

Lamination and Bonding competence

SCHURTER offers a wide range of lamination and bonding options. We have continuously developed our bonding capabilities in-house and expanded it with a wide range of investments regarding pretreatment and glass cleaning as well as in the bonding process.

Benefits of Optical Bonding

With Optical Bonding SCHURTER achieves:

- the best readability
- improved touch performance
- increased robustness
- secured against dirt and dust particles
- qualified UV stability
- no condensation
- reduced reflections



Optical Bonding options for HMI solutions

SCHURTER offers various bonding options for HMI solutions with coverlenses and display. By using our HMI touch panels with bonded display you will get an optimised solution for your application.



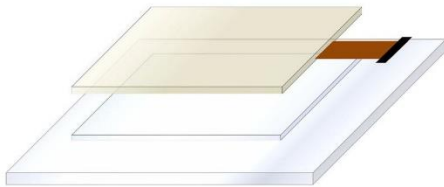
Optical Bonding options for HMI Solutions

Glass and Display Integration

To develop the optimum HMI solution with front glass, touch sensor, display and PCBA. Lamination and optical bonding of the display are carried out in-house in the clean room. We also offer bonding options and fibre optic integration for e-paper displays. Various options are available for the choice of front glass and surface finish. We can screen print the front glass according to your specific requirements.

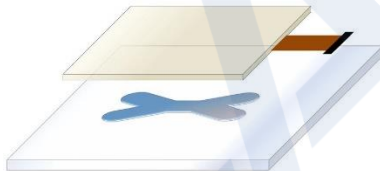
Overview about our bonding options

Sensor bonding



Optical clear adhesive (OCA) lamination

This is a lamination process with optically clear adhesive (OCA). A lamination from "soft to hard" takes place, e.g. a film-based sensor (ITO / mesh) behind the cover lens. With the help of storage in an autoclave, the air bubbles are eliminated.



Liquid bonding

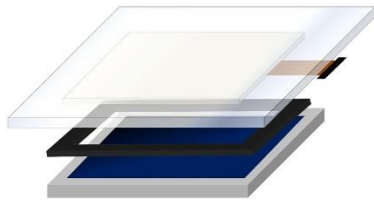
Here bonding of "hard to hard" is done, i.g. a glass-based PCAP sensor is bonded behind the front glass.



Optical clear film lamination

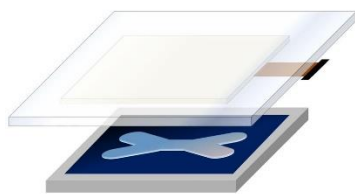
Glass-based PCAP sensors are bonded with a highly transparent film behind the cover lens. The film is placed between the two substrates. The parts are bonded together in a vacuum, so that no air bubbles occur.

Display bonding



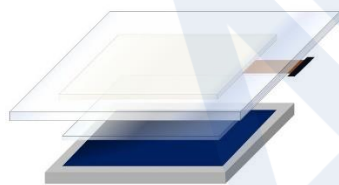
Air gap bonding

In this process, the display is glued all around with an adhesive frame directly behind the sensor or on the printing of the cover lens in the clean room. An air gap between the display and the sensor / cover lens remains.



Liquid optical clear adhesive (LOCA) bonding

The air gap between the display surface and the rearside of the sensor is filled with a UV liquid adhesive. The liquid adhesive is applied over the cover glass and then bonded to the touch panel or display.



Dry bonding

In the dry bonding process, the bonding material is cut to the size of the visible display surface. The assembly of the front glass with the touch and display is carried out under vacuum in the bonding machine.

Optical Bonding of e-paper displays

Optical bonding enables the connection of touch sensor, cover glass and display into one unit by means of different technologies and processes.

E-paper displays are a display technology that reflects incident light and is easily readable from any viewing angle. The image content is permanently displayed without a power supply. One advantage of these e-paper displays over conventional LC displays is that there is no continuous image build-up and therefore no flickering. A small current pulse is only required to change the image content. However, this is associated with relatively slow switching times. E-paper displays are therefore predestined for use as static information displays.

SCHURTER works with you to develop an e-paper display solution that is tailored to your specific application requirements. Each e-paper project is developed on a customer-specific basis. Various designs, materials and integration options with lighting option are available.

