



Next-Generation Growth Engine

Korean Display Industry Displays Korean Success

With the development of information technologies, the display industry has become one of the main industries as next-generation growth engines for Korea's information-electronics industry due to the enormous potential demands. With the liquid crystal display (LCD) the lead, the plasma display panel (PDP) has gained popularity in the field of wide vision TV and wall-mounted high-definition TV (HDTV). In addition, there are the field emission display (FED), inorganic/organic electroluminescence display (ELD), three-dimensional displays, vacuum fluorescence display, and others are existing next-generation for information displays.

The Korean polarizer market is estimated at 49.83 million square meters in 2006, growing 36% from the previous year, according to Displaybank. However, the rapid decline in panel prices will limit growth to 22%, generating a value of US\$2.3 billion. Backed by a steep upward curve in demand for large-format panels, demand for polarizers is also forecast to reach roughly

65 million square meters in 2007.

Korean polarizer capacity accounts for 23% of the worldwide capacity, and Korean polarizer suppliers will probably represent 27% of worldwide capacity by 2007, judging from the amazing growth of 60% per year in capacity.

The decline in prices for 32-inch TFT-LCD polarizers eased somewhat last year compared to 2005, but still posted a 30% drop. 17-inch monitor polarizer prices dropped 13%. This downward trend in parts prices is expected to continue in 2007.

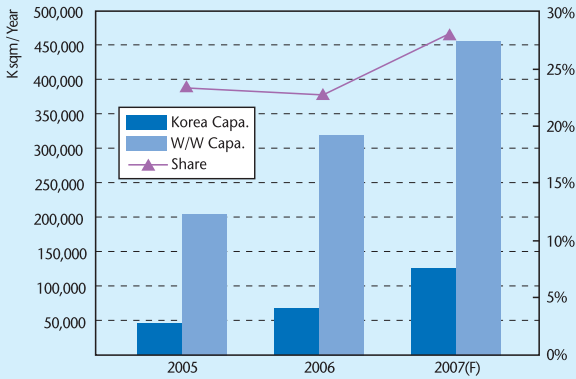
The polarizer market for 2006 faced heavy pricing pressure due to the fall in TFT-LCD panel prices. At the same time, demands on development and production of related supplementary films have intensified for stable production. The polarizer-use supplementary film market, behind the polarizer market, still has a problem with supply, because the volume needed entirely relies on Japanese firms.

Korean polarizer manufacturers' double whammy of price drops and unstable supply of supplementary films is projected to become more severe in tandem with market expansions. But, on the other hand, the increase in Korean polarizer supply may contribute to furthering the development of supplementary films.

A global display industry leader, Samsung Electronics Co., Ltd. of Korea, announced last year that it had created the first LCD panel that can produce independent images on each side of a mobile LCD display.

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Worldwide Capacity vs. Korea's Capacity



## KEA to Build High Value Infrastructure in '07



At a BOD meeting held on February 2, KEA set 2007 as the year to establish an infrastructure for high value addition to the electronics industry. For this, KEA decided to increase support for international patent disputes, actively respond to global environmental restrictions and foster specialized manpower through industry-academia cooperation.

Under this decision, KEA plans to prevent patent disputes by notifying domestic electronics firms of those patents that might become involved in disputes in advance, operate a quick response center related to international environmental restrictions and help enterprises establish an environmental management system. In addition, the association also plans to nurture manpower specialized in patents, environmental and product liability (PL) laws as well as in R&D.

Meanwhile, KEA reported its 'draft 2007 Business Plan' to the BOD meeting, which decided to resolve it at the regular general assembly of the association slated for February 13, while also agreeing to re-elect sitting Chairman Yoon Jong-Yong as chairman for the next term.

According to the business plan, KEA intends to study ways to stimulate utilization of patent information search systems by increasing the number of users to 2,000 this year from 1,520 in 2006.

Through the quick response center, KEA plans to suggest guidelines for responding to environmental restrictions of major countries, such as the EU, China and Japan, and coordinate and mediate settlement of disputes related to environmental restrictions through legal consulting. Moreover, the association plans to support the electronics business community in establishing an infrastructure for environment-friendly design through development and supply of environment-friendly guides and design tools.

KEA also plans to nurture R&D-specialized manpower by reinforcing re-education programs for field engineers, including embedded system and mobile communication system technology training. For unemployed graduates from colleges of science and technology, The association intends to help unemployed graduates from colleges of science and technology obtain jobs through implementation of communication software and SoC (System-on-Chip) technology education.

Jointly with large enterprises, KEA plans to stage an exemplary environmental management project for member firms and implement patent experts' course and PL accident prevention education as well on a regular basis. Furthermore, KEA also plans to conduct education on 'DiKi (Digital Kit) 3000 Project,' a program to manufacture a variety of electronic kits, MP3 player kit, etc. for middle and high school students.

A related KEA official revealed that through establishment of the high-value infrastructure, the association would enable the electronics industry to lead the economic growth of the nation also over the next five to 10 years.

## Participation in SecuTech 2007

After organizing Korea's common pavilion (12 booths, 108 sq.m), KEA plans to take part in SecuTech 2007 (Taiwan's security devices exposition) April 16-18 at Taipei World Trade Center (TWTC). SecuTech is appraised as a security show representing Asia, along with IFSEC in U.K. and ISC WEST in the United States.

In 2007, KEA also plans to organize Korean Pavilions at other world-renowned IT exhibitions abroad to assist domestic small and medium-size IT firms in exploring overseas markets and in expanding exports.

## Patent Search Education Launched



The International Patent Assistance Center of KEA conducted patent research education on January 18 at the International Conference Room of Seoul Trade Exhibition

& Convention Center (SETEC) jointly with the Korea Chamber of Commerce & Industry (KCCI).

A total of 560 persons from 351 organizations, including SMEs, venture firms, universities and research institutes, attended the education. The content of the education program included guides to utilization methods of patent information of major patent search agencies in Korea, Delphion, WIPS, etc. along with 'KIPRIS (Korea Intellectual Property Rights Information Service),' which is operated free of charge by Korea Institute of Patent Information (KIPI) under the Korea Intellectual Property Office (KIPO).

In 2006, KEA's patent assistance center expanded its services, which were limited to the electronics field, to all industries and is providing education, consulting, domestic and overseas training, starting in 2007.

## Education for Comm. System Design Tech Manpower

Starting in January this year, KEA implemented an education program to nurture next-generation mobile communication system design tech manpower.

This education program, which was identified, developed and tailored to best suit corporate situations, is a

government-supported project designed to enhance industrial competitiveness through cultivation of the technical capabilities of those employees actually engaged in the system design technology field.

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## Korean Display Industry...

Samsung's new double-sided LCD can show two entirely different pictures or sets of visual data simultaneously on the front and back of the same screen. Other conventional double-sided LCDs can only show a reverse image of the same displayed data.

This new development will replace two display panels with one, thereby reducing the overall thickness of mobile products by at least 1mm.

Executive Vice President Yun Jin-hyuk, in charge of the Mobile Display Division of the Samsung Electronics LCD Business, says, "Our new double-sided mobile display underscores Samsung's commitment to equip our customers with advanced display technology that accelerates the trend toward slimmer mobile products. We anticipate high demand

when we commence mass production in the first half of 2007."

The breakthrough LCD product makes use of Samsung's new double-gate, thin-film transistor (TFT) architecture. TFT gates are electronic components that convert the necessary voltage at the pixel level, which controls the liquid crystal alignment needed to reproduce on-screen images. Samsung's new double-sided LCD has two gates that operate each pixel instead of one, so the screen on the front can display different images than the one on the back. The double-sided display makes use of Samsung's proprietary Amorphous Silicon Gate (ASG) technology, which accommodates the increased number of TFT gates without increasing the size of the driver integrated circuits. Driver-ICs typically increase in size when more TFT gates are used.

## Korean Electronics Exports Rise 11% in January

Korea's digital electronics exports rose by more than 11% in January from a year earlier on the back of strong overseas demand for DRAMS and displays, the Ministry of Commerce, Industry and Energy said.

According to the ministry, exports of

digital electronics goods stood at US\$ 9.85 billion for the month, up 11.6 % from a year earlier. Exports of DRAMs and flat panels rose 30.8% and 47.5%, respectively.

The ministry said the expansion in DRAM exports was mainly boosted by

the release of the new Windows Vista operating system by Microsoft Corp., which drove higher demand for computer chips.

However, shipments of mobile phones and color televisions respectively fell 2.2% and 26.9%, the ministry said.

## e-Business Continues to Spread in Korea

Korean companies have made headway in the use of e-business operations on the back of advanced information technology (IT), the Ministry of Commerce, Industry and Energy reported.

The Korea e-Business Index (KEBIX) increased to 50.1 last year from 47.3 in 2005, the ministry said.

With 134 local firms responding to the KEBIX poll, the index for last year reached 57.5 out of a maximum 100, up from 56.5 in 2005 and 51.9 in 2002.

The figures showed that both

manufacturing and non-manufacturing businesses were making better use of electronic commerce.

Manufacturing businesses that make coke briquettes and electronic parts

earned 59.3 and 50, respectively, on the KEBIX scale, while financial and telecommunication firms that make extensive use of IT resources recorded 71.6 and 74.6.

### e-Commerce Market Sizes of Major Countries

(Unit: US\$1 billion)

Division	2002	2003	2004	2005	2006	2007
World total	936.4	1,616.6	2,575.4	4,025.1	5,525.3	7,127.7
USA	382.9	671.5	990.7	1,463.4	1,929.3	2,485.0
Japan	134.9	195.9	294.6	431.7	595.8	872.2
Western Europe	261.4	468.7	839.3	1,417.8	1,920.2	2,326.2
China	-	27.4	59.3	123.9	248.2	409.3
Korea	-	41.3	71.2	110.8	152.7	200.2

## Mobile Phone Makers Betting on Design

The Korean mobile phone industry will see a big shift in marketing strategy this year as the country's three handset makers now put the emphasis in product development on design rather than high-tech features. For several years now, the big three -- Samsung Electronics, LG Electronics, and Pantech -- have competed in developing innovative handsets with new advanced features and technologies, with most newly developed products described as "the world's first." But now they are all stressing design.

The present flagship model of Samsung Electronics is the SCH-B630 Ultra Edition DMB Cell Phone, for which the company says it developed a new interior to make it as slim as possible -- it is 12.9 mm thick -- despite being equipped with the mobile TV feature. The model heralds an era where design is everything in product development, even though multiple features still abound.

Over at LG Electronics, the flagship model is the Shine Phone. It is encased

in stainless steel, a feat once considered impossible in the industry because steel blocks radio waves and is conductive, so it can cause electric shocks. The reason the company put everything into solving those problems is that it makes for a sleek look.

