

SCG GLASSES AR/XR DESIGN SOLUTION: DOUBLE LCD-LAYERED FILM

For SCG lenses, the design solution involves a two-layered display system:

- The top outer display is dedicated to the opaque and transparent AR function, switching between clear, white, silver, multicolor, and dark privacy modes.
 - The inner display is for dedicated XR, multicolor information data.
 - The LAYERED DISPLAYS are sandwiched between two glass substrates; the upper (outer) glass substrate is a color filter.
 - It is a simple, elegant solution.
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BOE Flexible AMOLED Display. Flexible display refers to the technology designed for ultra-thin, ultra-light, and adaptable products based on a flexible substrate.

Active-Matrix Organic Light-Emitting Diode (AMOLED) is an organic light-emitting display device mainly consisting of a substrate, a TFT-driven array, and an OLED light-emitting device (metal cathode + organic light-emitting layer + anode). It is an ultra-thin device with fast response time, wide view angle, and high contrast, which is suitable for flexible display technology. AMOLED, with polymer plastic or metal foil as its flexible substrate material, has a strong anti-bending capability and can realize dynamic bending display or even folding display.

It has broad application prospects in wearable devices. Through persistent technical innovation, BOE has made great breakthroughs in several key technologies, such as flexible AMOLED displays.

BOE has now successfully developed AMOLED products, presenting the unlimited potential of the innovation of smart display devices.

- LCD is a liquid-crystal display that consists of thin-film nano-liquid crystal display (TFT-LCD) technology, which is a layer of liquid crystal film.
- The nano-transparent screen film material (NTS) is as thin as a human hair and capable of showing detailed images with a high degree of color and light clarity.
- It is light and flexible, and its transparency can be adjusted, with the screen capable of showing the most detail at its most opaque.

NTS is made in a roll-to-roll process in which a sheet of film is treated with tiny particles of titanium dioxide. The technology for manufacturing NTS is created through a combination of nanomaterials and nanomanufacturing technology. These nanoparticles give the NTS its durability and improve the optical quality of the film, meaning images projected onto it remain clear. The film is layered with a crystal polymer, a polymer-dispersed liquid crystal (PDLC) film. By applying an electrical field to the crystals, the PDLC can be made more or less transparent, allowing the screen to become more opaque when users want to see more detail. The manufacturing process is easy to replicate due to its relative simplicity. It is highly resistant to extreme heat and cold, meaning it can be used indoors and outdoors.