Global and China Thin-film Solar Cell Industry Report, 2010

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This report

- **Analyzes the market of global and China's thin-film solar cell industry, such as supply & demand, policy environment ,import & export and so on.**
- **Focuses on the market segments of thin-film solar cell, such as A-Si thin-film solar cell , CIGS thin-film solar cell and CDTE thin-film solar cell .**
- **Highlights the operation and development of key enterprises of thin-film solar cell devices in China and worldwide .**

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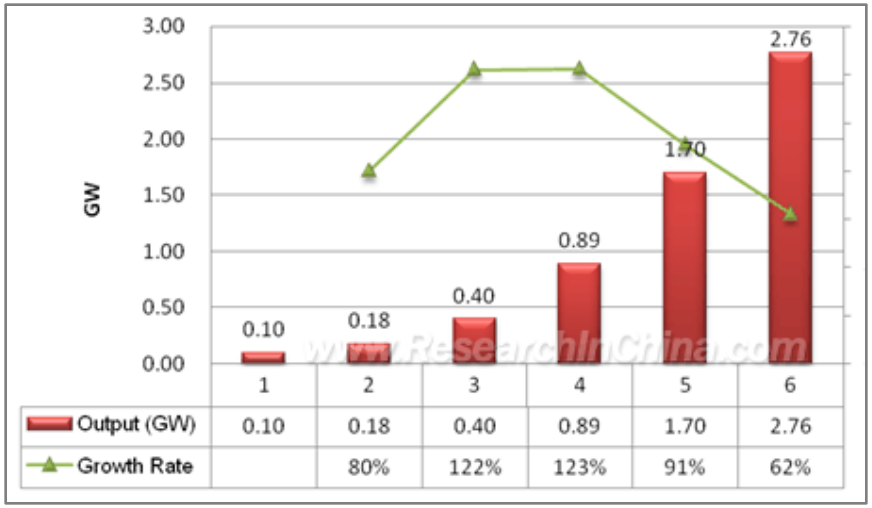
Abstract

In 2010, the output of thin-film solar cell worldwide expanded rapidly to 2767MW, up 62.8% against the 1700MW in 2009, and occupying 13.5% of the global solar cell output. During 2006-2010, the growth rate of thin-film solar cell output maintained a high level.

Global Thin-film Solar Cell Output and Growth Rate, 2005-2010



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Currently, thin-film solar cells mainly fall into amorphous silicon (a-Si) thin-film solar cell, CdTe thin-film solar cell, and CIGS thin-film solar cell. Despite the advantages like low price and good faint-light capability, thin-film solar cells have such disadvantages as low conversion efficiency and short service life; however, they will embrace a bright prospect as the shortcomings will fade away along with technology progress.

A-Si Thin-film Solar Cell

Owing to the relatively mature technology and comparatively low technical threshold of a-Si thin-film solar cell, a greater number of manufacturers represented by Energy Conversion Devices, Sharp, and Trony are engaged in the production. But on account of the low conversion efficiency, the sale was not hot in 2010 even though the selling price was very low.

CdTe Thin-film Solar Cell

The dominating First Solar controls the most advanced technology of CdTe thin-film solar cell. Its output rested on 1400MW in 2010, making it the enterprise with the second largest solar cell output in the world, and its capacity will hit 2700MW in 2012. Till present, no thin-film solar cell enterprise can compete with First Solar.

CIGS Thin-film Solar Cell

With a high theoretical conversion efficiency and suitability for mass production, CIGS thin-film solar cell turns out to be the most promising thin-film solar cell. Nevertheless, it has not achieved mass production yet owing to the immature technology. The relatively big enterprises cover Germany's Q-Cells with a capacity of merely 100MW or so; Chinese enterprises consist of Sunvim Group Co., Ltd, etc.

In addition, the report casts light on 8 major suppliers of thin-film solar cell devices, including Switzerland's Oerlikon and Japan's ULVAC.

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