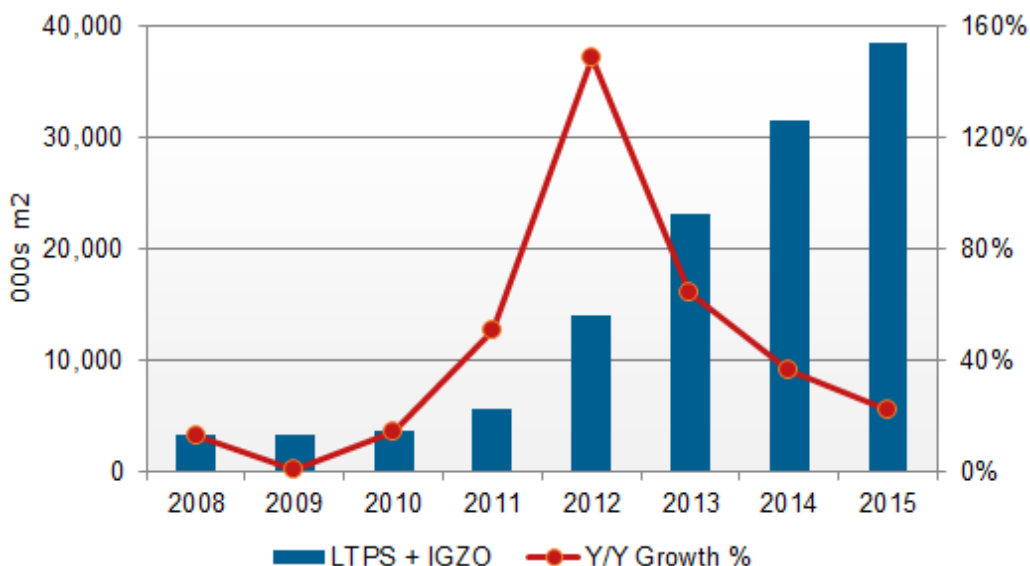


## Low Temperature Polysilicon and IGZO Production Forecast to Skyrocket 150% in 2012

Santa Clara, California, December 19, 2011—The explosive growth of smart phones and tablets has made high performance TFT technologies, particularly LTPS (low temperature polysilicon) and IGZO (indium gallium zinc oxide), critical to production of the high resolution displays used by these devices. These TFT technologies employ high mobility semiconductor materials, which allow panel manufacturers to shrink TFT dimensions and increase light transmission. LCDs with greater than 230 ppi (pixels per inch) resolution, such as Apple’s Retina Display, are enabled by high transmission because it minimizes power consumption, allowing mobile devices to run longer without recharging.

According to the NPD DisplaySearch [TFT LCD Process Roadmap Report](#), high mobility backplane production is forecast to grow 150% from 5.6 million square meters in 2011 to 14.1 million square meters in 2012. Drivers for this tremendous growth include multiple Gen 5 and larger LTPS fabs starting production in 2012, as well as expected IGZO production on existing lines by Sharp, LG Display and Samsung.

Figure 1: Manufacturing Capacity Devoted to High Resolution Backplane Production



Source: NPD DisplaySearch [TFT LCD Process Roadmap Report](#)

“Smart phones, tablets and cost reduction are expected to be the key drivers pushing the FPD industry in 2012,” stated [Charles Annis](#), NPD DisplaySearch Vice President of Manufacturing Research. “With FPD profitability under extreme pressure, LCD makers are focusing development efforts on rapidly-growing mobile segments and a wide array of cost reduction strategies. Because of this, high mobility backplanes, optical alignment, high resolution lithography and advanced LC modes are expected to be some of the most important manufacturing technology trends over the next year.”

All of these technologies target increasing panel transmission. With only about 4-9% of illumination generated by LCD backlights making it to the front of screen, very powerful light sources are required to meet LCD brightness specifications. In addition, backlight units are the single most expensive components in large-area LCD modules. Thus, by increasing transmission, panel makers can trade off power consumption and costs.

“However, a lot of know-how and proprietary technology are required to successfully increase transmission without sacrificing yield. Panel makers and their suppliers are racing to create competitive advantages through manufacturing technologies to increase profitability in 2012,” Annis added. “Any technology, such as IGZO, that may simultaneously lower costs while improving performance offers a double competitive advantage to panel makers, and potentially can create a new standard in FPD manufacturing.”

The new NPD DisplaySearch [TFT LCD Process Roadmap Report](#) offers a unique and unprecedented guide to these rapidly evolving FPD manufacturing technologies. The report provides technical discussions, process flows, production status by maker, adoption forecasts for 57 technologies and analysis of benefits, opportunities, negatives and challenges. Additionally, LCD cost and performance specifications for manufacturing technologies are projected through 2016.

For more information about the new NPD DisplaySearch [TFT LCD Process Roadmap Report](#) please contact Charles Camaroto at 1.888.436.7673 or 1.516.625.2452, e-mail [contact@displaysearch.com](mailto:contact@displaysearch.com) or contact your regional DisplaySearch office in [China, Japan, Korea or Taiwan](#) for more information.

#### About NPD DisplaySearch

Since 1996, NPD DisplaySearch has been recognized as a leading global market research and consulting firm specializing in the display supply chain, as well as the emerging photovoltaic/solar cell industries. NPD DisplaySearch provides trend information, forecasts and analyses developed by a global team of experienced analysts with extensive industry knowledge and resources. In collaboration with The NPD Group, its parent company, NPD DisplaySearch uniquely offers a true end-to-end view of the display supply chain from materials and components to shipments of electronic devices with displays to sales of major consumer and commercial channels. For more information on NPD DisplaySearch analysts, reports and industry events, visit us at <http://www.displaysearch.com/>. Read our blog at <http://www.displaysearchblog.com/> and follow us on Twitter at [@DisplaySearch](#).

#### About The NPD Group, Inc.

The NPD Group is the leading provider of reliable and comprehensive consumer and retail information for a wide range of industries. Today, more than 1,800 manufacturers, retailers, and service companies rely on NPD to help them drive critical business decisions at the global, national, and local market levels. NPD helps our clients to identify new business opportunities and guide product development, marketing, sales, merchandising, and other functions. Information is available for the following industry sectors: automotive, beauty, commercial technology, [consumer technology](#), entertainment, fashion, food and beverage, foodservice, home, office supplies, software, sports, toys, and wireless. For more information, contact us or visit <http://www.npd.com/> and <http://www.npdgroupblog.com/>. Follow us on Twitter at [@npdtech](#) and [@npdgroup](#).

#### Contact

Sign up for free email information services at [www.displaysearch.com/subscribe](http://www.displaysearch.com/subscribe). You can read our analysts' blog at <http://www.displaysearchblog.com/> and follow us on Twitter at [@DisplaySearch](#).

For more information on DisplaySearch analysts, reports and industry events, contact DisplaySearch at [contact@displaysearch.com](mailto:contact@displaysearch.com) or visit us at <http://www.displaysearch.com/>.

Media contact: Stacey Voorhees +1.925.336.9592 or email [media@displaysearch.com](mailto:media@displaysearch.com)