

## **Flatscreens under close Scrutiny: Basler Inspection Systems in TFT Display Production**

**With faster innovation cycles, shorter times-to-market, and higher investment costs, the pressure for more automation and higher production output in the flatscreen industry is growing. Inspections systems that can locate faults quickly and precisely are a key instrument in production optimisation.**

Ahrensburg, June 2005 – Driven by its innovative technology, Basler has assumed market leadership in the flatscreen glass inspection segment. Its tailored systems are used by vendors of primary products for the flatscreen industry where they are mainly deployed for inspection of glass substrates before these are layered in subsequent production processes and configured in the end product. Basler is continually working on the development of high value, reliable inspection systems for other production phases.

The highly sensitive primary glass can now reach a maximum size of 220 cm x 190 cm and is less than one millimetre thin. Inspection is carried out “in-line“ within the production process itself using up to 64 high-performance digital cameras. These cameras can reliably locate flaws of less than one 20 thousandth of a millimetre in just a few seconds and classify them according to their key differential characteristics. This kind of automatic inspection enables not merely classification of the glass in various types of quality but also allows for dynamic learning of the production process itself as subsequent readjustment of production settings eliminates the further occurrence of identified flaws. Such yield management significantly enhances production efficiency.

In addition, deployment of the optical inspection systems also enables the production of glass substrate sheets in ever larger formats. Glass sheets of the so-called Generation 7 with a surface area of up to 4 sm. are cut in a further process to the format of their destined end products (e.g. PC monitors, TVs, mobile phone or PDA displays). Larger primary substrates mean more production output and thus lower production costs.

Another decisive advantage of Basler inspection systems is that unlike other systems on the market optical inspection of flatscreens is built into the production process. This enables previously unknown inspection speeds to be attained in harmony with production flows. High-speed inspection is also supported by a high data processing capability of up to 4 gigabytes per second.



Cost savings are substantial when flatscreen vendors deploy Basler inspection solutions. While estimates say that every fifth screen in production is now discarded, deployment of an optical inspection system can reduce the rejection rate to under 10%. And these cost savings translate into the end price in the shop. Over the past two years the price for flatscreens with a diagonal of approx. 75 cm has dropped from an average of US\$ 4,800 in Europe to under US\$ 2,800.

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