

The LG NeON solar module range offers excellent performance from low light to peak sun. The new, premium NeON panels are LG's most efficient solar panel, optimising roof space and producing more electricity than standard mono-crystalline modules.

Choosing the premium and efficient NeON panels by LG can over the years save you money on your electricity bills and installation cost, when compared with standard mono-crystalline.

The NeON not only generates solid electricity output, but with their black anodised frame also win in stylish appearance. If you are seeking a premium solar product the LG NeON panels are for you.

# MonoX™ NeON

WORLD CLASS RESEARCH LEADING TO SOLAR EXCELLENCE

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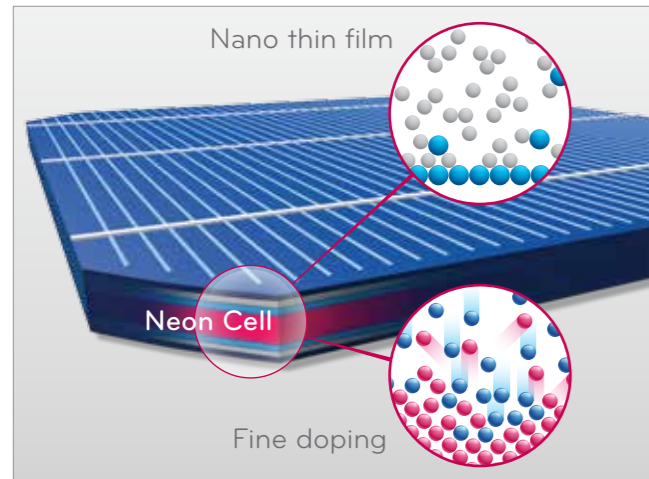
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THE NEW STANDARD  
**MonoX™ NeON**

# The New Mono X™ NeON

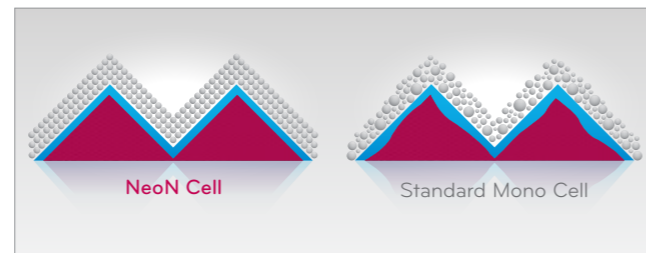
MonoX™ NeON is the new N-type module from LG Electronics designed to significantly enhance the output efficiency compared to existing LG high-efficiency modules.

## The NeON Technology



### Nano Level Control

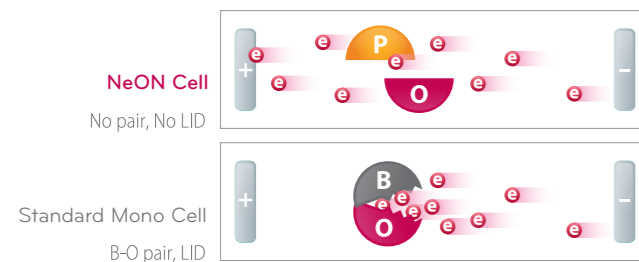
The semiconductor technology in LG NeON modules has been applied to the doping and surface treatment processes of our solar cells. This minimises cell defects and improves uniformity of the cells. As a result the solar module efficiency can reach up to 18.3 with the LG 300W module.



### Extremely Low LID Cells

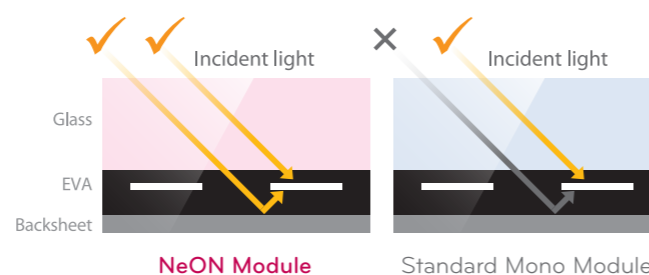
The Boron (B) and Oxygen (O) pair within the p-type cell limit the number of electrons that are being created to generate electricity. However inside the NeON cell there are minimal B-O pairs. This is why NeON has almost no LID\* and retains a higher efficiency for longer.

\*LID (Light Induced Degradation)



### New Double-sided Cell Structure

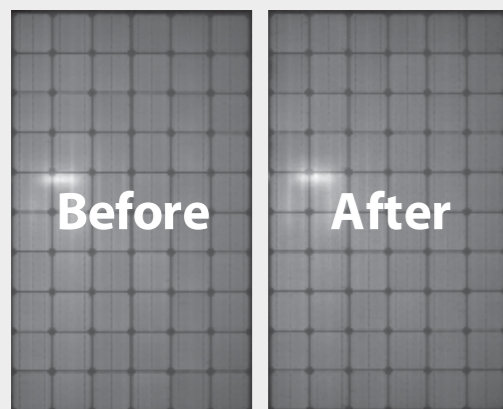
The NeoN Cell produces energy from both the front and back of the cell. This innovative approach allows the absorption of light from the back of the cell which raises the panel's efficiency. This technology makes NeON cells more efficient than standard Mono cells in the morning and afternoon when the sunlight hits the panel at a lower angle allowing light waves to travel between the gaps of the cells (the white spaces) and hit the back of the cell.



\*Image not to scale

## NeON System's Merits

### PID Reliability



NeON

The NeON cell is a high-efficiency module compared to the standard mono-crystalline cell structure and has better PID\* rating than many other modules. The NeON passed the Fraunhofer CSP PID\* test. This means the NeON panels are well equipped to withstand high voltage stress.

\*PID (Potential Induced Degradation)



### Hot-spot Stability

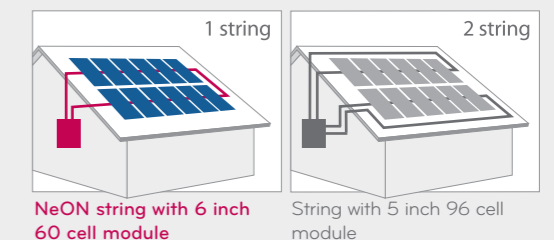
Hotspots (also known as hot joints and caused by increase in resistance due to cracks or poor soldering connections) on solar panels have the potential over time to affect the performance of the panel. In some circumstances hotspots have been known to increase the incidence of arcing resulting in the loss of output. LG's NeON solar panels performed superbly in the break-down voltage test for measuring hot-spot stability. Testing was conducted by the VDE testing laboratories.



### String Simplicity

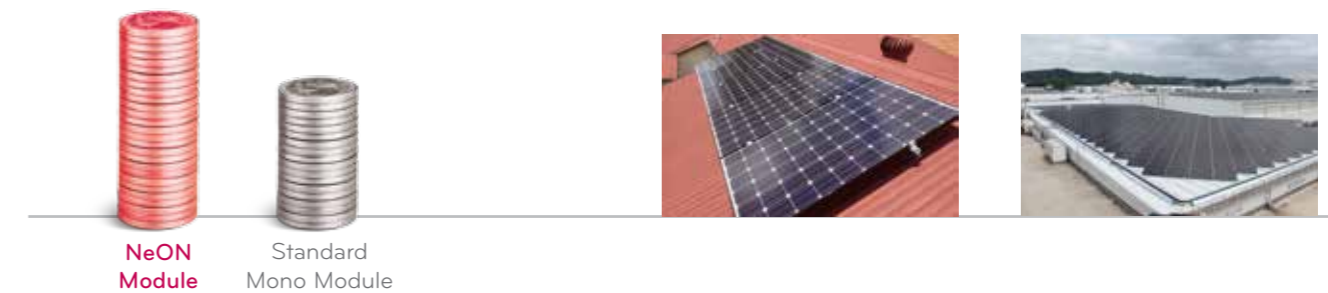
Our NeON modules use the 6 inch 60 cells module structure with 39V open circuit. Installers can connect more modules on a single string compared to 5 inch 96 cell modules with an open circuit voltage over 60V. The installer can therefore reduce the number of strings required, especially for larger systems. This will allow a more efficient installation of the solar system.

Example of 12 module connection



## The NeON Advantage

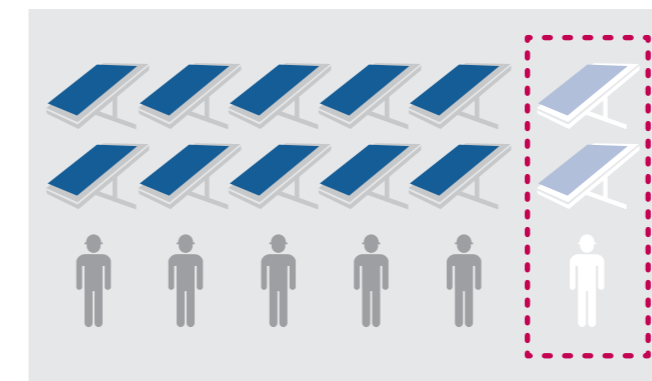
### Return on investment



In Australia and New Zealand, the return on a solar system investment varies depending on the existing electricity prices, feed in tariff rates and other factors such as installation and labor costs. As the NeON requires fewer panels for example, for a 3kW system, you require 10 x

300W NeoN compared to a 12 x standard 250W panels, therefore needing fewer rails and reducing installation time. The larger the system the more significant the NeON's financial advantages can be.

### Same output with fewer panels



For a 3 KW system one can use 12 x 250W standard modules or two less panels with 10 x 300W NeON modules.

### High performance maximises output power



The design of the NeON solar module range achieves a lower temperature co-efficient, resulting in better output in high temperatures, than standard mono-crystalline panels.