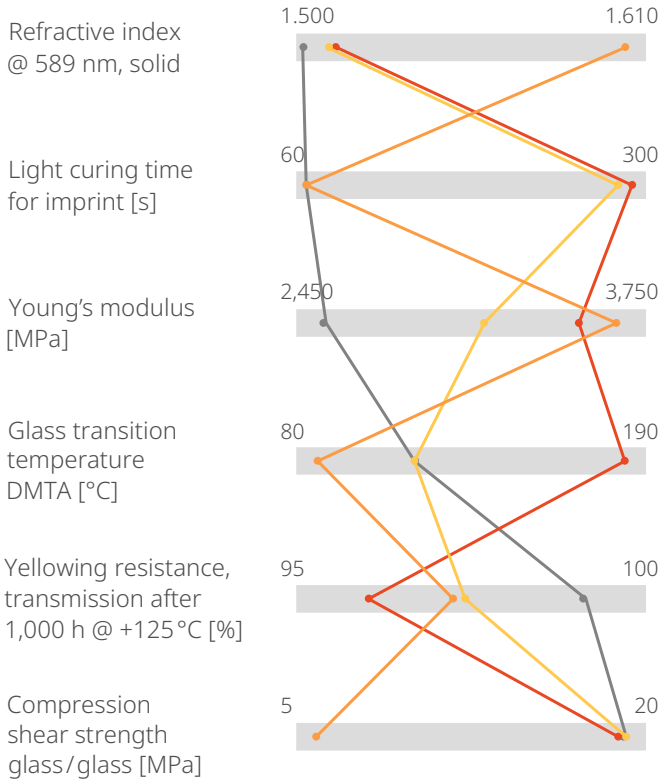


Material requirements

› High transmission
› Optical and dimensional stability
› Refractive index matching the optical design
› High adhesion to the substrate, e. g. glass
› Low shrinkage

Material solutions

› DELO PHOTOBOND OM4310: high refractive index
› DELO KATIOBOND OM614: allrounder
› DELO KATIOBOND OM6116: high glass transition temperature
› DELO KATIOBOND OM6611: high temperature resistance



DELO

DELO Industrial Adhesives

China | Czechia | France | Germany HQ | Italy | Japan
Korea | Malaysia | Singapore | Thailand | USA

www.DELO-adhesives.com