



# LG NeON<sup>®</sup> R

365 Q1C-A5

THE HIGHEST WATT OUTPUT

60 CELL PANEL IN AUSTRALIA



\*These awards were won for similar models in the NeON range.

## THE NeON<sup>®</sup> R - A SOLAR MILESTONE FOR LG

Many standard 60 cell modules in Australia and New Zealand produce 260W power (15.9% efficiency) The new LG NeON<sup>®</sup> R at a similar physical size reaches an incredible 365W (21.1% efficiency), making it ideal for solar systems seeking visually pleasing panels and for roofs where space is tight.

The NeON R is also the right panel when future solar system expansion is considered or as a combo install of panels and solar energy storage via batteries as well as electric vehicle charging. The LG NeON<sup>®</sup> R is a very powerful module. The 30 multi ribbon busbars at the rear of the module sets a new standard of innovation and is the result of LG's extensive solar R&D investment.



### Great Visual Appearance

LG NeON<sup>®</sup> R panels have been designed with appearance in mind. Their black cells, black frames and no metal solders or wires on the front of the panel give an aesthetically pleasing uniform black appearance. Your home deserves the LG NeON<sup>®</sup> R.



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

The LG product warranty is 15 years longer than many competitors standard 10 years and covers 25 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> R's 365W are a similar physical size to many conventional 260W panels. This means with the LG NeON<sup>®</sup> R 365W you get 40.3% more electricity per square metre than a 260W panel. So you can install more kW of solar on your roof with the LG NeON<sup>®</sup> R.



### Improved 25 Year Performance Warranty

The NeON<sup>®</sup> R has a better 25 year performance warranty than many of panels on the Australian market. It will still achieve 88.4% of rated output after 25 years, compared to 80.2% for standard panels. The annual degradation rate after first year is 0.4% compared to 0.7% for standard panels.

## ABOUT LG ELECTRONICS

LG Electronics embarked on a solar energy research programme in 1985, using our vast experience in semi-conductors, chemistry and electronics. In 2010, LG Solar successfully released its first Mono X<sup>®</sup> series, and 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 brands panels selling in Australia, LG solar panels offer a peace of mind solution.

## KEY FEATURES

 <p><b>Proven Field Performance</b></p> <p>LG has been involved in a number of comparison tests of the LG panels against many other brand panels and performed very well. The LG NeON<sup>®</sup> R is LG Solar's most efficient and highest output panels.</p>	 <p><b>Low LID</b></p> <p>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.</p>
 <p><b>Corrosion Resistance Certifications</b></p> <p>LG NeON<sup>®</sup> R panels can be installed confidently right up to the coastline. The panels have received certifications for Salt Mist Corrosion to maximum severity 6 and Ammonia Resistance.</p>	 <p><b>Extensive Testing Programme</b></p> <p>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.</p>
 <p><b>Strict Quality Control Reliable for the Future</b></p> <p>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.</p>	 <p><b>Cyclone Wind Load Resistance</b></p> <p>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.</p>
 <p><b>Multi Anti-reflective Coatings Increase Output</b></p> <p>LG is using an anti-reflective coating on the NeON<sup>®</sup> R 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.</p>	 <p><b>Positive Tolerance (0/+3%)</b></p> <p>If we sell you a 360 Watt panel then the flash test of this panel will show somewhere between 360W and 371W. 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.</p>
 <p><b>Improved High Temperature Performance</b></p> <p>Solar panels slowly lose ability to generate power as they get hotter. LG NeON<sup>®</sup> R, has an improved temperature co-efficient to standard modules, which means in hot weather LG NeON<sup>®</sup> R panels will deliver higher electricity output.</p>	 <p><b>Anti PID Technology for Yield Security</b></p> <p>PID (Potential Induced Degradation) affects the long term ability of panels to produce high level electricity output. LG panels have anti PID technology and have been successfully tested by leading third party laboratories regarding PID resistance.</p>
 <p><b>Heading: Multi-Ribbons Increases Power</b></p> <p>The NeON<sup>®</sup> R 30 multi-ribbon busbar technology hidden at the rear of the module, under the backing sheet, lowers electrical resistance and increases panel efficiency, giving more power per panel and provides a more uniform look to the panel.</p>	 <p><b>Automated Production in South Korea</b></p> <p>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.</p>

## LG NeON<sup>®</sup> R – QUALITY & HIGH EFFICIENCY IS OUR PASSION.

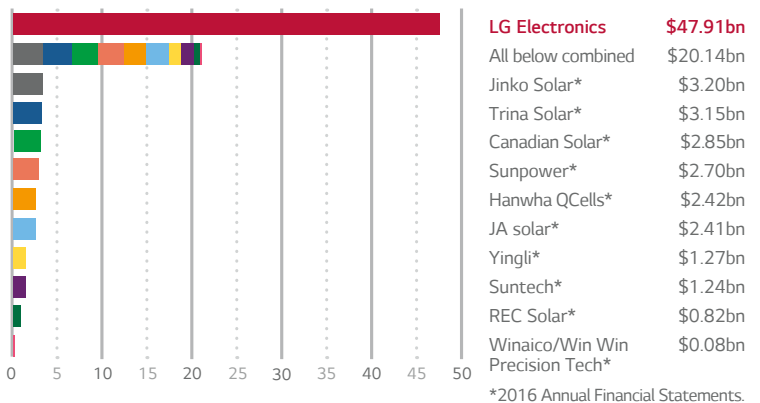
The NeON<sup>®</sup> R is LG's most efficient solar module range. Featuring an innovative new design which allows an up to 35.1% more electricity per m<sup>2</sup> than a standard 270W panel, it can also withstand at least twice the wind load to normal standard panels. The 25 year product warranty is 15 years longer than many of panels on offer and its linear performance guarantee has been improved to 88.4% of nominal output after 25 years. This is 6.8.2% more output guaranteed at year 25, than the standard panels on the market.

### 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.

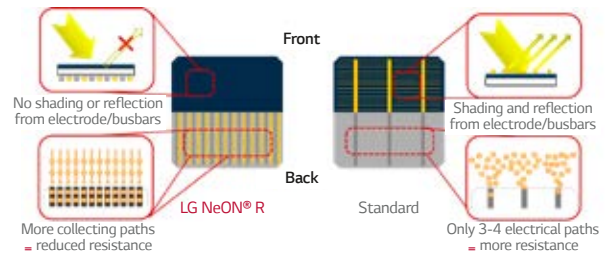
Good to know: LG Electronics Australia Pty Ltd is the warrantor in Australia and NZ for your solar modules. So LG support, via offices in every Australian mainland state and NZ and through our 70 strong, Australia wide dealer network, is only a phone call away.

The warrantor's 2016 sales in billions of US dollars



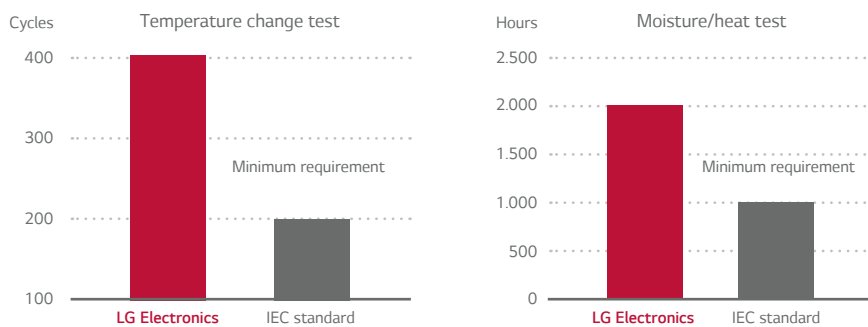
### HIGHER OUTPUT, HIGHER YIELD

The new NeON<sup>®</sup> R module range has moved the busbars to the rear of the module, allowing a bigger front cell surface to be exposed to light and therefore generating more electricity. With 30 multi-ribbon busbars on the rear, compared to 3 or 4 by conventional panels (at the front), LG has moved solar panel design forward, via this innovative approach, and increasing panel output as a result.



### EXCELLENT QUALITY, THOROUGHLY TESTED

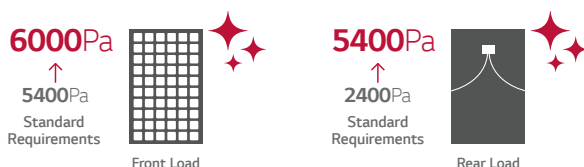
You can rely on LG. We test our products with at least double the intensity specified in the IEC standard. (International Quality Solar Standard).



Our panel range have won a string of International Awards.

### POWERFUL DESIGN, GUARANTEED ROBUST

With reinforced frame design, the LG NeON<sup>®</sup> R can endure a front load of 6000 Pa which is the equivalent of 1048 kg in weight 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).



Much Longer Product Warranty

**25 YEARS**

LG offers a 15 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	30 (Multi Ribbon Busbar)
Dimensions (L x W x H)	1700 x 1016 x 40 mm
Front Load	6000 Pa
Rear Load	5400 Pa
Weight	18.5 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

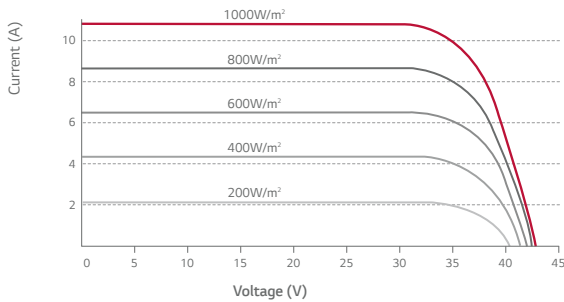
Certifications	ISO 9001
	IEC 61215, IEC 61730-1/-2
	IEC 62716 (Ammonia Test)
	IEC 61701 (Salt Mist Corrosion Test)
Module Fire Rating	Class C
Product Warranty	25 Years
Output Warranty of P <sub>max</sub> (Measurement Tolerance ± 3%)	Linear Warranty <sup>1</sup>

<sup>1</sup> 1) First year: 98%, 2) After first year: 0.4% annual degradation, 3) 25 years: 88.4%

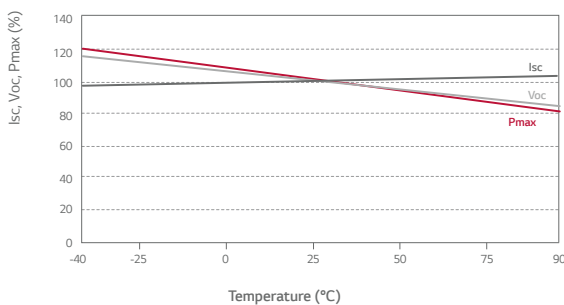
### Temperature Characteristics

NOCT	44 ± 3 °C
P <sub>max</sub>	-0.30 %/°C
V <sub>oc</sub>	-0.24 %/°C
I <sub>sc</sub>	0.04 %/°C

### Current – Voltage characteristics at various irradiance levels



### Current – Voltage characteristics at various cell temperatures



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

Module Type	360 W	365 W
Maximum Power P <sub>max</sub> (W)	360	365
MPP Voltage V <sub>mpp</sub> (V)	36.5	36.7
MPP Current I <sub>mpp</sub> (A)	9.87	9.95
Open Circuit Voltage V <sub>oc</sub> (V)	42.7	42.8
Short Circuit Current I <sub>sc</sub> (A)	10.79	10.80
Module Efficiency (%)	20.8	21.1
Operating Temperature (°C)	-40 ~ +90	
Maximum System Voltage (V)	1000	
Maximum Series Fuse Rating (A)	20	
Power Tolerance (%)	0 ~ +3	

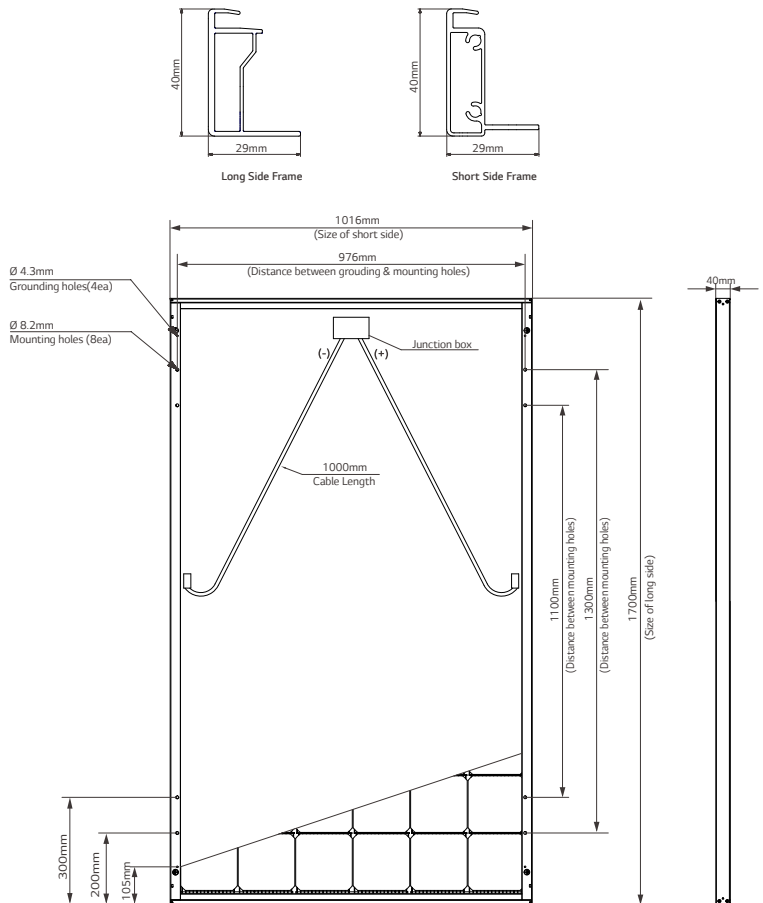
<sup>2</sup> STC (Standard Test Condition): Irradiance 1000 W/m<sup>2</sup>, Module Temperature 25 °C, AM 1.5. The nameplate power output is measured and determined by LG Electronics at its sole and absolute discretion.

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

Module Type	360 W	365 W
Maximum Power P <sub>max</sub> (W)	271	275
MPP Voltage V <sub>mpp</sub> (V)	36.4	36.6
MPP Current I <sub>mpp</sub> (A)	7.45	7.51
Open Circuit Voltage V <sub>oc</sub> (V)	40.2	40.2
Short Circuit Current I <sub>sc</sub> (A)	8.69	8.70

<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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