

Difference is in the Details





LG Electronics, Inc. (LG) is a global leader and technology innovator in consumer electronics, mobile communications and home appliances. The company employs more than 91,000 people working in 117 operations, including 98 subsidiaries around the world, with global sales of \$48.97 billion in 2011. LG consists of four business units – Home Entertainment, Mobile Communications, Home Appliance, Air Conditioning and Energy Solutions. LG is one of the world's leading producers of flat panel TVs, audio and video products, mobile handsets, air conditioners and washing machines.


LG Electronics is also moving one step ahead in the environmentally friendly field of Solar Energy. In 2008, the company proclaimed its charter, 'Life's good when it's green'. LG plans to reduce greenhouse gases in product usage by 30 million tons yearly, and by 150,000 tons by the year 2020. The company has strictly eliminated usage of harmful substances in its manufacturing processes and its efforts have been recognized by TÜV Rheinland of Europe and UL of US. LG's solar power business has also been launched on the basis of the environment-friendly leadership of LG Electronics.

## **LG Solar**

The history of LG's solar business can be traced back to the mid-1980's, when the LG central research lab started R&D on solar technologies. In 2004, the LG business group created synergy and prepared for mass production by consolidating several solar research laboratories under the LG Electronics umbrella. Using decades of R&D experiences, LG Electronics broke ground on its first solar cell and module factory.

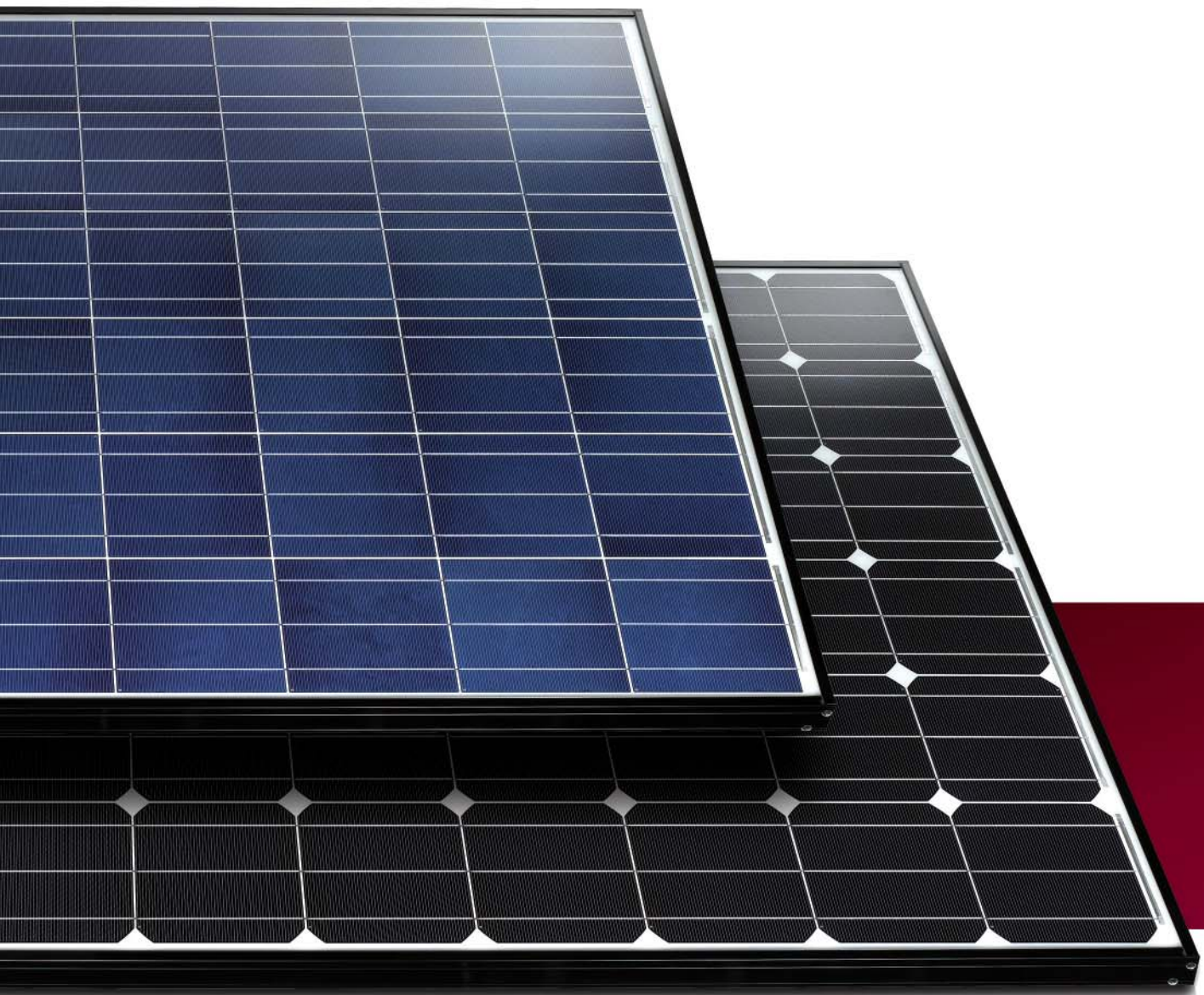
LG considers the solar power business not as a mere business expansion, but a new growth engine of the LG Group. A solar industry cluster has been organized within the LG Group and is achieving vertical integration in the solar power industry. Examples include the construction and operation of a 14MW scaled solar power plant in Taean, Korea in 2008 and the supply of wafers through Siltron, a subsidiary company.





"Creating Value for Customers  
and Respecting Human Dignity."

# World Class Production and Innovative R&D





## R&D, Developing Innovative Products

LG Electronics has a team of more than one hundred in R&D working in solar research. The R&D of LG Electronics consists of a Crystalline Cell research team, a Thin Film research team and a Module Development team. Currently, LG is in the process of developing a high-efficiency crystalline cell, and has succeeded in product development of the world's best efficiency (11.1 %) large-area (1.1 m x 1.3 m) thin film cells.

## Production with State-of-the-Art Equipment and Skillful Technicians

The factory is located in Gumi, Korea. As a Mecca of manufacturing the world's famous electronic products, Gumi city is abundant with numerous electronic product manufacturing companies and is well-known for skillful technicians and convenient logistics. LG Electronics uses a 3-story factory building with excellent clean room facilities. Production scale in the year 2011 is 330MW and LG Electronics plans to expand production capacity each year.

## Rigid Quality Control System

LG Electronics sets its priority in the quality of its product. The Quality Assurance Process of LG administers gateway checks at every stage from development to production. If the quality does not meet the rigid conditions, it will not be passed onto the next stage. LG has state-of-the-art testing equipment for quality, safety, and performance tests.

## Certified Laboratory

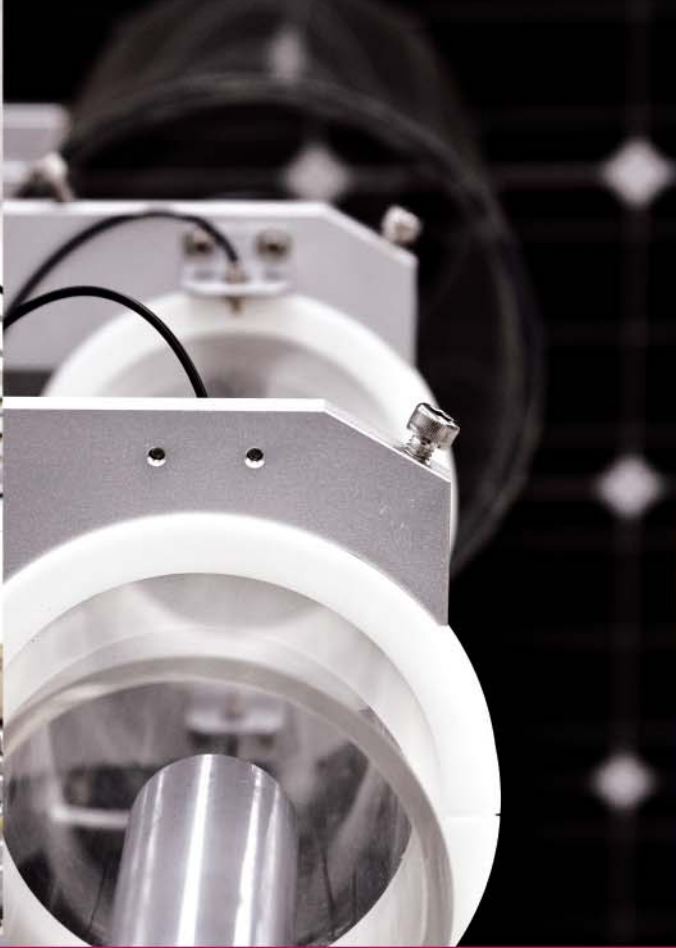
The LG laboratory is certified as a Photovoltaic testing laboratory by TÜV and UL. The facilities, functions and level of LG laboratories are the world's best. This is a core reason why LG Electronics is able to process certification tests in such a short period of time.

The best solar module of LG Electronics is derived from production capability, consisting of R&D with the best techniques and most skillful engineers. With a basis of quality control experience accumulated over several decades, the LG laboratories are equipped with a thorough quality control process. As for the development and manufacturing segments of LG, its employees have been well trained in the quality management system and are deeply rooted in it.



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## LG Solar Modules

### **Twenty Years of Solar Power Research**

The solar cell of LG Electronics has just seen the light of day, but research on solar power dates back more than 20 years. LG, with two business axes, LG Electronics and LG Chem, has a great foundation that makes the state-of-the-art technology required for solar power research possible. The world's best researchers have placed their utmost efforts into delivering the outcome of 20 years of research to LG's customers.

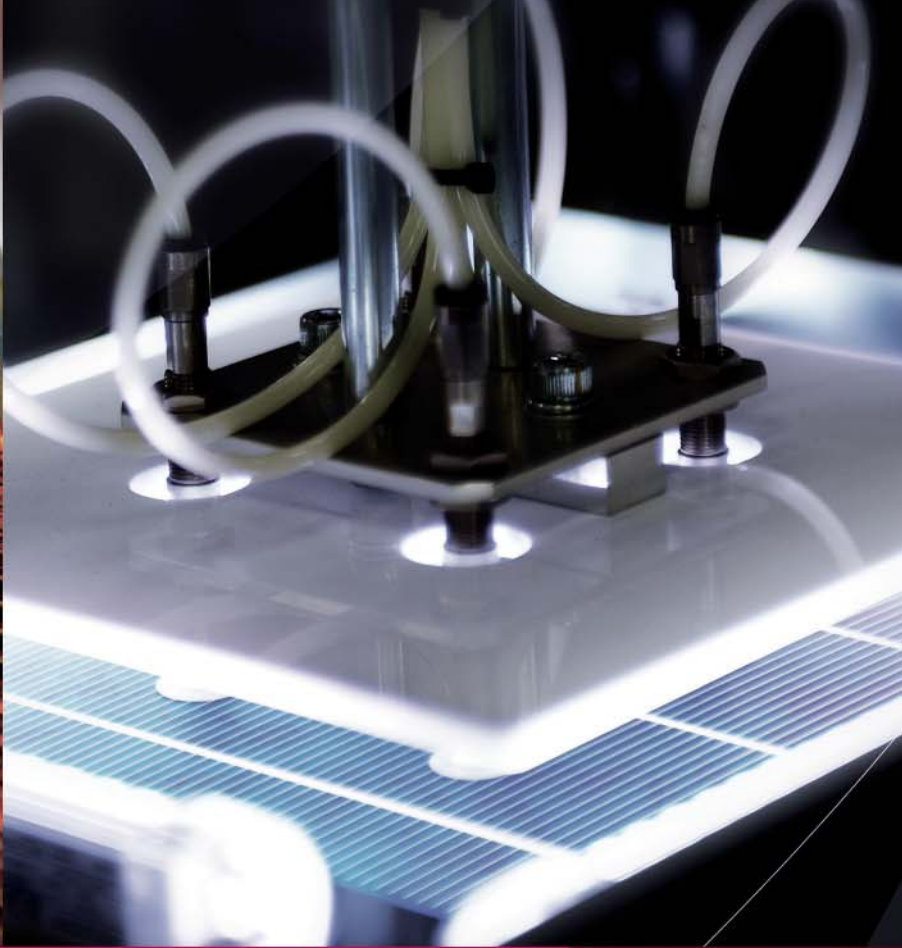
### **Tenacity for Quality**

The tenacity for quality at LG Electronics reaches a different level. The Gateway System of LG exceeds customer satisfaction and moves the hearts of customers by a thorough quality management system. The rigid quality standards apply equally to solar power products that require product reliability for more than 20 years.

### **DNA of LG Electronics**

LG's management principles are "Creating value for customers" and "Respecting human dignity." These principles are in the DNA of LG and in the genes of its constituents. Developing a brand that is reliable and loved throughout the world is only possible through the mindset of LG that the customer comes first above everything. This DNA of LG Electronics has been rooted into the Solar Power Business.





A solar module needs to produce electricity consistently, even in harsh environmental conditions such as rain, wind, snow etc. for a period of 25 years. This makes it imperative for the modules to be made from high quality raw materials and components. In order to maximize profits for customers, LG insists on positive power tolerance and high quality material policy and is placing its utmost efforts in aesthetic and optimal module designs.

### Positive Power Tolerance

LG guarantees positive power tolerance (0 ~ +3 %), which is substantial to customers' benefits. When the LG 230 W modules are purchased, customers will have additional benefits up to an average of 3.5 W. The nameplate power output is measured and determined by LG Electronics at its sole and absolute discretion.

### Strong Durability

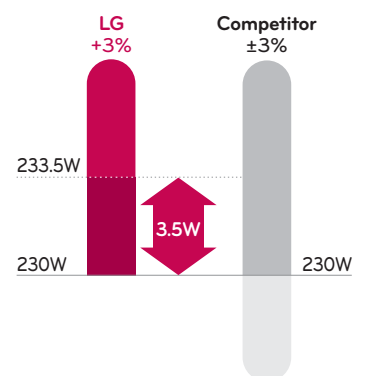
LG modules come with internal mechanical load standards (5400 Pa), which are stricter than international standards. The module frame's durability is uniquely anodized to minimize damage from rain, snow and sea wind.

### Rigid Selection of Materials

LG applies rigid standards to material procurement solely targeting products which have undergone previous technical analysis, laboratory tests, and field tests. All of the materials for LG Electronic modules are supplied by world-recognized partners.

### 25-Year Commitment

LG's leading warranty program includes a 10-year product warranty and a linear performance warranty that guarantees a minimum power output of 80,2% after 25 years.





LG Electronics Deutschland GmbH  
EU Solar Business Group  
Berliner Straße 93  
D-40880 Ratingen, Germany  
Email: solar@lge.de  
[www.lg.com/uk/solar](http://www.lg.com/uk/solar)

