

News Release

January 24, 2013, Nevada City, California – New Venture Research (NVR) announces the release of its seminal market research report, “Contract Manufacturing Opportunities in Printed Electronics – 2013 Edition”

The worldwide printed electronics (PE) market has been over-hyped and inaccurately forecast for over a decade, and frequently confused with conventional semiconductor electronics manufacturing. Yet PE holds significant potential and is now starting to show real commercial promise. NVR has been following the PE market for the last six years and the contract electronic manufacturing services market for more than 20 years. As a result of the latest field research, NVR is in a position to define this market in terms of size and emerging opportunity for both contract manufacturers and integration/solution-providing companies.

This report is a comprehensive analysis of three independent but related markets: PE printing equipment, PE materials, and PE market applications or end-user solutions (summarized below). The report analyzes 40 unique PE end-user applications within 10 vertical industry segments. In some cases, PE is creating a standalone market of its own, while in others it is displacing conventional semiconductor electronics.

Worldwide Printed Electronics Industry by Market, 2012

PE Market Segments	Rev. (\$M)
PE Equipment	2,617
PE Materials	3,278
PE Applications	3,840
Total	9,735

The goal of printed electronics has been to utilize common printing equipment found in the graphic arts industry, such as screen and inkjet printers, as the means of creating low-cost electronic devices. Because of the inherent efficiency of layering printed thin films, it is believed that large scale and continuous printed devices can be made quicker and less costly than with conventional photo-

lithography and etching semiconductor electronics. Unfortunately, not everyone adheres to the same definition of PE as opposed to semiconductor electronics, hence the confusion. This report examines only those technologies that can be truly characterized as PE.

The conclusion of this research is that the PE market is not as large or as fast-growing as has been frequently touted. Yet many exciting applications are emerging, with growth rates from 2012-2017 projected to be as high as 125% CAGR in some cases or as low as 5% CAGR in others. We limit our forecasts to 5-year windows because it is the only realistic growth-rate period over which technological change can be estimated with confidence. (Bottom line: the numbers should not overstate the opportunity.) Product applications are analyzed for both traditional contract electronics assembly and advanced PE manufacturing production.

Over 185 companies are profiled by PE market (equipment, materials, applications). In addition, there is a technology discussion of leading organic and inorganic thin films and other forms of printable circuits. For example, it is determined that OLEDs by PE are almost non-existent, while photovoltaics by PE, with the exception of emerging thin film opportunities such as CIGS and CdTe, is limited to the unglamorous application of printing bus bar circuit paths. The transportation industry emerges as the most solid positive growth sector, being exploited by companies like T-Ink, while latent applications in packaging, medical and general PE (involving memory/logic/sensor/battery applications) are being developed by Thin Film Electronics and contract manufacturers like GSI Technology.

The market for PE is erupting on many fronts, as identified by our analysis of 40 market applications in descending order of growth rate over the next five years. This unique report takes a critical and realistic look at PE from a manufacturing and customer point of view, and gives the most honest and thorough picture of emerging PE opportunities to date.

For more information, see <http://www.newventureresearch.com/wp-content/uploads/2013/01/PE13bro-RS.pdf/>