



# LG NeON<sup>®</sup> 2

LG320N1C-A5

**THE HIGH PERFORMER**

**18.7% MODULE EFFICIENCY**



## THE NeON<sup>®</sup> 2 - THE PANEL OF THE FUTURE AVAILABLE TODAY

The LG NeON<sup>®</sup> 2 has seen many improvements, from longer warranties and higher efficiency to stronger frames and better wind loading. This panel is ideal for homes seeking a visually pleasing solar panel and for where future system expansions are considered e.g. to incorporate battery storage in years to come.

The LG NeON<sup>®</sup> cells 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 BiFacial range.



### Great Visual Appearance

LG NeON<sup>®</sup> 2 panels have been designed with appearance in mind. Their black cells, black frames and thinner wire bursbars give an aesthetically pleasing uniform black appearance. Your home deserves the LG NeON<sup>®</sup> 2.



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

The LG product warranty is 5 years longer than many competitors standard 10 years and covers 15 years. The Warranty is provided by LG Electronics Australia and New Zealand. The warranty includes replacement labour and transport.



### More Power per Square Metre

LG NeON<sup>®</sup> 2's 320W are a similar physical size to many conventional 270W panels. This means with the LG NeON<sup>®</sup> 2 320W you get 18.51% more electricity per square metre than a 270W panel. So you can install more kW of solar on your roof with the LG NeON<sup>®</sup> 2.



### Improved 25 Year Performance Warranty

The initial degradation of the module 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 an established global brand.

## 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.



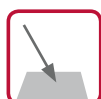
### LG Corrosion Resistance Certification

LG NeON<sup>®</sup> 2 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 using Six Sigma techniques via 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, has an improved temperature co-efficient to standard modules, which means in hot weather LG NeON<sup>®</sup> 2 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.



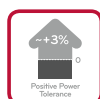
### Extensive Testing Programme

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 you buy a 325 Watt panel then the flash test of this panel will show somewhere between 325W and 334W. 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 – ENHANCED. MORE EFFICIENT. ADVANCED.

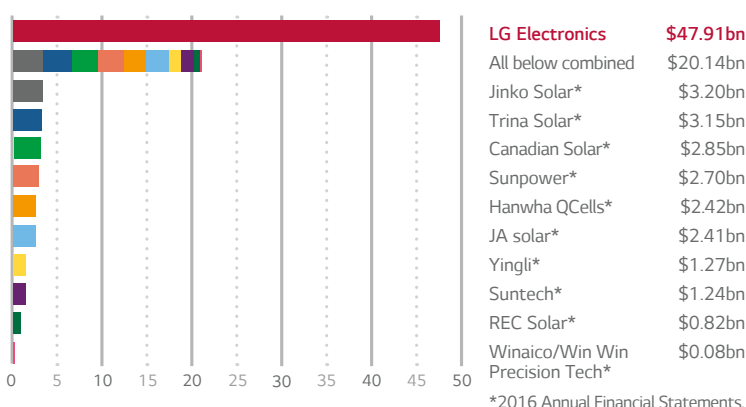
LG NeON<sup>®</sup> 2 solar modules now offer even more output. Featuring a classy design and with a total of 60 cells, it can withstand a load of 6,000 pascals. LG has lengthened its product warranty from 10 to 15 years and has improved its linear performance guarantee to 86% of nominal output after 25 years. The LG NeON<sup>®</sup> 2 is an excellent choice for high performing long lasting solar systems.

### 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



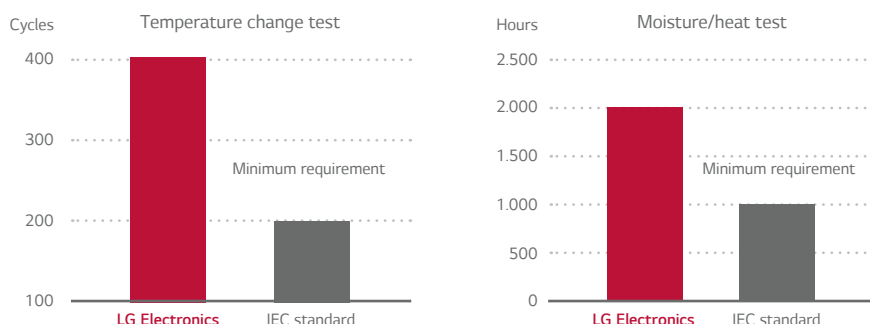
### HIGHER OUTPUT, HIGHER YIELD

The NeON<sup>®</sup> Cell produces energy from both the front and the back of the cell. This innovative approach allows the absorption of light from the back of the cell which raises the panel's efficiency and power output. Standard panels only absorb light from the front.



### EXCELLENT QUALITY, THOROUGHLY TESTED

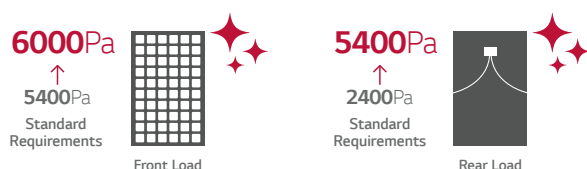
You can rely on LG. We test our products with at least double the intensity specified in the IEC standard. (International Quality Solar Standard).



Our panel range have won a string of International Awards.

### POWERFUL DESIGN, GUARANTEED ROBUST

With reinforced frame design, the LG NeON 2 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 + 5yrs

LG offers a five year longer product warranty for parts and labour than many competitors 10 years to an impressive 15 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	18.0 kg
Connector Type	Genuine MC4, IP68 (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

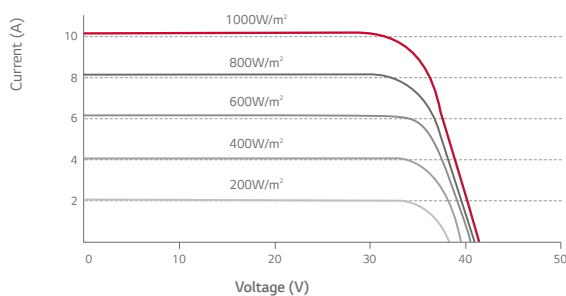
Certifications	ISO 9001
	IEC 61215, IEC 61730-1/-2, UL1703
	IEC 61701 (Salt Mist Corrosion Test)
	IEC 62716 (Ammonia Test)
Module Fire Rating	Class C
Product Warranty	15 Years from 1/1/2018
Output Warranty of Pmax (Measurement Tolerance $\pm 3\%$ )	Linear Warranty <sup>1</sup>

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

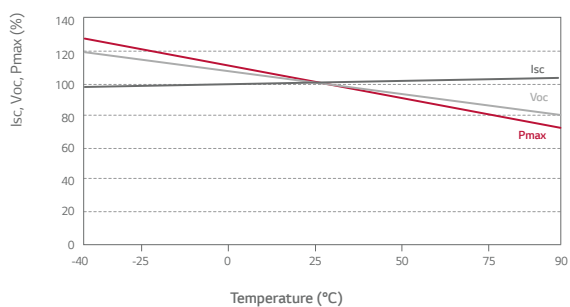
## Temperature Characteristics

NOCT	45 $\pm$ 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	320 W
Maximum Power Pmax (W)	320
MPP Voltage Vmpp (V)	32.9
MPP Current Impp (A)	9.74
Open Circuit Voltage Voc (V)	40.7
Short Circuit Current Isc (A)	10.37
Module Efficiency (%)	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	320 W
Maximum Power Pmax (W)	236
MPP Voltage Vmpp (V)	30.4
MPP Current Impp (A)	7.76
Open Circuit Voltage Voc (V)	37.9
Short Circuit Current Isc (A)	8.35

<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)

