



**Global and China LED Industry
Report, 2014-2015**

Feb. 2015

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, 2014-2015 is primarily concerned with the following:

1. LED development trend
2. LED industry analysis
3. 38 LED companies

After experiencing fall to the bottom and price slump in LED during 2012-2013, quite a few LED enterprises have been forced to go bankrupt or retreat from the industry. However, those that still struggled on the manufacturing front have reduced their capacity. Even worse, so many companies have aborted their capacity expansion plans, which is particularly true of the upstream sectors. Price reduction stimulates the market and capacity cuts stabilizes the price. Therefore, the LED industry improved greatly in the first half of 2014, which soon came to an end. The market rise propelled enterprises to operate in full capacity, and even the enterprises that had been closed down resumed their capacity. But in the second half of 2014, the LED market plummeted and will very likely continue to worsen in 2015.

Ranking of Major Global LED Companies

(USD mln)

		2012	2013	2014
<i>Nichia</i>		2,395	2,510	2,608
<i>Samsung</i>		1,218	1,390	1,210
<i>OSRAM</i>		1,106	1,198	1,358
<i>LG INNOTEK</i>		849	983	988
<i>Seoul Semiconductor</i>		731	933	858
<i>Cree</i>		757	895	828
<i>Everlight</i>	<i>Pure Package</i>	644	832	993
<i>Epistar</i>		674	749	915
<i>Liteon</i>	<i>Pure Package</i>	543	674	535
<i>Lumileds</i>		568	610	648
<i>Lumens</i>		414	577	485
<i>Toyota Gosei</i>		660	508	395
<i>Mulinsen</i>		285	446	539
<i>Sharp</i>		409	486	528
<i>LEXTAR</i>	<i>Pure Package</i>	489	463	479
<i>Sanan</i>		258	360	508
<i>Ciztizen</i>	<i>Pure Package</i>	380	338	350
<i>Kingbright Electronics</i>	<i>Pure Package</i>	240	270	250
<i>Unity Opto</i>	<i>Pure Package</i>	255	233	293
<i>AOT</i>		174	222	233
<i>Optotech</i>		223	215	212

The LED lighting market seems to have broad prospects, but the industry's threshold is extremely low, especially in downstream sectors of LED lighting, which virtually have no financial and technical thresholds. Price competition prevails in this market. On the other hand, there are a great number of enterprises in the downstream sectors of LED lighting industry that they, to open the market, have to invest capital into marketing. Although LED lighting market looks good, the profit, particularly operating income, shows declining trend. Take example for Cree, a large US company, whose operating margin in Q4 2014 was only 2.5% in sharp contrast to 8.5% in Q4 2013.

In October 2014, Samsung announced that it would retreat from overseas LED lighting market and shift its focus to the market in South Korea. In addition, GE repositioned its lighting business and is very likely to spin off the lighting business. Toshiba also largely withdrew from the overseas LED lighting market.

In July 2014, Philips merged LED Chip business and automotive lighting business into a new company, while other businesses were integrated to form Philips Lighting. In future, Philips will sell the equities of Philips Lighting, and the highly profitable LED Chip and automotive lighting businesses will still be Philips' wholly-owned subsidiary.

NICHIA's YAG is generally recognized as white-light LED patent with the best performance. The patent fee is very high and NICHIA has a stringent patent authorization, but this patent will expire in 2017. The white-light LED patents from other companies -- such as Toyota Gosei's orthosilicate fluorescent powder containing Sr, Ba, and Ca, will devalue after 2017. Recently, Toyota Gosei's LED revenue declined and its profit slumped, which made the company be willing to transfer its patents at a low price. In 2014, Toyota Gosei transferred the patent to Harvatek and JuFei Optoelectronics. This was the first time that the mainland Chinese enterprise had gained the white-light LED patent. However, JuFei Optoelectronics is a downstream packaging enterprise, and Toyota Gosei's patent transfer is to get profit and to entrust JuFei Optoelectronics to produce for it.

In 2014, as the companies in LED industry were aggressively expanding industry chain and packaging companies were entering retailing fields of lighting industry. This was particularly true of companies in Mainland China. The MLS Lighting -- the largest packaging enterprise in Chinese Mainland, for instance, was building a huge marketing network, with a network of 300 distributors brought into being in 2014. Its target is to create a network of 3,000 distributors.

In August 2014, Tsinghua Tongfang acquired Neo-Neon LED Lighting International, a company listed in Hong Kong. In FY 2014, Neo-Neon reported revenue of HKD841 million and a loss of HKD731 million in net income. But the company had a complete marketing network, which was Tsinghua Tongfang's top concern.

In 2014, Epistar's buyout of Formosa Epitaxy was the largest acquisition in LED industry. When the acquisition was completed, Epistar would have over 400 MOCVDs , more than doubling that of its rivals. In Q4 2014, Epistar's capacity was estimated to hold 11% of the market's total. After the merger, its capacity would increase an additional 4%, far exceeding the 7% for Sanan Optoelectronics and Samsung, which would make it the largest GaN wafer supplier around the world.

1 LED Market

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