

Global and China Optical Film Industry
Report, 2012

Nov. 2012



### The Vertical Portal for China Business Intelligence

#### STUDY GOAL AND OBJECTIVES

This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

#### REPORT OBJECTIVES

- ◆ To establish a comprehensive, factual, annually updated and costeffective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
- To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
- ◆ To complement the organizations' internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
- ◆ To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
- To help company to succeed in a competitive market, and

#### **METHODOLOGY**

Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications.

Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

#### **INFORMATION SOURCES**

The primary information sources include National Bureau of Statistics of China, and China Optics and Optoelectronics Manufactures Association etc.

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## **Abstract**

Global and China Optical Film Industry Report, 2012 of ResearchInChina chiefly covers the following:

- ➤ Downstream market of optical film
- ➤ Optical film industry
- ➤BLU industry and market
- ➤ Major players of polarizer, optical film for BLU and ITO film

Optical film covers 3 categories: polarizer, optical film for BLU, and ITO film for touch screen. The total market scale is about USD 11.194 billion in 2012, among which, the polarizer market scales about USD 7.728 billion, down 2% from last year.

Polarizer market shows very high concentration and stability, and top six major players occupy above 96% of the market. The top three players are Nitto Denko, Sumitomo Chemical and LG Chem, followed by Chi Mei Materials of Chi Mei Group, BenQ Materials of BenQ Group, and Samsung Cheil Industries of Samsung Group.

The key for polarizer business lies in the supply of raw materials, mainly including TAC and PVA. TAC, also as a main material of film, is

monopolized by Fujifilm and Konica Minolta, with market share of about 72% and 26% respectively. Since the new production line of Konica Minolta was put into production in 2010, the market share of Konica Minolta has increased rapidly to 26% from 19%. PVA is nearly monopolized by Kuraray. These upstream manufacturers are big enterprises with revenue of above USD 3 billion. TAC business accounts for about 5% of Fujifilm's total revenue. TAC and PVA are not main products of these manufacturers, therefore, these big manufacturers have the strength to reduce the prices and put pressure on new entrants.

The market scale of optical film for BLU is about USD 2.938 billion in 2012, down 9.9% from 2011, mainly due to the drastic decline of DBEF sector. Optical film generally covers 6 categories:

- 1. Reflective Film, Reflector
- 2. Diffuser Film
- 3. Normal Prism
- 4. Multi-Function Prism
- 5. Micro Lens Film
- 6. Reflective Polarizer, Dual Brightness Enhancement Film (DBEF)
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Early LCD BLU took CCFL as light source, and used four optical films, including two reflective films, one BEF, and one diffuser film.

Combination of BEF and diffuser film, as current development trend, can reduce cost, decrease BLU thickness, and shorten BLU production process. In the wake of high LED price in early 2011, manufacturers reduced LED usage and adopted expensive DBEF to compensate for the deficiency caused by less LED usage. However, as the price of high-brightness LED slumped in the second half of 2011, manufacturers have increased LED chip usage or adopted high-brightness LED chip, significantly reduced DBEF usage, and substituted cheap micro lens film for DBEF.

Because the threshold of BLU optical film business is very low, numerous manufacturers are faced with fierce price competition. Only by strengthening cooperation with upstream enterprises, can a manufacturer gain a stable foothold. PET film is a key material of BLU optical film, and is controlled by big petrochemical plants, such as Mitsubishi Plastics, Toray Industries, Teijin DuPont Films Japan, Toyobo, SKC, Toray Advanced Materials Korea, Kolon, Nan Ya Plastics, Shinkong Materials Technology, most of which are Japanese enterprises. Optical film performance depends heavily on raw materials. Another material of optical film is protection film, which is mainly

controlled by Japanese manufacturers, such as Fujimori Kogyo , Osung Lst, Youl Chon Chemical, Sun A Kaken, Nitto Denko, Lintec. Japan is not only an electronic power, but also a chemical giant, and there is a gap between South Korea and Japan. The chemical industry of Taiwan region lags far behind South Korea.

ITO film is mainly applied to touch screens. GFF and G1F touch screens need to use ITO film. The market growth rate hits 20% in 2012. GG, INCELL and ONCELL touch screens occupy the high-end market, but GFF and G1F touch screens, being cheaper and slightly thinner, though less transparent, occupy the mid and low-end market. Moreover, tablet PCs under 10-inch prefer G1F touch screens, such as Samsung Galaxy Tab and newest Apple iPad Mini. Japan's Nitto Denko has monopolized the market of ITO film for capacitive touch screen.

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