

Hybrid integrated optical sensors based on pre-structured adhesive layers

APPLICATION

Optical sensor assemblies typically require bonding and filling processes that must meet high optical standards. Instead of conventional dispensing, various methods have been developed to apply pre-structured adhesive layers at the substrate or wafer level.

Photostructurable adhesives, B-stage adhesives, and sintered film preforms have been tested.

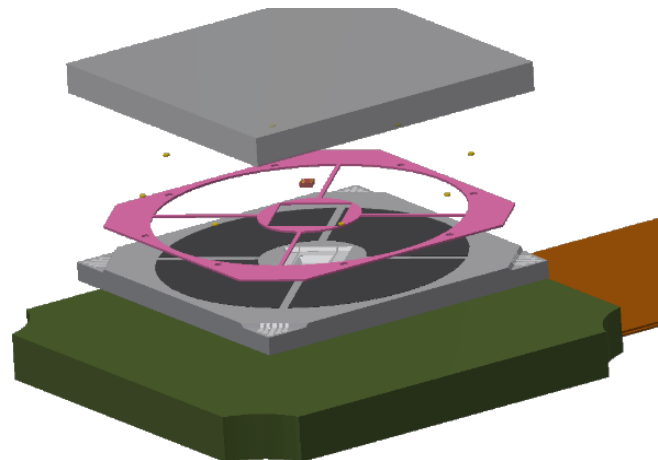
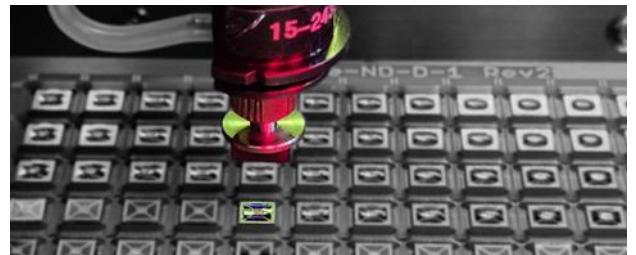
This enables a higher degree of automation and increased throughput while simultaneously achieving greater precision in the application of adhesive quantities and their positioning.

DEMONSTRATORS

- Bonding of optical fibers into cavities in a silicon chip
- Bonding and underfilling cover glasses on optical sensors

EXAMPLE

Bonding cover slips with a pre-coated adhesive layer



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