

New premium photovoltaic module: Black half-cell module and new frame concept from Bosch Solar Energy

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- ▶ New generation of cells with half-cell design and innovative module materials improve output
- ▶ High mechanical stability and new frame with multiple installation options for pressure loads of up to 7200 Pa

Arnstadt – Bosch Solar Energy is launching a new premium module onto the market. This black model was first exhibited at Solarexpo in Italy at the start of May to very positive acclaim. Limited numbers of the black module with the new generation of cells and innovative frame concept have been available since the start of May.

Bosch Solar Module c-Si M 60+ S – more output and improved product design

Module output of up to 285 watts is assured by a new generation of cells with a black half-cell design and a burned-in anti-reflection coating on the micro-structured, toughened front glass, which enables greater light absorption. A highly transparent encapsulant foil provides more exposure to light, while innovative structured cell connectors reduce electrical and optical losses in the module and therefore also increase output.

The new premium module consists of 120 half monocrystalline high-performance solar cells in time-tested quality of the Arnstadt plant. The cells measure 156x78 mm and therefore allow more efficient use of the module surface area. Reliability tests that far exceed the standard requirements have confirmed the durability and long-term stability of the new module.

New frame allows easy and fast installation and maintenance

The black premium module has a new frame featuring many innovations which particularly facilitate installation and maintenance of the modules. Optimized ergonomics ensure easier handling during installation. The use of a central bar improves the stability of the frame, allows a variety of mounting options and enables the module to withstand pressure loads of up to 7200 Pa.

Drainage corners have also been incorporated into the design of the module frame. These allow rainwater to flow away at the corners and therefore improve self-cleaning of the module, lessening soiling and moss in the lower section – frequent causes of reduced output. The drainage corners also provide additional grounding options.

Innovative white half-cell module begins series production in summer 2013

Limited numbers of the new black premium module are currently being produced at Arnstadt. Series production of a half-cell module with white and silver components is to commence this summer. Because the white rear encapsulant is more reflective than the black encapsulant, this module will have an even greater output of up to 290 Wp.

Bosch Solar Energy is exhibiting the new black premium photovoltaic module, the white high-output module and the new frame concept at this year's Intersolar trade show in Munich – at booth 270, hall A2 – from June 19 to 21.

Information on Bosch's withdrawal from the field of crystalline photovoltaics

On March 22, 2013, Robert Bosch GmbH announced that it will pull out of the crystalline photovoltaic business field by the beginning of 2014. The aim is to sell the business outright or in individual sub-divisions, if possible.

Activities at Bosch Solar Energy are continuing at present, support for business partners is assured, and known contacts remain available as contact persons.

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The Bosch Group's Solar Energy division is a leading supplier of photovoltaic products. From small-scale plants for family homes to finished large-scale photovoltaic projects, Solar Energy offers high-quality solar cells and modules for photovoltaic power generation. The division also develops top-quality turnkey solar power plants. In this area, Solar Energy handles the building of solar power plants, from initial planning to turnkey handover.

Together with its subsidiaries, Solar Energy employs about 3,300 associates.

For more information please visit www.bosch-solarenergy.com

The Bosch Group is a leading global supplier of technology and services. In fiscal 2012, its roughly 306,000 associates generated sales of 52.5 billion euros. Since the beginning of 2013, its operations have been divided into four business sectors: Automotive Technology, Industrial Technology, Consumer Goods, and Energy and Building Technology. The Bosch Group comprises Robert Bosch GmbH and its roughly 360 subsidiaries and regional companies in some 50 countries. If its sales and service partners are included, then Bosch is represented in roughly 150 countries. This worldwide development, manufacturing, and sales network is the foundation for further growth. Bosch spent some 4.8 billion euros for research and development in 2012, and applied for nearly 4,800 patents worldwide. The Bosch Group's products and services are designed to fascinate, and to improve the quality of life by providing

solutions which are both innovative and beneficial. In this way, the company offers technology worldwide that is “Invented for life.”

The company was set up in Stuttgart in 1886 by Robert Bosch (1861-1942) as “Workshop for Precision Mechanics and Electrical Engineering.” The special ownership structure of Robert Bosch GmbH guarantees the entrepreneurial freedom of the Bosch Group, making it possible for the company to plan over the long term and to undertake significant up-front investments in the safeguarding of its future. Ninety-two percent of the share capital of Robert Bosch GmbH is held by Robert Bosch Stiftung GmbH, a charitable foundation. The majority of voting rights are held by Robert Bosch Industrietreuhand KG, an industrial trust. The entrepreneurial ownership functions are carried out by the trust. The remaining shares are held by the Bosch family and by Robert Bosch GmbH.

Additional information is available online at www.bosch.com and www.bosch-press.com