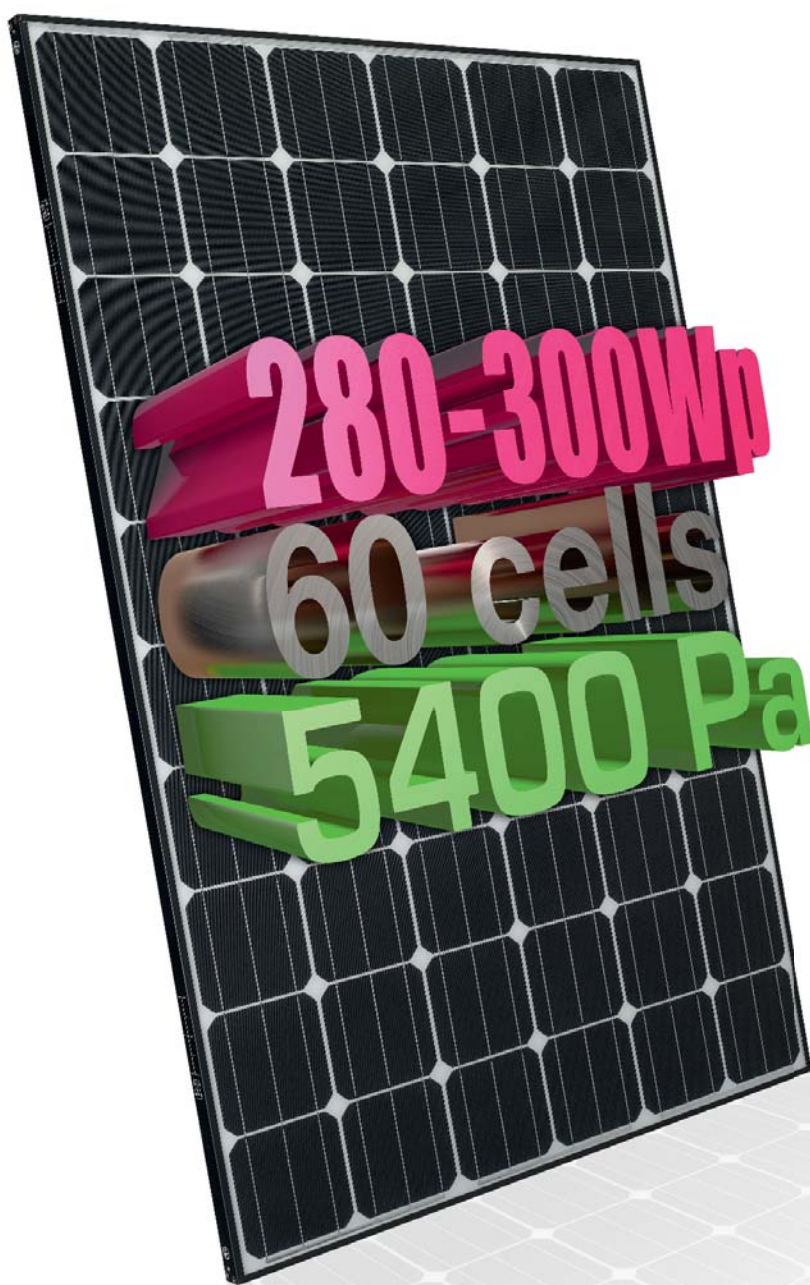


# LG MONO X™ NEON: A CLASS OF ITS OWN

LG Solar – the difference is in the detail.

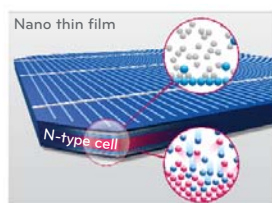


## A new ray of light for your sales.

Discover a generation of solar modules that sets new standards: Mono X™ NeON from LG. With its improved power output per m<sup>2</sup>, lower system costs and higher energy yield, the N-type silicon-based Mono X™ NeON modules are profitable not only for you, but also for your customers.

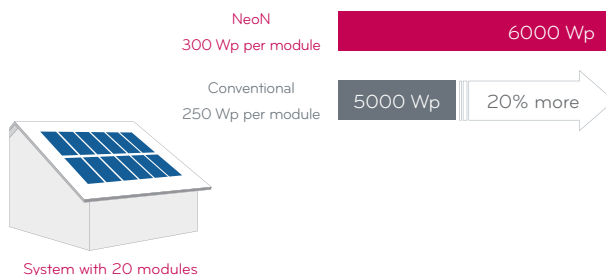
### More power per m<sup>2</sup>

N-type solar cells have a more homogeneous structure than conventional p-type cells. This results in higher efficiency.



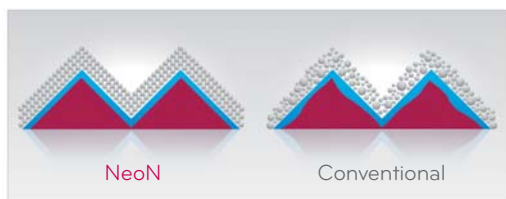
### Benefit 1: 20% more power

Install 20% more output per m<sup>2</sup> on rooftops.



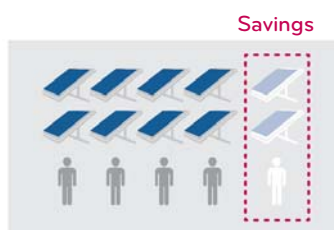
### Lower system costs

NeoN technology employs processes adapted from LG's expertise in semiconductor technology. This helps optimize the regularity of the cell surface and boosts cell efficiency to more than 21%.



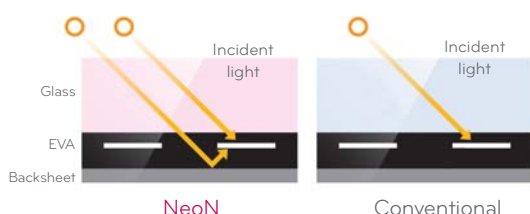
### Benefit 2: Save up to 20% on installation costs

Up to 20% lower installation costs compared to conventional modules. This is because you need fewer modules, less mounting material, less space and less time for installation - for the same system performance.



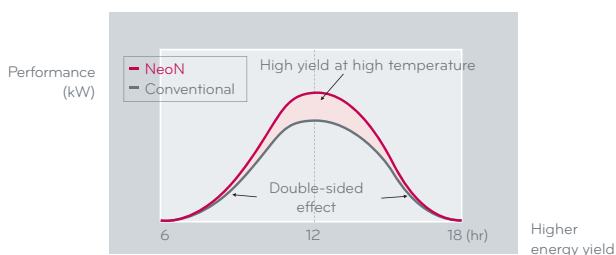
### Higher energy yield

Solar cells with NeoN technology can exploit light hitting both the front and rear of the cell. This is especially significant for light during the morning and afternoon hours that has a lower angle of incidence. The result is that solar cells with NeoN technology are more efficient than conventional ones.

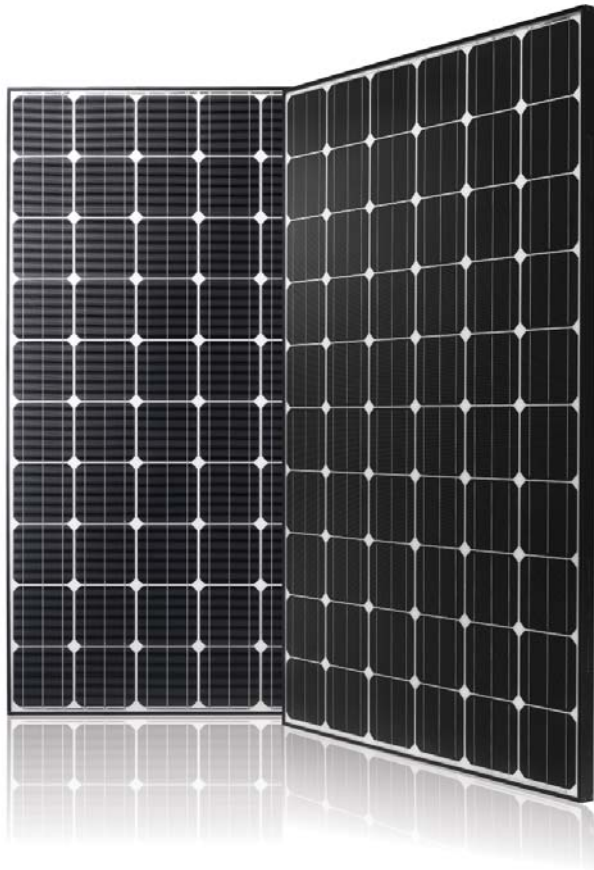


### Benefit 3: More yield – day in, day out

Anti-reflective coatings on the cell, anti-reflective glass, reduced temperature coefficients and bi-facial cells result in higher energy yields than conventional modules.



## An energetic partner.



LG Electronics, Inc. (Korea Exchange: 06657.KS) is one of the globally leading companies and technology innovator for electronics, information and communication products. LG Electronics currently employs more than 91,000 people worldwide in 117 companies. In fiscal year 2011 a turnover of 48,97 billion USD has been achieved.

LG is one of the world's largest manufacturers of mobile phones, flat screen TVs, air conditioners, washing machines and refrigerators. As a future-oriented company, LG relies on the technology of renewable energies and is expanding it. The entire range of high quality solar products are being manufactured in LG's leading production site Korea.



## Quality that makes everyone happy.

### LG's High Efficient Cell Technology



Cell Technology

Driven by LG's own N-Type technology, LG's high-efficiency modules will provide customers with high economic benefits.

### Reliable Warranties



Linear warranty

LG stands by its products with the strength of a global corporation and sterling warranty policies. Together with a 10 year product warranty a 25 year linear performance warranty is offered.

### 100% EL Test Completed



EL Test

All LG modules are tested at various stages of the production by Electroluminescence inspection. The EL inspection detects cracks unseen by the naked eye.

### Positive Power Tolerance



Positive Power Tolerance

LG provides rigorous quality testing to solar modules to assure customers of the stated power outputs of all modules, with a positive nominal tolerance starting at 0%.

### Light and Robust



Light & Robust

With a weight of just 16.8 kg, LG modules are proven to demonstrate outstanding durability against external pressure up to 5400 Pa.

### Convenient Installation



Convenient Installation

LG modules are carefully designed to help installers benefit from quick and easy installations throughout carrying, grounding, and connecting stages of modules.

## Mechanical Properties

|                        |                                  |
|------------------------|----------------------------------|
| Cells                  | 6 x 10                           |
| Cell vendor            | LG                               |
| Cell type              | Monocrystalline                  |
| Cell dimensions        | 156 x 156 mm <sup>2</sup>        |
| Cell busbar            | 3                                |
| Front cover            | Glass                            |
| Dimensions (L x W x H) | 1640 x 1000 x 35 (mm)            |
| Static load            | 5400 Pa (snow)<br>2400 Pa (wind) |
| Weight                 | 16.8 ± 0.5 kg                    |
| Connector type         | MC4 connector IP 67              |
| Junction box           | IP 67 with 3 bypass diodes       |
| Length of cables       | 2 x 1000 mm                      |
| Frame                  | Anodized aluminum                |

## Certifications and Warranty

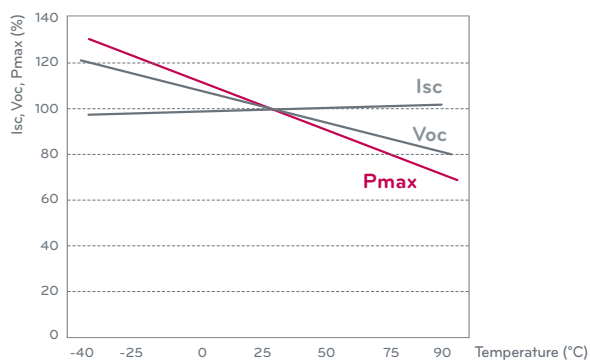
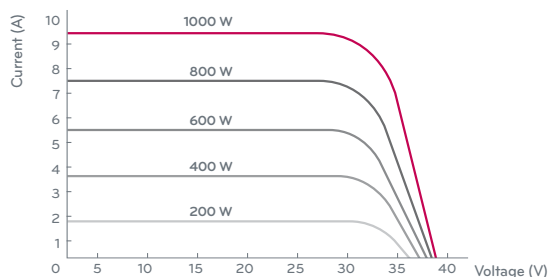
|                                                                     |                                                                               |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Certifications                                                      | IEC 61215, IEC 61730-1/-2,<br>ISO 14001, ISO 9001,<br>OHSAS 18001,<br>UL 1703 |
| Product warranty                                                    | 10 years                                                                      |
| Output warranty of P <sub>max</sub><br>(Measurement tolerance ± 3%) | 25 years linear warranty <sup>1</sup>                                         |

<sup>1</sup>1st year: 97%, 2nd - 25th year: -0,7%/a, 25th year: 80,2%

## Temperature Coefficients

|      |           |
|------|-----------|
| NOCT | 45 ± 2 °C |
| Pmpp | -0.42 %/K |
| Voc  | -0.31 %/K |
| Isc  | 0.03 %/K  |

## Characteristic Curves



## Electrical Properties (STC<sup>2</sup>)

|                                | 300 W     | 295 W | 290 W | 285 W | 280 W |
|--------------------------------|-----------|-------|-------|-------|-------|
| Maximum power Pmax (W)         | 300       | 295   | 290   | 285   | 280   |
| MPP voltage Vmpp (V)           | 32.0      | 31.9  | 31.8  | 31.6  | 31.5  |
| MPP current Impp (A)           | 9.42      | 9.30  | 9.19  | 9.09  | 8.97  |
| Open circuit voltage Voc (V)   | 39.5      | 39.3  | 39.2  | 39.0  | 38.9  |
| Short circuit current Isc (A)  | 10.0      | 9.91  | 9.80  | 9.68  | 9.56  |
| Module efficiency (%)          | 18.3      | 18.0  | 17.7  | 17.4  | 17.1  |
| Operating temperature (°C)     | -40 ~ +90 |       |       |       |       |
| Maximum system voltage (V)     | 1000      |       |       |       |       |
| Maximum series fuse rating (A) | 15        |       |       |       |       |
| Power tolerance (%)            | 0 ~ +3    |       |       |       |       |

<sup>2</sup> STC (Standard Test Conditions): Irradiance 1000 W/m<sup>2</sup>, module temperature 25 °C, AM 1.5

Application Class: A (according to IEC 61730). Safety Class: II

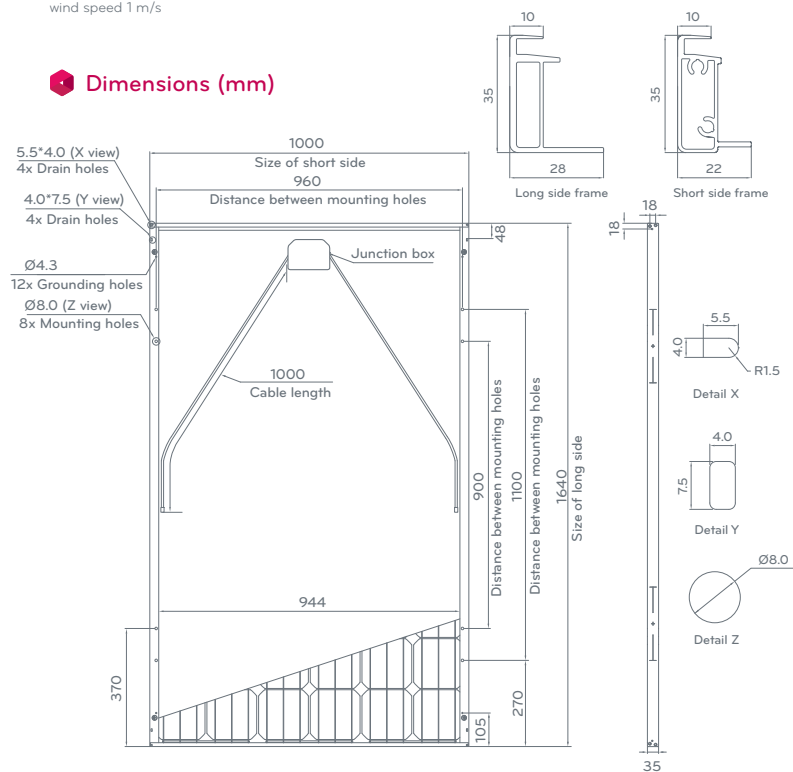
The nameplate power output is measured and determined by LG Electronics at its sole and absolute discretion.

Electrical Properties (NOCT<sup>3</sup>)

|                                                      | 300 W   | 295 W | 290 W | 285 W | 280 W |
|------------------------------------------------------|---------|-------|-------|-------|-------|
| Maximum power Pmax (W)                               | 220     | 216   | 213   | 210   | 206   |
| MPP voltage Vmpp (V)                                 | 29.3    | 29.2  | 29.1  | 28.9  | 28.8  |
| MPP current Impp (A)                                 | 7.51    | 7.42  | 7.33  | 7.25  | 7.15  |
| Open circuit voltage Voc (V)                         | 36.5    | 36.3  | 36.2  | 36.0  | 35.9  |
| Short circuit current Isc (A)                        | 8.08    | 7.98  | 7.89  | 7.80  | 7.70  |
| Efficiency reduction<br>(from 1000 W/m² to 200 W/m²) | < 4.5 % |       |       |       |       |

<sup>3</sup> NOCT (Nominal Operating Cell Temperature): Irradiance 800 W/m<sup>2</sup>, ambient temperature 20 °C, wind speed 1 m/s

 Dimensions (mm)



The distance is between the center of the mounting/grounding wholes.

