



# LG NeON<sup>®</sup> 2 Black

LG315/320N1K-A5

**HIGH PERFORMANCE - GREAT LOOKS**

**TOTALLY BLACK / UP TO 320 WATTS**



## YOUR HOME DESERVES THE NeON<sup>®</sup> 2 Black

The LG NeON<sup>®</sup> 2 Black has seen many improvements that really matter, from longer warranties and higher efficiency to stronger frames and better wind loading as well as an excellent uniform looking panel. This panel is ideal for homes seeking a visually pleasing solar panel and for roofs where space is tight or where future system expansions are considered e.g. to incorporate battery storage. The LG NeON<sup>®</sup> modules with their double sided cells and CELLO technology absorb light from the front and the back of the module. This technology sets a new standard for innovation and was recognised with the 2015 Photovoltaic Innovation Award at the Intersolar Industry Event in Germany. LG also won the 2016 Intersolar award for our new NeON<sup>®</sup> Bifacial range.



### Great Visual Appearance

LG NeON<sup>®</sup> 2 Black panels with their black cells, black frames and black backsheet give an aesthetically pleasing uniform appearance. Standard competitor poly panels have blue cells and grey aluminium frames. Your home deserves the great looking LG NeON<sup>®</sup> 2 Black.



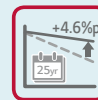
### 25 Years Product Warranty (Parts & Labour)

The LG product warranty is 15 years longer than the industry standard 10 years and covers 25 years. The Warranty is held by LG Electronics Australia and New Zealand. The warranty includes replacement labour and transport.



### More Power per Square Metre

LG NeON<sup>®</sup> 2 Black's 320W panels are a similar physical size to many of the industries 260W panels. This means up to 23% more electricity per square metre with LG NeON<sup>®</sup> 2 Black. So you can get more power from your roof space with LG panels.



### Improved 25 Year Performance Warranty

The initial degradation of cells has been improved from -3% to -2%, in the 1st year and the annual rate of degradation has fallen from -0.7%/year to -0.5%/ year thereafter. This brings an 86% warranted output after 25 years, compared to 80.2% for many standard panels.

## ABOUT LG SOLAR

LG Electronics embarked on a solar energy research programme in 1985, using our vast experience in semi-conductors, chemistry and electronics. LG Solar modules are now available in 32 countries. In 2013, 2015 and 2016 the LG NeON<sup>®</sup> range won the acclaimed Intersolar Award in Germany, which demonstrates LG Solar's lead in innovation and commitment to the renewable energy industry.

With over 200 lesser known brand panels selling in Australia, LG solar panels offer a peace of mind solution, as they are backed by a very large, diversified company with over 100 subsidiaries.

## KEY FEATURES



### Proven Field Performance

LG has been involved in a number of comparison tests of the LG panels against many other brand panels. LG NeON<sup>®</sup> 2 models are consistently among the best performing in these tests.



### Corrosion Resistance Certification

LG NeON<sup>®</sup> 2 Black panels can be installed confidently right up to the coastline. The panels have received certification for Salt Mist Corrosion to maximum severity 6 and Ammonia Resistance.



### Strict Quality Control Reliable for the Future

The quality control of LG world-class solar production is monitored and improved to Six Sigma quality control standards, which includes 500+ monitoring points to effectively maintain and improve our uncompromising quality.



### Multi Anti-reflective Coatings Increase Output

LG is using an anti-reflective coating on the panels glass as well as on the cell surface to ensure more light is absorbed in the panel and not reflected. More absorbed light means more electricity generation.



### Improved High Temperature Performance

Solar panels slowly lose ability to generate power as they get hotter. LG NeON<sup>®</sup> 2 Black, has an improved temperature co-efficient to standard modules, which means in hot weather LG NeON<sup>®</sup> 2 Black panels will deliver higher output.



### "CELLO" Technology Increases Power

"CELLO" Multi wire busbar cell technology lowers electrical resistance and increases panel efficiency, giving more power per panel and provides a more uniform look to the panel.



### Low LID

The N-type doping of the NeON<sup>®</sup> cells results in extremely low Light Induced Degradation (LID) when compared with the standard P-type cells. This means more electricity generation over the life of the panel, as the panel degrades less.



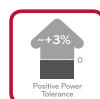
### Extensive Testing Programme

LG solar panels are tested between 2 to 3 times the International Standards at our in-house testing laboratories, ensuring a very robust and longer lasting solar module.



### Extreme Wind Load Resistance

LG modules have a strong double walled frame. When it comes to wind forces (rear load) many competitor modules are certified to 2400 Pascals. LG modules are certified to more than double - 5400 Pascals, which provides at least double the strength and durability to a standard module.



### Positive Tolerance (0/+3%)

If we sell you a 320 Watt panel then the flash test of this panel will show somewhere between 320W and 329.6W. Some competitor panels have -/+ tolerance, so you could get a flash test result below the rated Watt, meaning you pay for Watts you never get.



### Enhanced low light performance

LG NeON 2 panels will give better performance under low light, such as early morning or late afternoon compared to standard panels. At 200W/m<sup>2</sup> LG Neon 2 panel efficiency drop is -2% while many conventional panels reduce by -4%.



### Automated Production in South Korea

All LG solar panels are manufactured in a custom designed and fully automated production line by LG in Gumi, South Korea ensuring extremely low tolerances. This means great quality and build consistency between panels.

## LG NeON<sup>®</sup> 2 BLACK – ELEGANT DESIGN. GREAT LOOKS.

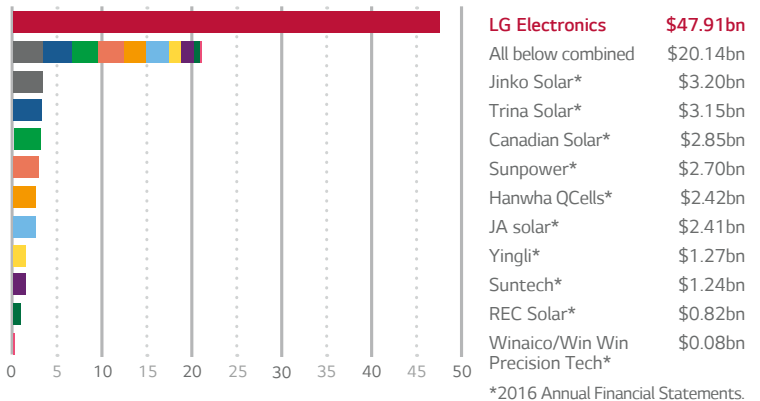
As its name suggests, the monocrystalline LG NeON<sup>®</sup> 2 Black solar module is completely black and will look great on your roof. Featuring the black CELLO look, it can withstand a static front load of 6,000 Pascals and a rear panel cyclone wind load of 5400 Pascals which is more than twice that of a standard panel. LG is also improving its linear performance guarantee to at least 86 % of nominal output after 25 years.

### LOCAL WARRANTY, GLOBAL STRENGTH

LG Solar is part of LG Electronics Inc., a global and financially strong company, with over 50 years of experience in technology.

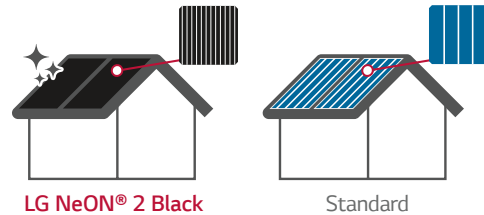
Good to know: LG Electronics Australia Pty Ltd is the warrantor in Australia and NZ for your solar modules. So LG support, via offices in every Australian mainland state and NZ and through our 70 strong, Australia wide dealer network, is only a phone call away.

The warrantor's 2016 sales in billions of US dollars



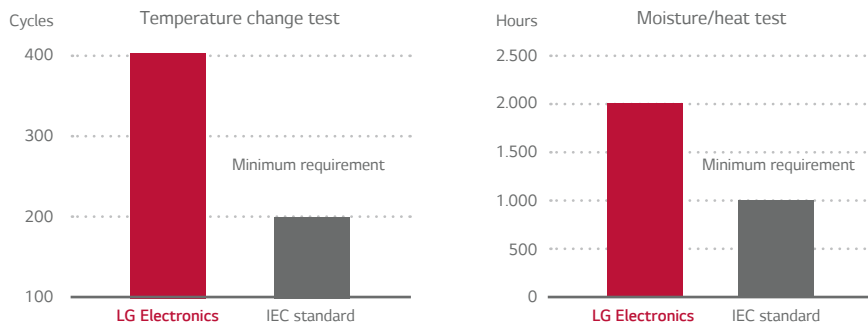
### UNDERSTATED ELEGANCE FOR BEAUTIFUL ROOFS

The LG NeON<sup>®</sup> 2 Black solar module featuring a black anodised frame and black backing sheet looks totally black. Its uniform design looks much more elegant than the blue colour cells and grey/silver frames of standard panels.



### EXCELLENT QUALITY, THOROUGHLY TESTED

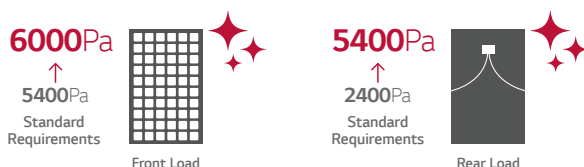
You can rely on LG. We test our products with at least double the intensity specified in the IEC standard. (International Quality Solar Standard).



Our panel range have won a string of International Awards.

### POWERFUL DESIGN, GUARANTEED ROBUST

With reinforced frame design, the LG NeON<sup>®</sup> 2 Black can endure a front load of 6000 Pa which is the equivalent of 1048 kg over the size of the module. The rear load/wind load of the module is 5400 Pa which is more than twice the wind load resistance of standard modules (2400 Pa).



**Extended Product Warranty**  
**10yrs + 15yrs**

LG offers a fifteen year longer product warranty for parts and labour than many competitors 10 years to an impressive 25 years.

### Mechanical Properties

|                        |  |
|------------------------|--|
| Cells                  | 6 x 10   |
| Cell Vendor            | LG   |
| Cell Type              | Monocrystalline / N-type                               |
| Cell Dimensions        | 161.7 x 161.7 mm                                       |
| # of Busbar            | 12 (Multi Wire Busbar)                                 |
| Dimensions (L x W x H) | 1686 x 1016 x 40 mm                                    |
| Front Load             | 6000 Pa  |
| Rear Load              | 5400 Pa  |
| Weight                 | 18 kg  |
| Connector Type         | Genuine MC4, IP68<br>(Male: PV-KST4) (Female: PV-KBT4) |
| Junction Box           | IP68 with 3 bypass diodes                              |
| Length of Cables       | 2 x 1000 mm  |
| Front cover            | High transmission tempered glass                       |
| Frame                  | Anodised aluminum with protective black coating        |

### Certifications and Warranty

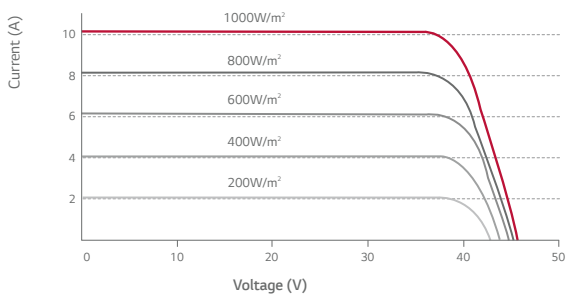
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| Certifications  | ISO 9001                                |
|   | IEC 61215, IEC 61730-1/-2               |
|   | IEC 61701 (Salt Mist Corrosion Test)    |
|   | IEC 62716 (Ammonia Test)                |
| Module Fire Rating                                      | Class C                                 |
| Product Warranty  | 25 Years (Manufactured after 1/10/2017) |
| Output Warranty of Pmax<br>(Measurement Tolerance ± 3%) | Linear Warranty <sup>1</sup>            |

<sup>1</sup> 1) 1st year: 98%, 2) After 1st year: 0.5%p annual degradation, 3) 86% for 25 years

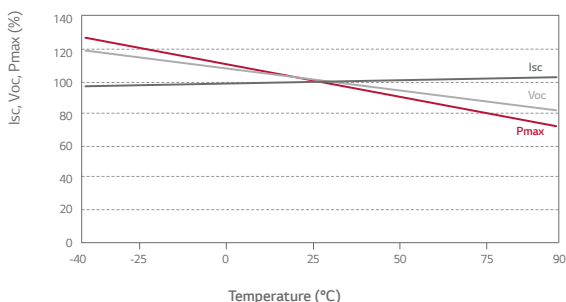
### Temperature Characteristics

|      |            |
|------|------------|
| NOCT | 45 ± 3 °C  |
| Pmax | -0.37 %/°C |
| Voc  | -0.27 %/°C |
| Isc  | 0.03 %/°C  |

### Current – Voltage characteristics at various irradiance levels



### Current – Voltage characteristics at various cell temperatures



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

| Module Type                    | 315 W     | 320 W |
|--------------------------------|-----------|-------|
| Maximum Power Pmax (W)         | 315       | 320   |
| MPP Voltage Vmpp (V)           | 32.9      | 33.3  |
| MPP Current Impp (A)           | 9.58      | 9.62  |
| Open Circuit Voltage Voc (V)   | 40.7      | 40.8  |
| Short Circuit Current Isc (A)  | 10.15     | 10.19 |
| Module Efficiency (%)          | 18.4      | 18.7  |
| Operating Temperature (°C)     | -40 ~ +90 |       |
| Maximum System Voltage (V)     | 1000      |       |
| Maximum Series Fuse Rating (A) | 20        |       |
| Power Tolerance (%)            | 0 ~ +3    |       |

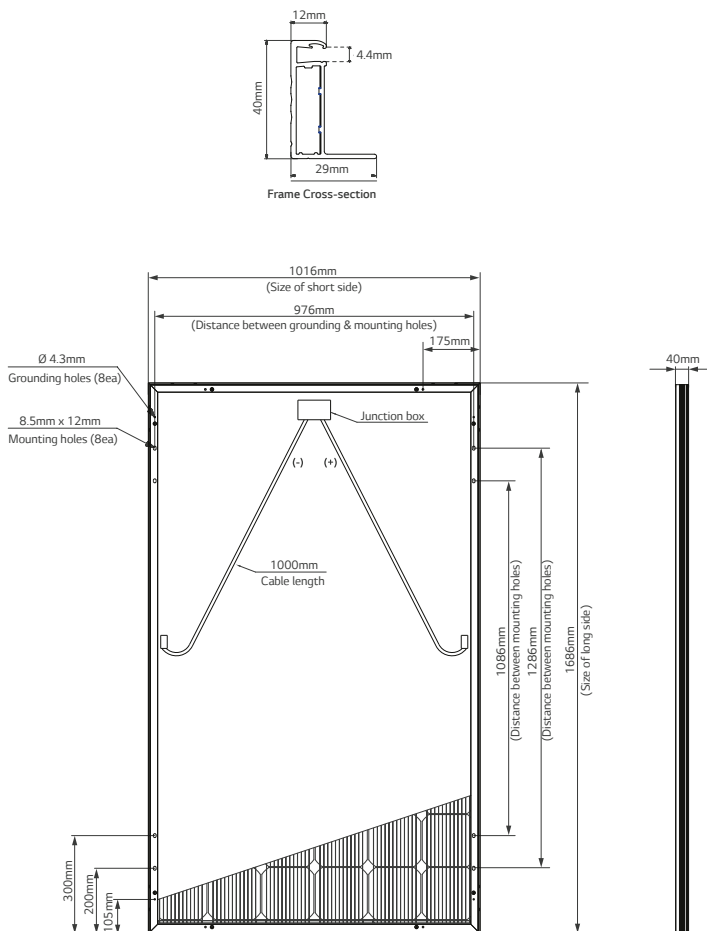
<sup>2</sup> STC (Standard Test Condition): Irradiance 1000 W/m<sup>2</sup>, Module Temperature 25 °C, AM 1.5.  
The nameplate power output is measured and determined by LG Electronics at its sole and absolute discretion.

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

| Module Type                   | 315 W | 320 W |
|-------------------------------|-------|-------|
| Maximum Power Pmax (W)        | 232   | 236   |
| MPP Voltage Vmpp (V)          | 30.4  | 30.8  |
| MPP Current Impp (A)          | 7.63  | 7.67  |
| Open Circuit Voltage Voc (V)  | 37.9  | 38.0  |
| Short Circuit Current Isc (A) | 8.17  | 8.20  |

<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)



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