Global and China LED Industry Report, 2013-2014

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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 cost-effective 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 Company Reports, and National Bureau of Statistics of China etc.

Abstract

Global and China LED Industry Report, 2013-2014 mainly includes the following:

1, LED downstream market
2, Trends of LED packaging
3, Sapphire Ingot Industry and Market
4, LED industry
5,39 LED vendors

The LED industry chain consists of six levels: Die (L0), Package (L1), Carrier (L2), Module (L3), Lump (L4) and System (L5). Herein, Die (L0) and Package (L1) are two focuses.

After the recession in 2011 and 2012, LED saw a turning point in 2013 when Die (L0) and Package (L1) LED market size hit about USD15.188 billion, a rise of 8.3% from 2012. In 2014, the LED market will continue to recover with the market size of USD16,562 million (up 9.0% from 2013). However, the market is expected to slow down in 2015 because oversupply and a new round of price wars may arise.

The global LED industry can be divided into four clusters. First, Europe and America underline general lighting with an emphasis on high reliability and high brightness. Second, Japan embodies the most comprehensive technology, performing outstandingly in both of general lighting and backlight display. Besides, it also targets general lighting, automobiles, mobile phones and TV. Third, South Korea and Taiwan targets laptop display backlight, LED-TV backlight and mobile phone backlight with large shipment, low unit price and low margin. Last, Mainland China centers AlInGaP, outdoor display, advertising screen and signal lights which require low technology and reliability; and in these fields, customers are scattered and the unit price is low.

From 2011 onwards, a large number of Mainland Chinese enterprises have entered the LED industry, causing panic. In reality, none of Mainland Chinese enterprises (including the giant Sanan Optoelectronics) is capable of producing white LED chips or grasping the related patents. Therefore, Mainland China has to import or purchase all needed white LED chips from foreign companies.

Mainland Chinese LED enterprises rely on local governmental subsidies which were huge in 2010-2013. For example, Elec-Tech International was subsidized with RMB270 million in 2010, RMB311 million in 2011, RMB224 million in 2012 and RMB315 million in 2013; but, the net income of the company was only RMB4.6 million in 2013. Without these subsidies, the company might be in a serious loss. Sanan Optoelectronics obtains RMB4 billion from Xiamen's government in 2014, because Xiamen is eager to make the company return to Xiamen from Wuhu.

Numerous Mainland Chinese LED downstream enterprises are featured with small scale, severe homogenization and intense price war. They cannot get governmental subsidies or conduct financing in the stock market. In 2014, many of them may go bankrupt.

Since 2013, the development of the LED industry has been mainly reflected in the packaging field. In the future, the LED cost reduction depends on packaging instead of Epitaxy. Packaging costs over 50% of the LED chip cost. Currently, COB packaging and Flip chip packaging are not only the most promising, but also represent the future direction.

COB performs strikingly in the field of street lighting and high-power general lighting. But, it is inferior to FLIP-CHIP in the fields where volume is emphasized, such as TV BLU. In addition, FLIP-CHIP's cost advantage is more obvious. From the perspective of cost and application, COB will become the future mainstream of lighting design.

FLIP-CHIP made its debut in 2008, and became mature in early 2012. Its biggest advantage lies in: it can go to SMT production lines directly under high current without Wirebond and hand welding; besides, its size is small. The market size is estimated to jump from USD1.5 billion in 2013 to USD5.5 billion in 2017. In the BLU field, FLIP-CHIP will become the mainstream.

Prior to 2014, LED cost cutting concentrated in the Epitaxy field, so that Epitaxy vendors witnessed a sharp decline in profits, even many of them exited from the industry due to losses. After 2014, packaging factories will suffer the cost-cutting pressure, so some of them with poor technical capabilities may see descending profits.

Top 30 LED Vendors in the World by Revenue, 2012-2014

USD mln		2012	2013	2014E
Nichia		2,395	2,510	2,608
Samsung		1,218	1,390	1,398
OSRAM		1,106	1,198	1,258
LG INNOTEK		849	933	908
Seoul Semiconductor		731	921	1,058
Cree		757	895	928
Everlight	Pure Package	644	832	993
Epistar		674	749	1,017
Liteon	Pure Package	543	674	792
Lumileds		568	610	608
Lumens		414	577	708
Toyota Gosei		660	538	470
Sharp		409	486	508
LEXTAR	Pure Package	489	463	499
Sanan		258	360	398
Ciztizen	Pure Package	380	338	350
Kingbright Electronics	Pure Package	240	270	290
Unity Opto	Pure Package	255	233	293
Optotech		223	215	217
Harvatek	Pure Package	127	157	211
Genesis	Pure Package	123	132	171
Formosa Epitaxy		164	148	165
TYNTEK		113	140	225
Nationstar	Pure Package	106	115	118
Bright LED	Pure Package	113	94	83
Edison Opto		77	92	119
HuaLei Optoelectronic		50	85	108
Tekcore		55	62	67
ELEC-TECH		60	62	88
HC SemiTek		52	51	116

Note: The above revenue means the revenue from Die (L0) and Package (L1). The revenue of Samsung and LG INNOTEK includes some revenue from Carrier (L2).

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