

SHARP

Working on Super Hi-Vision in Preparation for the Tokyo Olympics



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With the growth of High-Definition (HD) digital broadcasting over the past 10 years, liquid crystal displays have made rapid progress in terms of their screen size and image quality, and now dominate the global television market. Recent trends in television include the move towards larger screen sizes approaching the screen sizes offered by projectors, and the introduction of 4K television with a resolution exceeding that of full-HD television.

Looking further ahead, the Japan Broadcasting Corporation (NHK) has proposed a next-generation TV broadcasting service called Super Hi-Vision (8K), which has a resolution of approximately 33 megapixels (7,680 horizontal × 4,320 vertical) — 16 times as many as full-HD television. This system produces video images that are extraordinarily realistic and moving. Japan is planning to start trial 8K broadcasts in 2016, and to start regular 8K broadcasting in time for the 2020 Tokyo Olympic and Paralympic games. Various manufacturers are now working to develop displays and TV receivers for next-generation broadcasting based on Super Hi-Vision.

In May 2011, in anticipation of the advent of next-generation high-definition TV, Sharp Corporation worked with NHK to successfully develop a Super Hi-Vision compliant ultra-high-resolution 85V liquid-crystal-display (LCD) television, which is the world's first¹ direct-view type display. This was made possible by adopting our proprietary UV²A² technology to improve the display performance. Since then, at numerous demonstrations in exhibitions in Japan and overseas, audiences who experience Super Hi-Vision for the first time have expressed great surprise at the unprecedented levels of reality and presence offered by this

technology.

Although Japan's 8K broadcasting standard is based on IP, the Internet standard technology, with a view to fusing broadcasting and telecommunications at some point in the future, Sharp is also working hard on developing standards for video coding (HEVC: High Efficiency Video Coding) and multiplexing/transport (MMT: MPEG Media Transport), which are the key technologies of 8K broadcasting. We are also actively participating in the standardization of broadcasting systems at the Association of Radio Industries and Businesses (ARIB), Japan. These technologies should not only create systems that are necessary for the implementation of a future broadcasting system, but should also give rise to new viewing styles.

Since our establishment in 1912, Sharp has been creating innovative world-leading products based on the philosophy that “we are dedicated to the use of our unique, innovative technology to contribute to the culture, benefits and welfare of people throughout the world”. In a wide range of industrial fields such as liquid crystal displays, solar cells, Plasmacluster ion technologies³, communication equipment and document solutions, we are constantly working to produce better technologies from the viewpoint of our customers, and conducting research and development aimed at spreading new value and happiness throughout the world. In particular, it is important for us to make further advances in the field of liquid crystal displays, mainly aimed at increasing resolution and reducing power consumption. In last year's medium-term management plan for the 2013–2015 business years, we set forth new five priority business areas as a way of leveraging our strengths and technology resources. These new priority business areas are “Healthcare & medicine”, “Robotics”, “Smart home/mobility/office technology”, “Ensuring the safety of food, water and air”, and “Education”.

Through the further growth of existing business including next-generation television and the cultivation of the new priority business areas, we aim to provide all our customers with a “good life” in whatever way we can.



A super-high-definition direct-view 85V liquid crystal display

¹ As of 19th May, 2011.

² Short for Ultraviolet induced multi-domain Vertical Alignment. A photo-alignment technique that can precisely control the orientation of liquid crystal molecules in a liquid crystal panel with a simple structure.

³ Plasmacluster ion technology is Sharp's original air disinfecting technology for suppressing the effects of airborne viruses, and breaking down and removing airborne mold.