
Description: Flexible glass is useful as a substrate for deposition of nanotechnology materials used to create solar panels, thin film batteries, and HDD drives. Substrates are needed for nanotechnology implementations of different devices including materials used in the aircraft and building industries. The study has 232 pages and 70 tables and figures.

Nanotechnology frequently involves sputtering some active material onto a substrate at high temperature and in a vacuum. Flexible glass is a valuable substrate because of its handling characteristics chemical characteristics, and the overall maturity of the glass industry.

Analysis of flexible glass markets depends on looking at the need for substrates for nanotechnology including the thin film solar and battery markets which in turn depend on the number of autos sold and number of solar panels. In addition there are a lot of metrics to look at, including number of concentrating solar installations up coming, number of LCD TVs, number of thin film batteries, number of semiconductors, and number of HDD components.

Electric power from renewable sources, particularly solar energy promises a new generation of utility companies that replace large fossil fuel generating plants with substations that gather electricity from commercial rooftops near the demand for electricity. Electric vehicles will be recharged from stationary batteries located near suburban homes.

Flexible glass has a higher threshold for heat management than polymer. Polymers will melt at temperatures where glass substrate remains stable. Glass markets overall continue to be strong. Corning expects worldwide glass demand to reach 2.7-2.8 billion square feet in 2010, up from 2.4 billion square feet in 2009. Glass shipments can be analyzed at a rate of 37% residential, 21% commercial, 28% automotive, and 17% specialty glass.

Following is a forecast for flexible glass substrate markets that represent but a fraction of the overall solar panel markets. Starting from zero in 2010, the market reaches $1 billion by 2016 representing just a fraction of overall spending on solar panels. After that, the markets are anticipated to grow significantly capturing a large part of the solar panel and other nanotechnology manufacturing production.

Market growth is a result of demand for nanotechnology that benefits from controlling matter on an atomic and molecular scale. New properties of matter are evolving rapidly.

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