Technological innovation is paramount for the growth of sustainable renewable energy.

The advancement of solar technology and affordability paired with the positive public view led to an exponential growth for the industry. Since photovoltaic (PV) modules have an average lifespan of 25 years, choosing a robust product from a trusted brand is paramount for all consumers. Through 30 years of diligent solar research and development, LG continuously leads the industry with PV modules that are unparalleled in quality and performance. Additionally, LG’s record is complimented by the stability of its veteran brand making LG the reliable partner for everyone.
LG has developed a complete energy management system that integrates solar energy production, storage, and control that can be complimented with LG high efficiency appliances.

Through time-tested experience in the electronics and technology industry, the LG brand became an icon of excellence in the Home Appliance and Home Entertainment markets. We will continue to uphold our standards of perfection in our younger ventures such as our Vehicle Component and Energy Business Company.

Innovation in LG Electronics

LG Electronics plays an active role in world markets with its assertive global business policy. As a result, LG Electronics controls 125 local subsidiaries worldwide, with roughly 77,000 executives and employees.

LG Smart Energy Solutions

LG has developed a complete energy management system that integrates solar energy production, storage, and control that can be complimented with LG high efficiency appliances.

SOLAR
High efficiency module that generates more energy

ESS Energy Storage System
Stable electricity flow with high system efficiency

EMS Energy Management System
Ultimate building control and energy management solution

$47.92 billion (2016)
77,000
125 Global Operations

* LGE consolidated basis; Exchange Rate KRW 1,155.47 per USD
LEADING TECHNOLOGY

LG won the internationally recognized “Intersolar AWARD” in 2013, 2015, and 2016 for groundbreaking ideas and technological innovations that sets itself ahead of the competition. Growing power output at an expeditious ~7.5% annually, LG’s flagship NeON R, 60-cell module generates a remarkable 365W output.

- NeON R
- NeON R²
- MonoX Plus

LG Solar Module Power Output Graph

- N-type Cell
- NeON R
- NeON R²
- N-type Cells convert sunlight into energy more efficiently than P-type cells. Additionally, the rear side of the cell also generates energy.

LG Solar Awards & Innovation in Technology

- **2013**
  - Intersolar Award 2013 [Winner]
  - Plus X Award 2013 [High Quality, Ecology]

- **2015**
  - Intersolar Award 2015 [Winner]
  - Plus X Award 2015 [High Quality, Functionality, Ecology]

- **2016**
  - Intersolar Award 2016 [Winner]

- **2017**
  - Intersolar Award 2017 [Winner]
  - EUPD Research Top Brand [Module] 2017

**Why LG Solar**

- **Leading Technology**

**Innovation for a Better Life**

LG SOLAR

- **21.1% efficiency**
- **19.6% efficiency**
- **17.5% efficiency**

**LG Solar Module Power Output Graph**

**Intersolar**

**Quality Award**

**Plus X**

**Research Top Brand**
QUALITY

LG has always built innovative, high quality products and LG modules uphold the same standards. LG PV modules remain robust and efficient in environments with high temperatures or low irradiance. This combined with a low annual degradation and longer warranty than the market average, warrants LG quality and consumer confidence.

Operational Excellence & Testing Facilities

LG PV modules are built on an automated production line in order to maintain the utmost precision and quality. And LG is the first corporation in the world to operate in-house solar testing facilities that are certified by the 4 major inspection and certification authorities.

Innovation for a Better Life

LG offers industry top-level warranty on output providing customers with peace of mind when generating electricity.

**Superior Performance Warranty**

LG offers industry top-level warranty on output providing customers with peace of mind when generating electricity.
The Apex of Solar Generation

The LG NeON® R is LG’s premier module armed with the highest and most efficient energy generation technology that LG has ever produced. LG NeON® R not only generates the most energy from LG’s lineup but is also the most stable in all environmental conditions. The LG NeON® R Black is the sleek version of the LG NeON® R built to astastically compliment a residential rooftop.

The LG NeON® R Black is a “true black” module that eliminates metal electrodes on the front side. The module’s environmental and aesthetic design is ideal for roofs offering a clean, sleek modern exterior and increasing the home’s value.

The LG NeON® R is a high efficiency module that generates more energy than a conventional module. Less modules are needed to achieve energy requirements allowing consumers flexibility in system design.

The LG NeON® R generates 2.9% more energy than conventional P-type mono modules in high temperature conditions.

- **Features**
  - High Temperature Stability
  - High Power Generation

**Technical Data**

<table>
<thead>
<tr>
<th>Product Model</th>
<th>LG NeON® R 60cell</th>
<th>LG NeON® R Black 60cell</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cell Type</strong></td>
<td>Monocrystalline / N-type</td>
<td>Monocrystalline / N-type</td>
</tr>
<tr>
<td><strong># of Cells</strong></td>
<td>60cell (6 x 10)</td>
<td>60cell (6 x 10)</td>
</tr>
<tr>
<td><strong>Maximum Power</strong></td>
<td>365W</td>
<td>350W</td>
</tr>
<tr>
<td><strong>Module Efficiency</strong></td>
<td>21.1%</td>
<td>20.0%</td>
</tr>
<tr>
<td><strong>Dimensions (L x W x H)</strong></td>
<td>1,700 x 1,016 x 40 mm</td>
<td>1,700 x 1,016 x 40 mm</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>18.5kg</td>
<td>18.5kg</td>
</tr>
</tbody>
</table>

**Output Warranty of Pmax**

- Linear Warranty
  - First 5 years: 95%, After 5th year: 0.4% annual degradation, 25 years: 87%

**Technical Feature**

- Interconnectors positioned on the cell’s rear side maximizes light absorption
- Increased amount of Interconnectors reduces energy loss
- Delivers premium piano black frame
- Provides full Black module
- Eliminates electrodes on the front of cells

**High Power Generation**

The LG NeON® R is a high efficiency module that generates more energy than a conventional module. Less modules are needed to achieve energy requirements allowing consumers flexibility in system design.

**High Temperature Stability**

The LG NeON® R generates 2.9% more energy than conventional P-type mono modules in high temperature conditions.
**LG NeON® 2** | **LG NeON® 2 Black**

**LG’s Best Selling Module**

The LG NeON® 2 is LG’s best selling solar module. It received the acclaimed 2015 Intersolar AWARD for featuring LG’s Cello Technology that increases its power output and reliability making it one of the most powerful and versatile modules on the market.

**Product Model**

<table>
<thead>
<tr>
<th>Product Model</th>
<th>LG NeON® 2 60cell</th>
<th>LG NeON® 2 Black 60cell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell Type</td>
<td>Monocrystalline 12-Type</td>
<td>Monocrystalline 12-Type</td>
</tr>
<tr>
<td># of Cells</td>
<td>60cell (6 x 10)</td>
<td>60cell (6 x 10)</td>
</tr>
<tr>
<td>Maximum Power</td>
<td>335W</td>
<td>327W</td>
</tr>
<tr>
<td>Module Efficiency</td>
<td>19.6%</td>
<td>19.0%</td>
</tr>
<tr>
<td>Dimensions (L x W x H)</td>
<td>1,686 x 1,016 x 40 mm</td>
<td>1,686 x 1,016 x 40 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>18kg</td>
<td>18kg</td>
</tr>
</tbody>
</table>

**Output Warranty of Pmax**

- Linear Warranty
  - Output Warranty (First year: 98%, After 1st year: 0.55%/annual degradation, 25years: 84.8%)
LG NeON® 2

LG’s Best Selling Module

The LG NeON® 2 is LG’s best selling solar module. It received the acclaimed 2015 Intersolar AWARD for featuring LG’s Cello Technology that increases its power output and reliability making it one of the most powerful and versatile modules on the market.

Technical Data

<table>
<thead>
<tr>
<th>Product Model</th>
<th>LG NeON® 2 Silver 60Cell</th>
<th>LG NeON® 2 72Cell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell Type</td>
<td>Monocrystalline / N-type</td>
<td>Monocrystalline / N-type</td>
</tr>
<tr>
<td># of Cells</td>
<td>60cell (6 x 10)</td>
<td>72cell (6 x 12)</td>
</tr>
<tr>
<td>Maximum Power</td>
<td>335W</td>
<td>330W</td>
</tr>
<tr>
<td></td>
<td>325W</td>
<td>325W</td>
</tr>
<tr>
<td></td>
<td>400W</td>
<td>395W</td>
</tr>
<tr>
<td></td>
<td>395W</td>
<td>390W</td>
</tr>
<tr>
<td>Module Efficiency</td>
<td>19.6%</td>
<td>19.3%</td>
</tr>
<tr>
<td></td>
<td>19.3%</td>
<td>19.0%</td>
</tr>
<tr>
<td></td>
<td>19.3%</td>
<td>19.1%</td>
</tr>
<tr>
<td></td>
<td>18.8%</td>
<td></td>
</tr>
<tr>
<td>Dimensions (L x W x H)</td>
<td>1,686 x 1,016 x 40 mm</td>
<td>2,024 x 1,024 x 40 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>18kg</td>
<td>21.7kg</td>
</tr>
<tr>
<td>Output Warranty of Pmax</td>
<td>Linear Warranty</td>
<td>Linear Warranty</td>
</tr>
<tr>
<td></td>
<td>(First year : 98%, After 1st year : 0.55% annual degradation, 25years : 84.8%)</td>
<td>(First year : 98%, After 1st year : 0.55% annual degradation, 25years : 84.8%)</td>
</tr>
</tbody>
</table>

Features

Enhanced Long-term Reliability

When micro crack or finger electrode erosion happens by natural degradation of mechanisms in the outskirts of the solar cell, LG NeON® 2 reduces down performance by blocking the electrical path due to the tight layout of wires.

High Power Module

The LG NeON® 2 produces more energy than Conventional P-type Multi modules allowing energy requirements to be met using less space.

| Conventional Ribbon Product |
|-----------------------------|-----------------------------|
| Area of Installation (m²)   | 780m²                       |
| Save 20%                    | 16 x 19 17 x 23             |
| Performance Ratio (%)       | 85.4%                       |
| P-type Multi (260W)         | 975m²                       |

Strong Performance in Diverse Environments

The LG NeON® 2 generates 2.7% more energy than P-type Multi modules in high temperature conditions as well as at low irradiation conditions.

<table>
<thead>
<tr>
<th>P-Multi Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7% More electricity</td>
</tr>
</tbody>
</table>

* PV Syst simulation result
* Region: Bayern München, Germany
* Data source: Pan file, Datasheet
* Pitch: 5.5m
* The distance between modules in an array: 20mm

Technical Data Table:

<table>
<thead>
<tr>
<th>Product Model</th>
<th>LG NeON® 2 Silver 60Cell</th>
<th>LG NeON® 2 72Cell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell Type</td>
<td>Monocrystalline / N-type</td>
<td>Monocrystalline / N-type</td>
</tr>
<tr>
<td># of Cells</td>
<td>60cell (6 x 10)</td>
<td>72cell (6 x 12)</td>
</tr>
<tr>
<td>Maximum Power</td>
<td>335W</td>
<td>330W</td>
</tr>
<tr>
<td></td>
<td>325W</td>
<td>325W</td>
</tr>
<tr>
<td></td>
<td>400W</td>
<td>395W</td>
</tr>
<tr>
<td></td>
<td>395W</td>
<td>390W</td>
</tr>
<tr>
<td>Module Efficiency</td>
<td>19.6%</td>
<td>19.3%</td>
</tr>
<tr>
<td></td>
<td>19.3%</td>
<td>19.0%</td>
</tr>
<tr>
<td></td>
<td>19.3%</td>
<td>19.1%</td>
</tr>
<tr>
<td></td>
<td>18.8%</td>
<td></td>
</tr>
<tr>
<td>Dimensions (L x W x H)</td>
<td>1,686 x 1,016 x 40 mm</td>
<td>2,024 x 1,024 x 40 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>18kg</td>
<td>21.7kg</td>
</tr>
<tr>
<td>Output Warranty of Pmax</td>
<td>Linear Warranty</td>
<td>Linear Warranty</td>
</tr>
<tr>
<td></td>
<td>(First year : 98%, After 1st year : 0.55% annual degradation, 25years : 84.8%)</td>
<td>(First year : 98%, After 1st year : 0.55% annual degradation, 25years : 84.8%)</td>
</tr>
</tbody>
</table>

- 60Cell:
  - 1,686 x 1,016 x 40 mm
  - 18kg

- 72Cell:
  - 2,024 x 1,024 x 40 mm
  - 21.7kg

Output Warranty of Pmax:

- LG NeON® 2 Silver 60Cell: Linear Warranty (First year: 98%, After 1st year: 0.55% annual degradation, 25 years: 84.8%)
- LG NeON® 2 72Cell: Linear Warranty (First year: 98%, After 1st year: 0.55% annual degradation, 25 years: 84.8%)
LG NeON® 2 BiFacial

Double-sided Generation at its best

The LG NeON® 2 BiFacial is designed to absorb irradiance not only from the front but also the rear of its NeON® cell by using a transparent back sheet. The dual faces of the cell allows for higher energy generation.

Technical Data

<table>
<thead>
<tr>
<th>Product Model</th>
<th>LG NeON® 2 BiFacial 60Cell</th>
<th>LG NeON® 2 BiFacial 72Cell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell Type</td>
<td>Monocrystalline / N-type</td>
<td>Monocrystalline / N-type</td>
</tr>
<tr>
<td># of Cells</td>
<td>60-cell (6 x 10)</td>
<td>72-cell (6 x 12)</td>
</tr>
<tr>
<td>Maximum Power</td>
<td>315W</td>
<td>310W</td>
</tr>
<tr>
<td></td>
<td>310W</td>
<td>385W</td>
</tr>
<tr>
<td></td>
<td>385W</td>
<td>380W</td>
</tr>
<tr>
<td></td>
<td>380W</td>
<td>375W</td>
</tr>
<tr>
<td>Module Efficiency</td>
<td>17.8%</td>
<td>17.5%</td>
</tr>
<tr>
<td></td>
<td>18.3%</td>
<td>18.0%</td>
</tr>
<tr>
<td></td>
<td>18.0%</td>
<td>17.7%</td>
</tr>
<tr>
<td>Dimensions (L x W x H)</td>
<td>1,730 x 1,024 x 40 mm</td>
<td>2,064 x 1,024 x 40 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>19.6kg</td>
<td>22.1kg</td>
</tr>
<tr>
<td>Output Warranty of Pmax</td>
<td>Linear Warranty</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(First year : 98%, After 1st year : 0.55% annual degradation, 25years : 84.8%)</td>
<td></td>
</tr>
</tbody>
</table>

* Based on LG internal simulation program. Landscape: 3 rows, height 0.5m, pitch 6.7m, tilt angle 30°.

* Region: Bayern München, Germany.

* Albedo: Reflecting light energy of a surface. It changes according to aging, weather, measurement of surface.

Additional Energy Yield Based on Ground Type

The LG NeON® 2 BiFacial can produce additional energy yield dependent on the reflectiveness of the surface. It can generate up to 30% more energy from its rear side with ideal installation conditions.

<table>
<thead>
<tr>
<th>Albedo (%)</th>
<th>Soil, Meadows</th>
<th>Dirt, Gravel, Concrete</th>
<th>Sand</th>
<th>Snow</th>
<th>White Membrane</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.5%</td>
<td>16.5%</td>
<td>23.3%</td>
<td>5.5%</td>
<td>10.2%</td>
<td>26.9%</td>
</tr>
<tr>
<td>10.2%</td>
<td>23.3%</td>
<td>26.9%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.3%</td>
<td>26.9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Based on LG internal simulation program. Landscape: 3 rows, height 0.5m, pitch 6.7m, tilt angle 30°.

* Region: Bayern München, Germany.

* Albedo: Reflecting light energy of a surface. It changes according to aging, weather, measurement of surface.
**LG MonoX® Plus**

**Built Tough**

The LG MonoX® Plus is an extremely robust P-type module that maintains high performance by using LG’s LiL Y Technology. LG also provides an enhanced warranty for LiL Y Technology modules.

**Features**

**LiL Y Technology**

The LG MonoX® Plus remains resilient against light induced degradation through the use of LG’s LiL Y Technology.

**Outdoor Expose (kWh/m²)**

- More Electricity
  - 1.4% (300 kWh/m²)
  - 2% (4 month)

**Extreme Physical Durability**

The LG MonoX® Plus’s stress endurance is rated to handle up to 6000 Pa on the front side and up to 5400 Pa on the rear side.

---

**Technical Data**

<table>
<thead>
<tr>
<th>Product Model</th>
<th>LG MonoX® Plus 60Cell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell Type</td>
<td>Monocrystalline / P-Type</td>
</tr>
<tr>
<td># of Cells</td>
<td>60Cell (6 x 10)</td>
</tr>
<tr>
<td>Maximum Power</td>
<td>300W, 295W, 290W</td>
</tr>
<tr>
<td>Module Efficiency</td>
<td>17.5%, 17.2%, 16.9%</td>
</tr>
<tr>
<td>Dimensions (L x W x H)</td>
<td>1,686 x 1,016 x 40 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>18kg</td>
</tr>
</tbody>
</table>

**Linear Warranty**

(First year: 98%, After 1st year: 0.55% annual degradation, 25years: 84.8%)
**LG MonoX® Plus (For Floating System)**

**Built to work over water**

The MonoX® Plus is reinforced as water floating product, optimized for lake and reservoir applications. It can provide a long-term and stable power generation with its enhanced high moisture resistance. Moreover, using Pb free ribbons, MonoX® Plus can prevent water pollution.

**Technical Data**

<table>
<thead>
<tr>
<th>Product Model</th>
<th>LG MonoX® Plus 72Cell</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cell Type</strong></td>
<td>Monocrystalline / P-type</td>
</tr>
<tr>
<td><strong># of Cells</strong></td>
<td>72 cell (6 x 12)</td>
</tr>
<tr>
<td><strong>Maximum Power</strong></td>
<td>360W / 355W</td>
</tr>
<tr>
<td><strong>Module Efficiency</strong></td>
<td>17.4% / 17.1%</td>
</tr>
<tr>
<td><strong>Dimensions (L x W x H)</strong></td>
<td>2,024 x 1,024 x 40 mm</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>21.7kg</td>
</tr>
</tbody>
</table>

**Linear Warranty**
(First year: 98%, After 1st year: 0.55% annual degradation, 25 years: 84.8%)

---

**Features**

**Environmentally-friendly Module**

It is a product designed to minimize the corrosion of module when generating over water for a long time, and it uses lead-free ribbon to prevent water pollution.

**Enhanced Power Reliability**

It has a higher credibility than that of solar cells when using over water, as it is applied with the components with a stronger wet-proof property.

**Balance of System (BOS) Saving**

It is a high-performance model that may reduce the cost for system.
REFERENCE

Thailand_Bangkok

Netherland_Venlo

Thailand_Bangkok

Germany_Leipzig

Germany_Grasberg

Switzerland_Kolliken
LG Solar has conducted continued solar energy research for the last 30 years, and by synergizing this research with more than 50 years of experience and knowhow in the electronics industry, has developed a premium solar module product line that offers longterm quality assurance and high energy output capacity. LG Solar continues to seek new challenges even today. Rather than settling for its successes up to this point, LG Solar will continue its genuine and relentless pursuit of value to satisfy its customers.

**PRODUCT LINE-UP**

**LG NeON® R**
- 60Cell
- 365W
- 360W
- 355W
- 350W

**LG NeON® 2**
- 60Cell
- 335W
- 330W
- 325W

**LG NeON® 2 Bifacial**
- 60Cell
- 315W
- 310W

**LG MonoX® plus**
- 60Cell
- 300W
- 295W
- 290W

**BEST PARTNER, LG SOLAR**

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  - E-mail: atish@lge.com
- **West Africa Subsidiary**
  - 1st Floor of OIC Towers, Diwanee One Street, JFF Ashkelon Industrial Park, Phase 1, Legal: Jaffa Jaffa
  - E-mail: atish@lge.com

**Innovation for a Better Life**

**LG SOLAR**