

ADAS camera systems

Advanced Adhesives

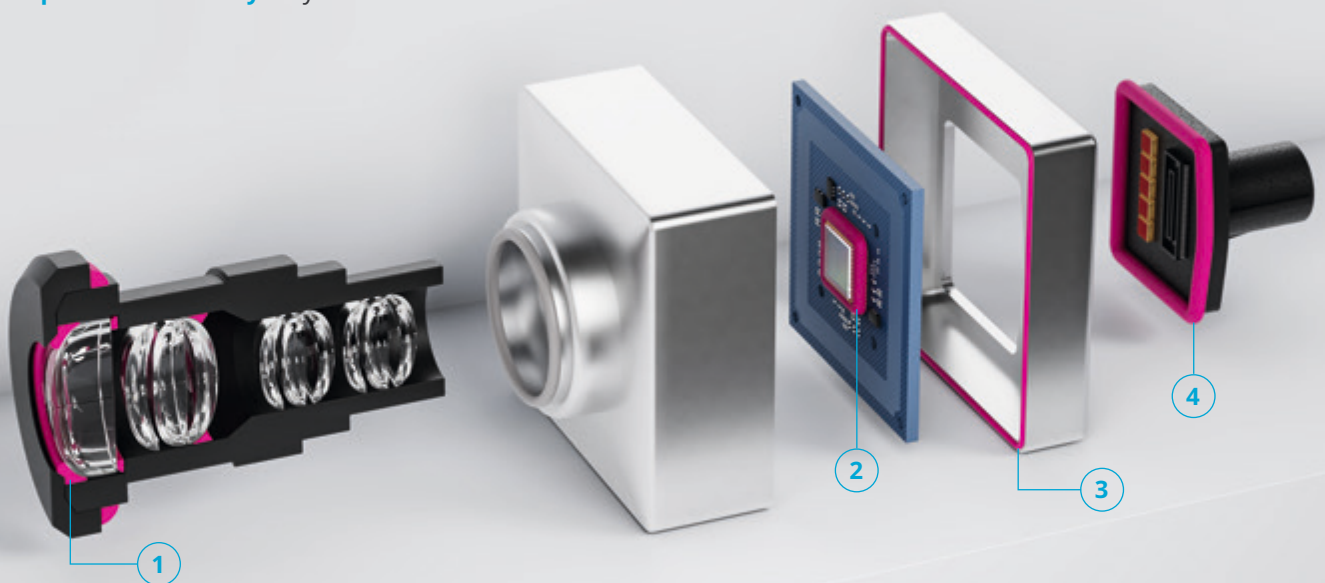
for next-generation ADAS camera manufacturing.

As ADAS evolves toward higher automation levels, camera manufacturers face the challenge of combining **optical precision** for high-resolution systems with **cost-efficient, high-volume production**. In addition, new camera concepts, such as satellite-based architectures with centralized image processing, require compact and mechanically robust designs.

DELO provides adhesive solutions engineered for these requirements – combining **precision, reliability**, and **process efficiency**. Beyond adhesives for active

alignment, DELO's portfolio covers all major bonding applications within camera modules.

A broad range of adhesive chemistries and curing technologies – including light, heat, anaerobic, humidity, and dual-curing systems – enables flexible process design and cycle-time optimization. This allows **repeatable quality, shorter cycle times**, and **improved durability**, supporting the efficient production of next-generation ADAS camera systems.



— Adhesive

- 1 Lens and retainer ring bonding or sealing
- 2 Imager chip packaging (chip-on-board)
- 3 Housing bonding
- 4 Connector bonding and sealing

Rethinking camera assembly — housing bonding as one example

The bonding of camera housings is just one example of how modern manufacturing methods are redefining camera design. As image processing shifts to centralized systems, **device dimensions** can be **reduced**, but compact designs bring new challenges. Traditional welding, for instance, subjects the imager chip to significant thermal stress.

Adhesive bonding offers a superior alternative. DELO adhesives **minimize thermal load** by eliminating high welding temperatures. Heat-curing variants at +80°C can incorporate electrically conductive fillers for effective ESD and EMI protection while ensuring mechanical stability and functional reliability. Alternatively, pre-activatable products cure fully by light exposure at ambient temperature — enabling **gentle, efficient processing**.



Further properties of DELO's housing bonding adhesives

- › Stress compensation
- › Low outgassing
- › Optimized flow behavior
- › Strong adhesion to typical camera housing substrates
- › Process control through fluorescence detection
- › Solvent-free
- › Halogen-free (acc. to IEC 61249-2-21)
- › PFAS-free



Any questions?
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DELO Industrial Adhesives

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The data and information provided are based on tests performed under laboratory conditions. Reliable information about the behavior of the product under practical conditions and its suitability for a specific purpose cannot be concluded from this. It is the customer's responsibility to test the suitability of a product for the intended purpose by considering all specific requirements and by applying standards the customer deems suitable (e.g. DIN 2304-1).

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