

[DayStar](#) - [DSTI](#) - is focused on low-cost, high performance, CIGS thin film photovoltaic products for converting electricity from the sun. The company aiming to achieve cost and performance parity with fossil fuel electricity generation.

Solar Photovoltaics

Solar cells work by absorbing light and converting it to electrical power, referred to as the photovoltaic effect. The majority of commercial solar cells in use today are made of silicon, the same semiconductor material used in the microelectronics industry. In addition to the semiconductor materials, solar cells consist of a top and bottom electrical contact to move the electricity out of the solar cell. The performance of a solar cell is measured in terms of its efficiency in converting sunlight into electricity. Typical commercial solar cells have an efficiency ranging between 6% and 18%, meaning that for every 1,000 watts of sunlight striking a solar module, 60 to 180 watts of electricity will be produced.

Thin Film Photovoltaics

Solar cells and modules made from certain thin film semiconductors have been shown to be much less expensive to produce in larger volume and requiring much less raw material to produce than silicon based PV cells. Extensive research and development on thin film cells has been conducted for more than 30 years, and recent advances in manufacturing and product commercialization have increased worldwide share of thin film photovoltaics to over 10% in 2007.

Thin film photovoltaic products exhibit the following attributes:

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Scaleable, low cost manufacturing: Thin

film solar cells and modules require a structural "substrate" to support them, such as glass. Applying the films on low cost glass substrates enables continuous and scaleable manufacturing. As much of the equipment to process these substrates is used in other industries, the capital expenditure required to establish large-volume thin film PV product manufacturing plants enables rapid capacity expansion and lowers the cost per watt of products.

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Lower material cost: The substrate and raw materials used in thin film PV products are less expensive than the cost of most semiconductor materials. With increasing thin film

manufacturing capacity and process yield improvements product costs are reduced.

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Performance attributes: In addition to cost per watt advantages, thin film photovoltaic technologies exhibit performance advantages in generating energy in low light level and increased temperature environments. This positions them particularly well for applications in regions with less direct sunlight, such as in

Northern Europe.

**Day Start is trading near 52
WK**

**Lows, stock could Bounce
back from this levels, keep
an eye!**

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Written by staff

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Thanks.