

# New technology –

China Sunergy brings innovation and technology to market, paying special attention to the product warranty.

China Sunergy (Nanjing) Co., Ltd. (NASDAQ: CSUN) carries on its development and technological progress, following a roadmap that enables it to keep the promises made to the market last year and bringing to 19% the efficiency of its monocrystalline cells already in the first half of 2011.

Established in 2004, China Sunergy is a leading company in the hi-tech photovoltaic field. Its core business is the manufacturing of high performance cells and modules and, being one of the main players in the PV market, the company is constantly improving its modules, cutting their costs while raising efficiency and reliability.

Following this path, two new lines were created thanks to the innovative spirit and the great experi-

ence of Dr. Zhao, CTO of the company. The R&D team developed a new module line called "QUASAR".

These new modules produce more power than the normal 60 cells monocrystalline modules, increasing productivity by 6% thanks to the new cells, characterized by a different texturization and low coupling losses due to an average efficiency of 19%.

An appreciable increase in peak power is brought by the following models of the new range: CSUN 270-60M, CSUN 265-60M, CSUN 260-60M, CSUN 255-60M, CSUN 250-60M.

Moreover, in order to prove the experience and reliability of its products on the market, CSUN extended to 10 years the hardware warranty and to 12 years (90% of Pmin), 20 years (83% of Pmin) and 25 years (80% of Pmin) the power output warranty.

The second innovation presented by CSUN is a new generation of MONO-LIKE polycrystalline cells that considerably improve efficiency. This new technology is based on the casting process for the manufacturing of polycrystalline silicon, with surface areas made of mono crystal. This way it is possible to create

# efficiency guaranteed

wafers that are similar to mono, also in terms of electrical performances. However this new technology makes the cell's surface multi-faceted, creating visible differently coloured areas.

In summary, the main features are the following:

- 1) Higher cell's efficiency than polycrystalline ones.
- 2) Stable performances, reduced LID as for the polycrystalline.
- 3) Remarkable increase in the output power with a reduction of the cost per unit.
- 4) The modules produce more watts, 250 W or 300 W.
- 5) Sensible reduction of the power-to-surface ratio for PV plants.

Furthermore, since September 2011, CSUN has been using "tape sealing" modules in order to improve products and services: the junction box and the frame are fixed through adhesive tape instead of silicone. The fixing technique through adhesive tape fits the production process better than the silicone one, and the module's appearance remains unaltered.



BIPV project using CSUN modules in Serdegna, 1.5 MW

Photos: CSUN



CSUN launched its Quasar module at 26th EU PVSEC.



Dr. Zhao Jianhua, CTO of CSUN, the world record holder of silicon cell (mono) conversion efficiency for 22 years



PV project using CSUN module in Terontola, 11.3 MW



PV project using CSUN modules in Puglia, 4.3 MW

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