LG
Life's Good

# The Star Performer

## LG NeON® R

LG355/360 Q1C-A5

**UP TO 20.8% MODULE EFFICIENCY**

EUPD RESEARCH TOP BRAND PV MODULE EUROPA 2016
EUPD RESEARCH TOP BRAND PV MODULES AUSTRALIA 2016
inter solar award 2013 WINNER
inter solar award 2015 WINNER
inter solar award 2016 WINNER

## THE NeON® 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® R at a similar physical size reaches an incredible 360W (20.8% 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® 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 LGs extensive solar R&D investment.

### Great Visual Appearance

LG NeON® 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® R.

### More Power per Square Metre

LG NeON® Rs 360W are a similar physical size to many conventional 260W panels. This means with the LG NeON® R 360W you get 38.5% more electricity per square metre than a 260W panel. So you can install more kW of solar on your roof with the LG NeON® R.

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

The LG product warranty is 2 years longer than many competitors standard 10 years and covers 12 years. The warranty is provided by LG Electronics Australia and New Zealand. The warranty includes replacement labour and transport.

### Improved 25 Year Performance Warranty

The NeON® R has a much better 25 year performance warranty than the many of panels on the Australian market. It will still achieve 87.6% of rated output after 25 years, compared to 80.2% for standard panels. The annual degradation rate from years 5 to 25 is 0.4% compared to 0.7% for standard panels.

Panels made in Korea

www.lgenergy.com.au

# LG NeON® R

## 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® series, and LG Solar modules are now available in 32 countries. In 2013, 2015 and 2016 the LG NeON® 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

### Proven Field Performance

LG has been involved in a number of comparison tests of the LG panels against many other brand panels and performed very well. LG NeON® R are LG Solar's most efficient and highest output panels.

### Low LID

The N-type doping of the NeON® 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.

### Corrosion Resistance Certifications

LG NeON® 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.

### Extensive Testing Programme

LG solar panels are tested between 2 to 4 times the International Standards at our in-house testing laboratories, ensuring a very robust and longer lasting solar module.

### 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.

### Cyclone 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.

### Multi Anti-reflective Coatings Increase Output

LG is using an anti-reflective coating on the NeON® 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.

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


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.

### Improved High Temperature Performance

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

### Anti PID Technology for Yield Security


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.

### Heading: Multi–Ribbons Increases Power

The NeON® 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.

### Fully 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® R – QUALITY & HIGH EFFICIENCY IS OUR PASSION.

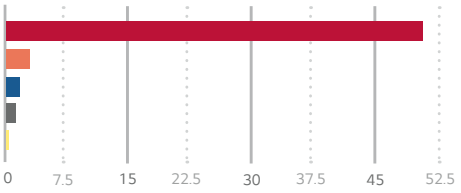
The NeON® R is LGs most efficient solar module range. Featuring an innovative new design which allows an incredible 38% more electricity per $m^2$ than a standard 260W panel , it can also withstand at least twice the wind load to normal standard panels. The 12 year product warranty is 2 years longer than many of panels on offer and its linear performance guarantee has been improved to 87.6% of nominal output after 25 years. This is 7.4% 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.

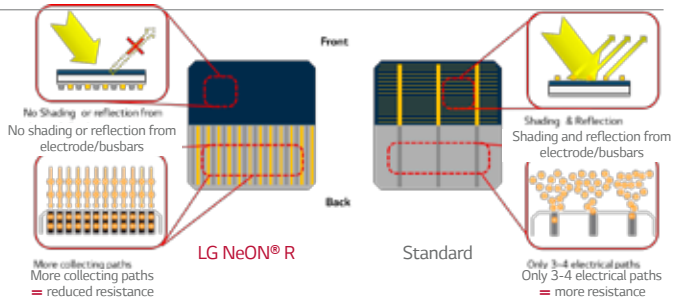
The warrantor's 2015 sales in billions of US dollars




*2015 annual financial reports.

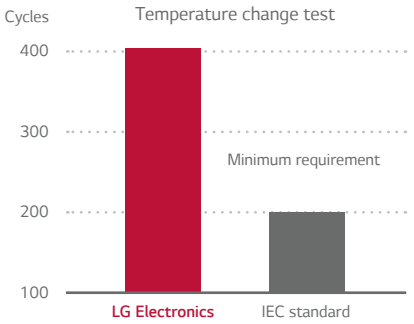
## HIGHER OUTPUT, HIGHER YIELD

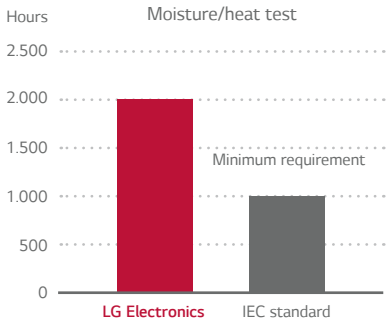
The new NeON® R module range has moved the busbars to the rear of the module, allowing a bigger front cell surface to be exposed to light and therefore generating more electricity. With 30 multi-ribbon busbars on the rear, compared to 3 or 4 by conventional panels (at the front), LG has moved solar panel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




## EXCELLENT QUALITY, INDEPENDENTLY 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).

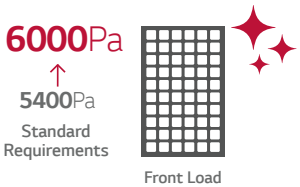


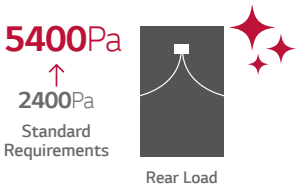




Our panel range have won a string of International Awards.

## POWERFUL DESIGN, GUARANTEED ROBUST

With reinforced frame design, the LG NeON® 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).




**Longer Product Warranty**

**10yrs +2yrs**

LG offers a two year longer product warranty for parts and labour than many competitors 10 years to an impressive 12 years.

# LG NeON® R

## 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, IP67<br>(Male: PV-KST4) (Female: PV-KBT4) |
| Junction Box | IP67 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

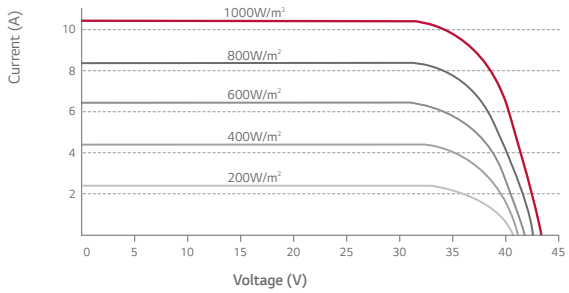
| | |
|---|---|
| Certifications | ISO 9001 |
| | IEC 61215, IEC 61730-1/-2 |
| | IEC 62716 (Ammonia Test) |
| | IEC 61701(Salt Mist Corrosion Test) |
| Module Fire Rating | Class C |
| Product Warranty | 12 Years |
| Output Warranty of Pmax<br>(Measurement Tolerance ± 3%) | Linear Warranty[1] |

[1] 1) First 4 years: 96%, 2) After 4th year. 0.4% annual degradation, 3) 25 years: 87.6%

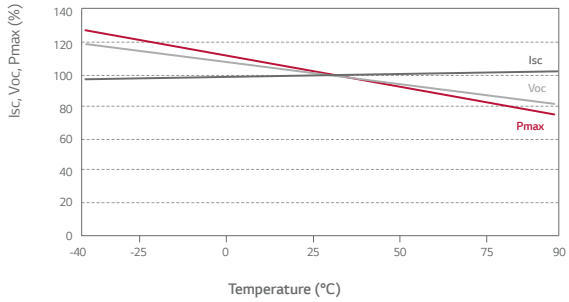
## Temperature Characteristics

| | |
|---|---|
| NOCT | 44 ± 3 °C |
| Pmax | -0.30 %/°C |
| Voc | -0.24 %/°C |
| Isc | 0.04 %/°C |

## Current – Voltage characteristics at various irradiance levels




## Current – Voltage characteristics at various cell temperatures




## Electrical Properties (STC[2])

| Module Type | 355 W | 360 W |
|---|---|---|
| Maximum Power Pmax (W) | 355 | 360 |
| MPP Voltage Vmpp (V) | 36.6 | 36.7 |
| MPP Current Impp (A) | 9.71 | 9.82 |
| Open Circuit Voltage Voc (V) | 43.5 | 43.6 |
| Short Circuit Current Isc (A) | 10.61 | 10.61 |
| Module Efficiency (%) | 20.6 | 20.8 |
| Operating Temperature (°C) | -40 ~ +90 | |
| Maximum System Voltage (V) | 1000 | |
| Maximum Series Fuse Rating (A) | 20 | |
| Power Tolerance (%) | 0 ~ +3 | |

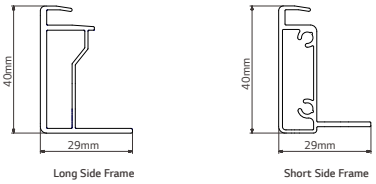
[2] STC (Standard Test Condition): Irradiance 1000 W/m², Module Temperature 25 °C, AM 1.5.
The nameplate power output is measured and determined by LG Electronics at its sole and absolute discretion.
The typical change in module efficiency at 200 W/m² in relation to 1000 W/m² is -2.0%.

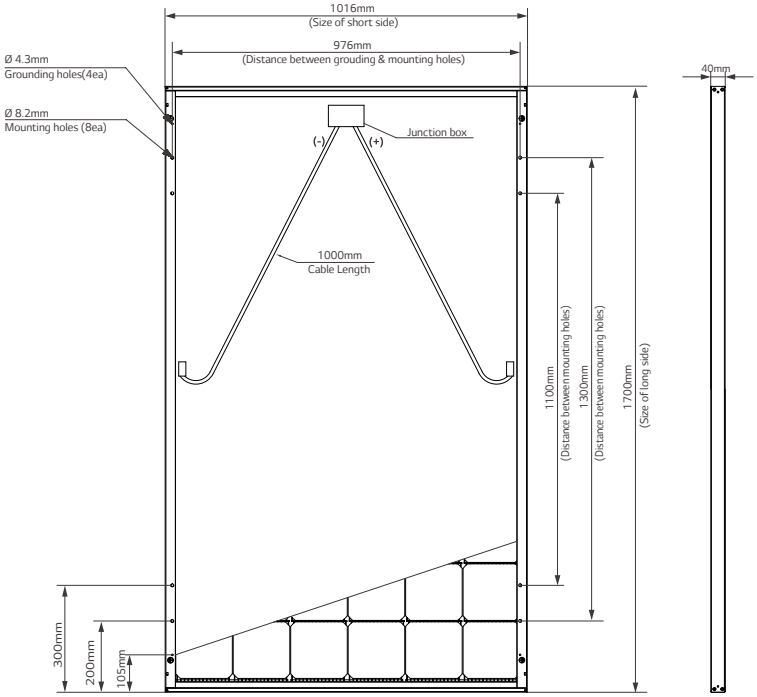
## Electrical Properties (NOCT[3])

| Module Type | 355 W | 360 W |
|---|---|---|
| Maximum Power Pmax (W) | 267 | 271 |
| MPP Voltage Vmpp (V) | 36.5 | 36.7 |
| MPP Current Impp (A) | 7.33 | 7.39 |
| Open Circuit Voltage Voc (V) | 40.9 | 41.1 |
| Short Circuit Current Isc (A) | 8.54 | 8.55 |

[3] NOCT (Nominal Operating Cell Temperature): Irradiance 800 W/m², ambient temperature 20 °C, wind speed 1 m/s

## Dimensions (mm)

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