Global and China LED Industry Report, 2010-2011

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This report

- **Aalyzes the market segments of LED ,such as small & edium-sized Backlit LED, LED-TV, LED-Backlit LCD , LED-Backlight Laptop and so on.**
- **Focuses on the regional distribution, ranking of global top 25 vendors of LED industry and LED upstream industry.**
- **Highlights the operation and development of key enterprises in LED industry in China and woldwide.**

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Abstract

The LED market size climbed 58% to US$15.8 billion in 2010 from US$10 billion. The market size of LED for LCD TV backlight actually boomed to approximately US$3.9 billion from US$960 million driven by the explosion of LED-TV.

The market share of LED-backlit LCD TV arrived at 26.9% in 2010, and it is predicted to see 55.9% in 2011. Promisingly, LED will completely replace CCFL in 2014. The market share of LED-backlit NB rose to 95% in 2010 from the merely 59% in 2009; while that of LED-backlit LCD hit 15% in 2010 from 1.5% in 2009, and is projected to rest on 40% in 2012.

The global LED industry can be divided into four big regions elaborated as follows:

1. European & American region that focuses on general lighting and gives priority to the high reliability and high brightness of products;

2. Japan which boasts the most comprehensive technology and the most powerful strength in both general lighting and backlight display, with the development orientation attaching equal importance to general lighting, automotive, mobile phone, and TV;

3. South Korea and Taiwan that highlight the laptop display backlight, LED-TV backlight, and mobile phone backlight, featuring large shipment, low unit price, and meager gross profit;

4. Chinese Mainland which gives priority to yellow-green LED and aims at outdoor display, advertising screen, and signal lamp. The applications require low product technology and reliability, the clients are scattered and of small scales, yet the gross profit is not low due to the engineering projects in most cases.

Chinese Mainland is at best a production workshop although it has manufactured 80% mobile phones, 95% notebook computers, 50% LCD TVs, and 95% LCDs worldwide. As a whole, the key raw materials, small & medium-sized panels, and large-sized panels are monopolized by Japanese, South Korean, and Taiwanese enterprises.

European & American enterprises have nothing to do with the flourishing LED backlight market in that they have targeted at the big market of general lighting from the very beginning. In 2010, the shipment expanded greatly, but the price dropped dramatically, which just brought along slight growth to these manufacturers. Japanese, South Korean, and Taiwanese enterprises enjoyed the most rapid progress.

In 2010, LG INNOTEK presented the highest growth margin, and the revenue from LED Division advanced to US$783 million from US$229 million in 2009. Nevertheless, LG INNOTEK sacrificed the profit whose growth margin was far from that of revenue. The revenue of Samsung LED also progressed considerably to US$1.14 billion from US$508 million in 2009, ranking the global No.2; while that of South Korea's Seoul Semiconductor climbed 105% to US$726 million.

Nichia, the global No.1 for consecutive 8 years since 2003, also advanced rapidly, and its LED revenue rose 65% against 2009 to US$2.246 billion. China is in possession of more than 150 LED enterprises, but their total revenue is inferior to that of Nichia and the total operating profit fails to meet 40% of Nichia's profit.

China's LED industry remained a hotspot in 2010 and a great number of enterprises successively announced the investment of at least RMB10 billion. Chinese government was eager about LED upstream and offered the subsidy of RMB10 million for each MOCVD machine, which stimulated the LED investment upsurge. Chinese Mainland enterprises purchased only 25 MOCVD machines in 2009, but the number expanded to 267 in 2010, and it surpassed 450 considering the MOCVD machines purchased by Taiwanese enterprises in Mainland China. In 2010, the global shipment of MOCVD machines totaled just 768.

The MOCVD machines worldwide are almost monopolized by AIXTRON and VEECO who have benefited a lot from the investment zeal of Chinese enterprises. In 2010, VEECO launched K465I in Chinese market, posing great pressure on AIXTRON, and its revenue soared 230%.

Different from automobiles, MOCVD machines require debugging first, which will take2-4 moths for veteran manufacturers but possibly even longer time for those absent in experience or technology. Chinese Mainland manufacturers have frequently headhunted Taiwanese LED talents with the promised salary by several folds; however, few have been attracted in view of the probable lay-off after the completion of debugging. Consequently, the actual mass production ratio of the available 267 MOCVD machines in 2010 is not high in 2011.

Since early 2011, partial local governments of China have suspended the procurement subsidy over MOCVD equipment taking into account possible overcapacity and insufficient utilization of MOCVD devices.

Revenue of Global LED Manufacturers (only concerning LED Epitaxy and LED Die), 2009-2010

Manufacturer	Type	Region	2009	2010
NICHIA	Epitaxy	Japan	1358	2246
SAMSUNG LED	Epitaxy & Packaging	South Korea	508	1140
OSRAM	Epitaxy & Packaging	Germany	819	822
CREE	Epitaxy & Packaging	USA	788	818
LG INNOTEK	Epitaxy & Packaging	South Korea	229	783
Seoul Semiconductor	Epitaxy & Packaging	South Korea	355	726
Lumileds	Epitaxy & Packaging	Holland	630	679
Epistar	Epitaxy	Taiwan	385	626
SHARP	Packaging	Japan	420	588
Everlight Electronics	Packaging	Taiwan	342	553
LiteOn Technology	Packaging	Taiwan	311	446
Toyota Gosei	Epitaxy	Japan	356	438
STANLEY	Packaging	Japan	310	299
Kingbright	Packaging	Taiwan	192	288
CITIZEN	Packaging	Japan	302	276
Lextar Electronics	Packaging	Taiwan	62	255
Optotech	Epitaxy	Taiwan	164	240
Unity Opto	Packaging	Taiwan	121	214
LUMENS	Epitaxy & Packaging	South Korea	104	213
Bright Led Electronics	Packaging	Taiwan	131	164
Formosa Epitaxy	Epitaxy	Taiwan	63	147
Huga Optotech	Epitaxy	Taiwan	66	140
Chi Mei Lighting Technology	Epitaxy	Taiwan	70	119
Harvatek	Packaging	Taiwan	82	119
Nation Star Optoelectronics	Packaging	China	77	114

Source: ResearchInChina

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