



15 YEARS  
LONGER THAN  
INDUSTRY  
STANDARD OF  
10 YEARS

# LG NeON<sup>®</sup> 2

LG415/420N2W-V5

THE 72 CELL POWER HOUSE

UP TO 20.0% MODULE EFFICIENCY

## Awards Received By LG Solar<sup>™</sup>



## THE NeON<sup>®</sup> 2 72 CELL - 420W - THE PANEL OF THE FUTURE AVAILABLE TODAY

The new LG NeON<sup>®</sup> 2 72 cell has seen many improvements, from longer warranties and higher efficiency to lower degradation. This panel is ideal for commercial systems or solar farms seeking an efficient use of space and a high quality panel with great output efficiency.

The new NeON<sup>®</sup> 2 with 72 cells adopts the award winning CELLO Technology replacing 3 busbars in each cell with 12 thin wires to enhance power output. 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.



### More Power per Square Metre

LG NeON<sup>®</sup> 2's 420W are a similar physical size to many conventional 360W 72 cell panels. This means with the LG NeON<sup>®</sup> 2 420W you get 16% more electricity per square metre than a 360W panel. So you can install more kW of solar on your roof with the LG NeON<sup>®</sup> 2.



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

LG has extended the product warranty of the LG NeON<sup>®</sup> 2 by an additional 15 years from industry average 10 to 25 years. This includes coverage for labour and transport.



### 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 of -0.36%/°C to our previous model and to the majority of competitor models which means in high temperatures LG NeON<sup>®</sup> 2 panels will deliver higher output.



### 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 -0.33%/ year thereafter. This brings an 90.08% warranted output at 25 years, compared to 80.2% for many competing panels.

# LG NeON<sup>®</sup>2 - 72 Cell

## ABOUT LG ELECTRONICS

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 over 50 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. Additionally, LG Solar™ won the Australian Top Brand award in 2016, 2017, 2018 and 2019. LG Solar has also been voted WINNER Trusted Brands 2020 - SOLAR PANELS by Reader's Digest from over 3,000 Australian consumers surveyed. 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> models are consistently among the best performing in these tests.



### Additional Certification

LG NeON<sup>®</sup> 2 panels have received additional certification including for, Salt Mist Corrosion to maximum severity 6. Ammonia Resistance certification and PID Resistance Tests.



### Strict Quality Control Reliable for the Future

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



### Multi Anti-reflective Coatings Increase Output

LG Solar™ 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.



### Installation Time Savings

This NeON<sup>®</sup> 2 - 72 cell panel can reduce installation time for commercial systems, as there are less panels required eg. to install a 3.6 MW system one would need 8,675 LG415W instead of 10,000 of a 360W - 72 cell panel. There will also be significant savings in design, transport, labour, rails and cabling and 13% less space required.



### "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.



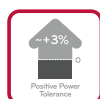
### Extensive Testing Programme

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



### Double-Sided Cell Structure

In conventional panels the cells produce energy from the front only. The NeON<sup>®</sup> Cell produces energy from both the front as well as the back of the cell. This innovative technology allows the absorption of light from behind the panel which raises the panel's efficiency and electricity output.



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

If we sell you a 420 Watt panel then the flash test of this panel will show somewhere between 420W and 432W. 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.



### Excellent low light performance

LG NeON 2 panels will give better performance under low light, such as early morning or late afternoon compared to many competing panels.



### 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 72 cell- INNOVATIVE, CLEVER, HIGH EFFICIENT

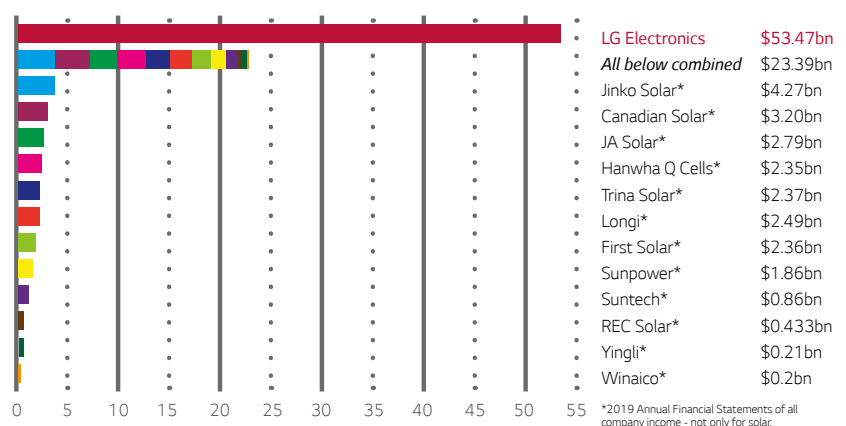
LG NeON<sup>®</sup> 2 72 cell solar modules now offer even more performance. Featuring LG's 12 wire busbar CELLO Technology for improved performance and reliability, it can also withstand a static front panel load of 5,400 pascals. LG has extended its product warranty from 10 to 25 years and improved its linear performance guarantee to at least 90.08% of nominal output after 25 years.

### LOCAL WARRANTY, GLOBAL STRENGTH

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

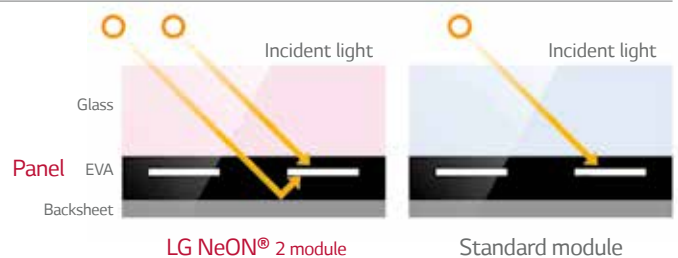
Good to know: LG Electronics Australia Pty Ltd is the warrantor in Australia and NZ for your solar modules. So LG support, via offices in every Australian mainland state and NZ and through our 70 strong, Australia wide dealer network, is only a phone call away.

The Warrantor's 2019 Sales in Billions of US Dollars\*



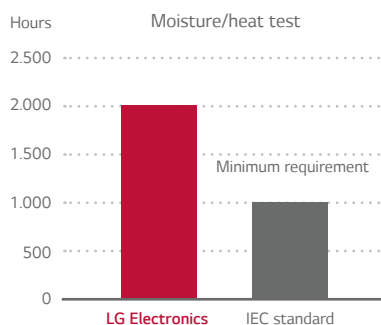
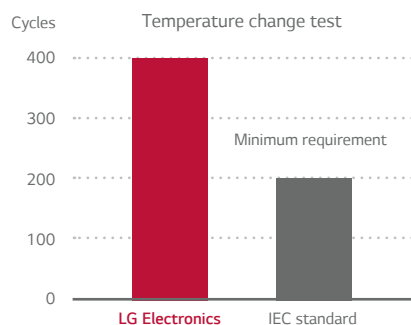
### HIGHER OUTPUT, HIGHER YIELD

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).



### Awards Received By LG Solar<sup>™</sup>



Our panel range have won a string of Local and International Awards.

### GREAT WARRANTY

If you buy an LG panel and should there be a warranty issue you will deal with LG Electronics Australia/NZ. You will not have to worry if the importer is still in operation or the manufacturer is located overseas. We are only one phone call away. LG Electronics Australia/NZ backs your product. That's peace of mind. Contact us on [solar.sales@lge.com.au](mailto:solar.sales@lge.com.au) or ph 1300 152 179.

LG offers a 15 year longer product warranty for parts and labour than many competitors 10 years to an impressive 25 years.

**10yrs + 15yrs**



# LG NeON<sup>®</sup>2 - 72 Cell

## Mechanical Properties

Cells	6 x 12
Cell Vendor	LG
Cell Type	Monocrystalline / N-type
# of Busbar	12 (Multi Wire Busbar)
Dimensions (L x W x H)	2024 x 1024 x 40 mm
Front Load (test)	5400 Pa
Rear Load (test)	3000 Pa
Weight	20.3 kg
Connector Type	Genuine MC4, IP68 (Male: PV-KST4) (Female: PV-KBT4)
Junction Box	IP68 with 3 bypass diodes
Length of Cables	2 x 1200 mm
Front cover	High transmission tempered glass
Frame	Anodised aluminum (silver colour)

## Certifications and Warranty

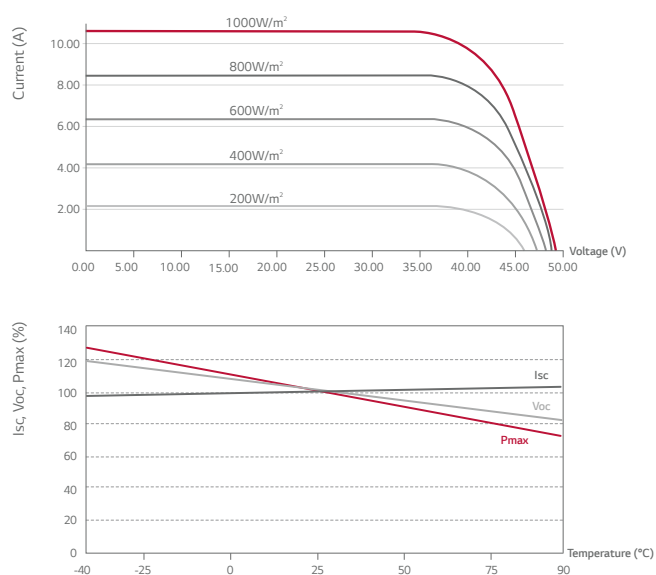
Certifications	ISO 9001, ISO 14001, ISO 50001 IEC 61215-1/-1/2:2016, IEC 61730-1/2:2016, UL1703 OHSAS 18001 IEC 61701:2012 Severity 6 (Salt Mist Corrosion Test) IEC 62716:2013 (Ammonia Test)
Module Fire Performance	Type 1 (UL 1703), Class C (UL 790, ULC/ORD C 1703)
Product Warranty	25 Years
Output Warranty of Pmax (Measurement Tolerance $\pm 3\%$ )	Linear Warranty <sup>1</sup>

<sup>1</sup> 1) 1st year 98%, 2) After 1st year 0.33% annual degradation, 3) 90.08% for 25 years

## Temperature Characteristics

NMOT	42 $\pm 3$ °C
Pmax	-0.36 %/°C
Voc	-0.26 %/°C
Isc	0.02 %/°C

## Characteristic Curves



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

Module Type	415 W	420 W
Maximum Power Pmax (W)	415	420
MPP Voltage Vmpp (V)	41.8	42.1
MPP Current Impp (A)	9.94	9.98
Open Circuit Voltage Voc (V)	49.6	49.7
Short Circuit Current Isc (A)	10.59	10.63
Module Efficiency (%)	20.0	20.3
Operating Temperature (°C)	-40 ~ +90	
Maximum System Voltage (V)	1000	
Maximum Series Fuse Rating (A)	20	
Power Tolerance (%)	0 ~ +3	

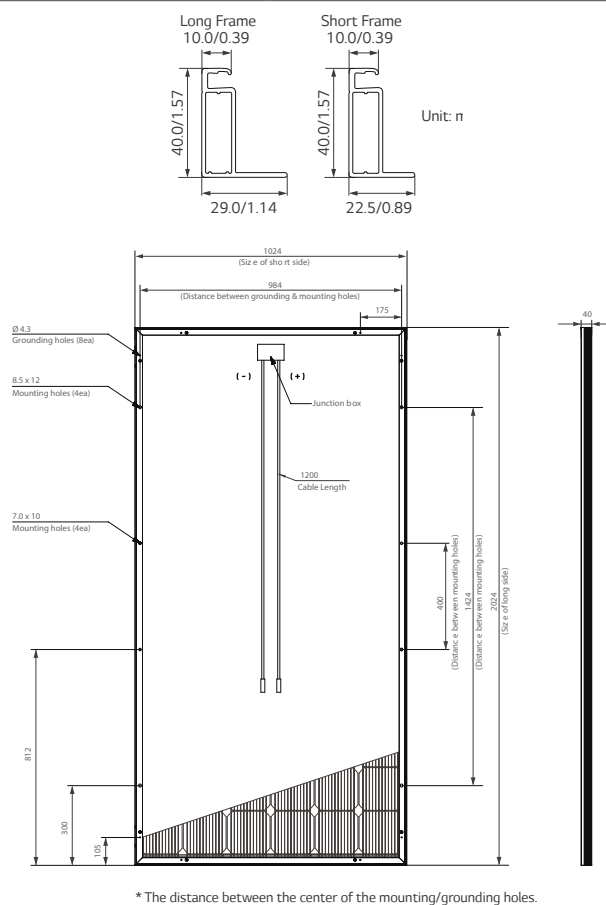
<sup>2</sup> STC (Standard Test Condition): Irradiance 1000 W/m², Module Temperature 25 °C, AM 1.5.  
The nameplate power output is measured and determined by LG Electronics at its sole and absolute discretion.

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

Module Type	415 W	420 W
Maximum Power Pmax (W)	311	315
MPP Voltage Vmpp (V)	39.3	39.6
MPP Current Impp (A)	7.92	7.95
Open Circuit Voltage Voc (V)	46.8	46.9
Short Circuit Current Isc (A)	8.52	8.55

<sup>3</sup> NMOT (Nominal Module Operating Temperature): Irradiance 800 W/m², ambient temperature 20 °C, wind speed 1 m/s, Spectrum AM 1.5.

## Dimensions (mm)



\* The distance between the center of the mounting/grounding holes.



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Product specifications are subject to change  
without prior notice.  
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