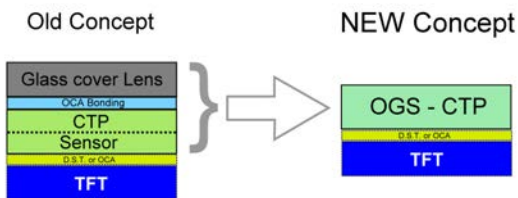


One Glass Solution, short named OGS, is the newest mutual capacitive touch panel (CTP) technology which combines a glass-cover-lens with the CTP in one single part (Graph 1, Picture 1).



Graph 1

Yeebo Electronics Techn. established for this product a new factory in Shenzhen. Therefore Yeebo can offer all key- process and materials In-House, so we can guarantee a long product life time. One of these

important processes is the in-house ITO (Indium-Tin-Oxide) coating, Yeebo invested into the 3rd generation state of the art fully automated inline ITO coating production.



Picture 1

With this smart and unique technology of OGS we can realize an interesting overall cost advantage (NRE and Unit-price) compared to the traditional constructions of CTP + optical glued Cover-Lens. This approach is very flexible, especially for full custom made designs at many kinds of HMIs. Furthermore the outline of the OGS can be a freeform, irregular shape fitting best into your application. The maximum outline contour dimension shall not exceed the 480 x 340 mm, where then the smaller active CTP area can be designed free in dimension and position with a certain distance to the outline. But also openings in printings (clear or semitransparent) and cutouts can be realized.

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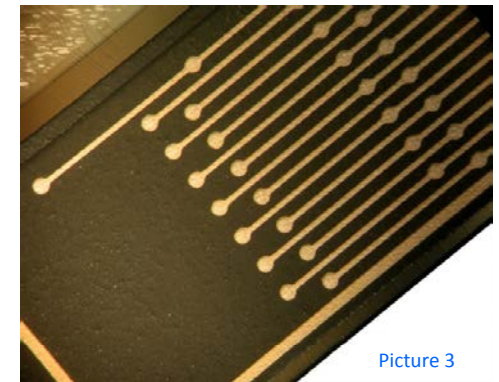


Picture 2

The electrode structure and their interconnection of the OGS are partly made by photolithographic and screen printing process steps. ITO – electrodes, through plating dots, isolation layers and interconnections are done similar as known from PCB (printed circuit board) process. To achieve a high resolution touch readout the ITO electrodes are done in <math><5\mu\text{m}</math> finest tracking and spacing (Picture 2). Based on this capability the complex bridging inside the capacitive touch area can be avoided.

As the ITO coating process is in house, Yeebo can optimizes and adjust the ITO resistivity (up from $5\Omega^{\text{sq}}$) in respect of the custom made dimensions.

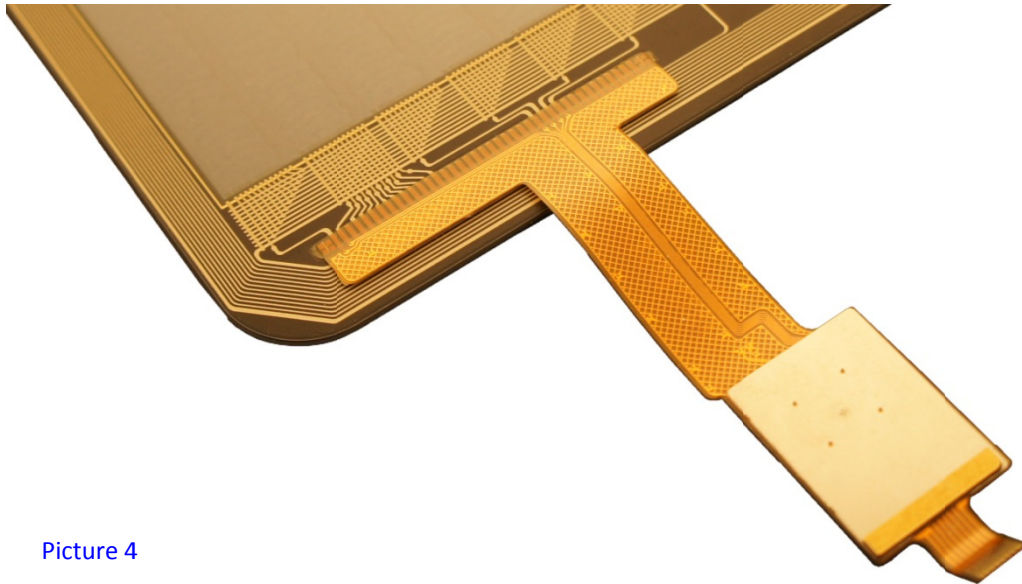
The interconnection between the individual rows- and column-electrodes of the CTP-sensor are made, outside of the active cap-touch area, by a silver-tracks which are through plated by carbon dots (Picture 3), with this technology these interconnections can be realized in small space in order to achieve compact designs. Consequently OGS are best fitting for TFTs in the range of 2.0" up to 15.6" diagonal but also can be applied to passive LCD (e.g. FSTN or VA) as well. Next to the custom made designs we can offer some standard products for 6.0" up to 15.6" diagonals.



Picture 3

The system is built with the CTP controller as FOG (flex on glass) which makes the unit easy to implement by e.g. a six Pin FPC-connector into the customer's application (Picture 4). Mostly an I²C interface is available; also drivers for Linux, Android etc. are available at these controllers. Of course we can offer the complete HMI with the best performed TFT (e.g. IPS Technology) and also embedded system on request at the backside.

The OGS technology will be the common concept for HMI which requires a glass surface, with the compact structure and the capabilities of different surface treatments most of the customer specifications, especially the custom-made-design can be fulfilled.



Picture 4

Actually we have some reference samples available. Please contact us if you have a project available. Our team can advise you for an efficient and optimized CTP – OGS Design.

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Typical specifications:

Sensor area:	up to 15.6" diagonal
Thickness:	0.4 ~ 1.8 mm (2.0 ~ 3.4 mm in planning)
Multitouch:	2 ~ 10 fingers
Touch sensors:	30 up to 68 Channels
CTP Controller:	e.g. ILI2303
Surface:	chemical hardened under R+D are AR-, Anti - finger and Anti - smudge
coatings	
Masking:	multi-color mask printing
Options:	High SNR types (Water proof and glove readout)
Others:	Pen to write

