



**BUILT TO PERFORM. BUILT TO LAST.**

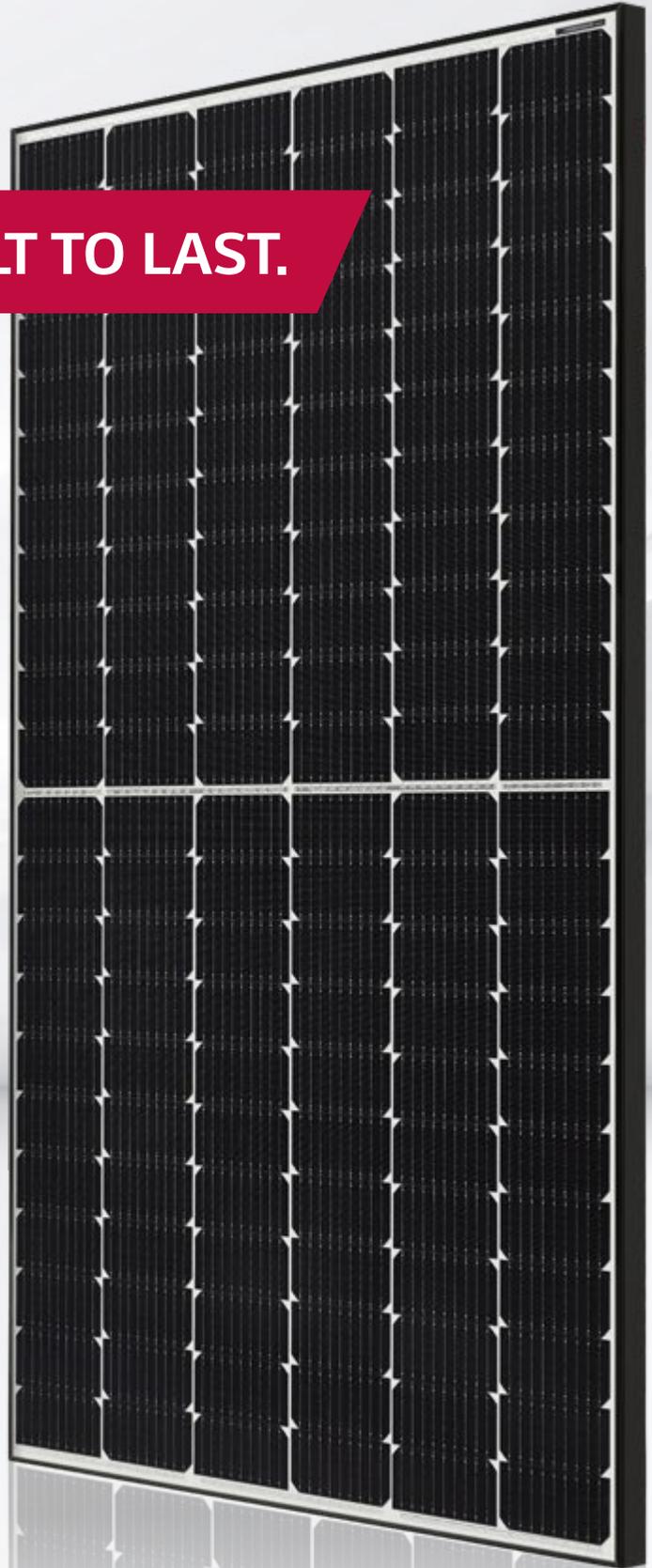
# LG NeON<sup>®</sup> H<sup>+</sup>

**415W**

Up to 21.2% module efficiency

**LG NeON<sup>®</sup> H<sup>+</sup> - Ideally suited for Australia and New Zealand climates**

The LG NeON<sup>®</sup> H<sup>+</sup> is a powerful and one of the most versatile modules on the market today. The LG NeON<sup>®</sup> H<sup>+</sup> is equipped with N-type cells and half-cut and gap-free technology to increase power and efficiency compared to previous models. The LG NeON<sup>®</sup> H<sup>+</sup> includes a 25-year product and performance warranty for high performance and reliability.



# Performance

## | Key Benefits



### Excellent Low Light Performance

LG NeON<sup>®</sup> H<sup>+</sup> has great performance under low light conditions with LG technology and our own Korean cell manufacturing, with low tolerances ensuring highly consistent performing panels.



### Improved High Temperature Performance

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



### Enhanced Performance Warranty

LG NeON<sup>®</sup> H<sup>+</sup> comes with an enhanced performance warranty. At 25 years of use, the LG NeON<sup>®</sup> H<sup>+</sup> is guaranteed to provide at least 90.6% of initial performance.



### Increased Output with HTAR Glass and Anti-reflective Coatings

LG uses HTAR glass (Highly Transmitted Anti Reflection) which has low reflectivity and high transmittance to increase power generation compared to AR glass used in previous models.



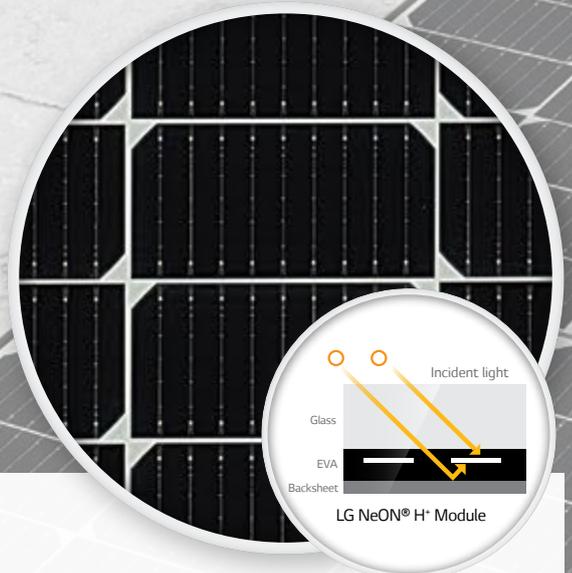
### Proven Field Performance

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



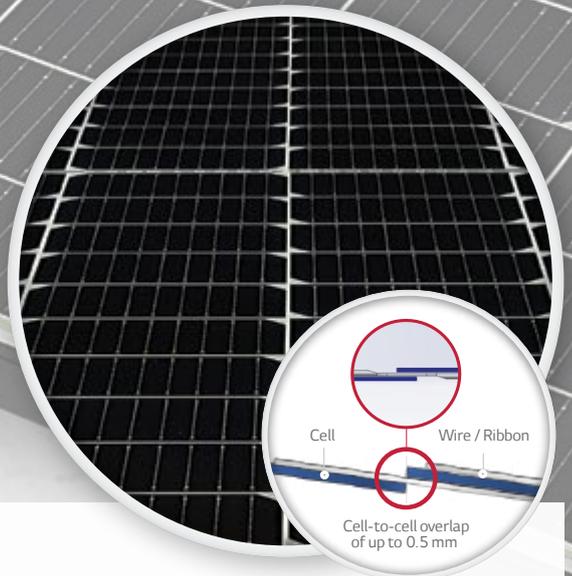
### Low LID

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.



### Increased Power Generation

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



### Reduce Power Loss

Reduce power loss with half cut gap-free technology. LG's unique N-type cell technology reduces electrical loss by applying thinner finger electrodes and improving the shallow contact to reduce electrical resistance.

## Reliability

### | Key Benefits



#### **Hail Resistant**

LG NeON<sup>®</sup>H<sup>+</sup> panels are tested with 35mm hail stones hit at 27.2m per second in comparison with the IEC standards of 25mm and 23m per second, thus making the NeON<sup>®</sup>H<sup>+</sup> panel significantly stronger to withstand larger hail stones.



#### **25 Year Product & Performance Warranty**

The LG NeON<sup>®</sup>H<sup>+</sup> comes with a 25 year product and performance warranty which includes replacement, labour and transport. The warranty is provided by LG Electronics Australia and New Zealand.



#### **Built To Last - Extensive Testing Programme**

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



#### **Strict Quality Control**

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 quality.



#### **60 Years of Manufacturing Expertise**

LG panels are designed and built utilising 6 decades of manufacturing excellence by LG. As with any other LG Electronics product, when you buy LG panels, they come with the assurance of a global manufacturer that over the past 6 decades has mastered product design and manufacturing process. The benefit is peace of mind solar panels that exceed customer expectations.





### **Suitable for Coastal Installation**

LG NeON<sup>®</sup> H<sup>+</sup> 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.



### **Excellent high temperature performance**

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



### **High Wind Load Resistance**

LG panels have a strong double walled frame. When it comes to wind forces (rear load) our panel under test withstood a wind load of 4000 Pascals.

## LG offers strength and stability



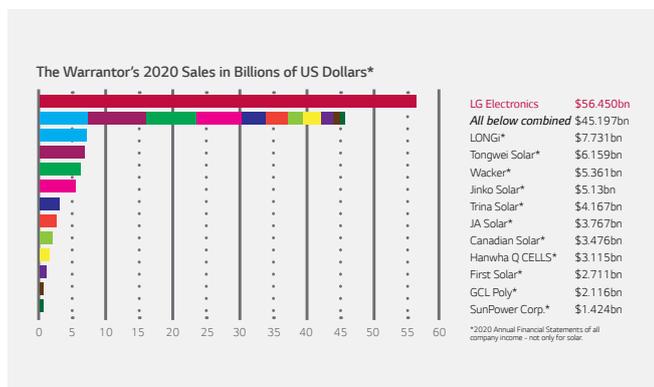
### Reliable 25 year Product and Performance Warranty with Long Term Support

LG offers one of the most meaningful panel warranties in solar. The 25 years warranty includes parts and labour and shipping costs as well as the labour cost of un-installing and installing the panel. In the event you sell your home in the future, the LG warranty is transferrable to the new owners. LG Solar offers a simple warranty registration process via [LGenergy.com.au](http://LGenergy.com.au)



### Trusted Brand - Multi Award Winning

LG solar panels have won many local and international awards including most recently winning the Most Trusted Brands 2021 Solar Panels award by Readers Digest. Over 3,000 Australian consumers were surveyed. LG has won this award 2 years in a row - 2020 and 2021.



### Global Strength, Largest Consumer Brand in Solar in Australia

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. LG Electronics is a global and financially strong US\$56 Billion company with over 60 years experience in technology, innovation and commitment to the renewable energy industry.

LG Electronics Australia has been operating in Australia for over 30 years employing over 300 staff and is the warrantor in Australia and NZ for your solar modules.

### Sustainability and Social Contribution

LG Electronics considers climate change response as a critical part of our business management. LG is committed to pursuing carbon neutrality by 2030 in the overall operations through emissions reduction, development of high-efficiency energy products, improvement of environmental impacts and management of waste from production and at the end of product lifecycles. Locally, we are strong supporters of community groups such as WIRES, as well as helping communities recover from natural disasters.

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

Module Type	LG415N3C-V6
Maximum Power Pmax (W)	415
MPP Voltage Vmpp (V)	37.9
MPP Current Impp (A)	10.95
Open Circuit Voltage Voc (V)	45.4
Short Circuit Current Isc (A)	11.49
Module Efficiency (%)	21.2
Operating Temperature (°C)	-40 ~ +85
Maximum System Voltage (V)	1000 (IEC)
Maximum Series Fuse Rating (A)	20
Power Tolerance (%)	0 ~ +3

<sup>2</sup> STC (Standard Test Condition) : Irradiance 1,000W/m<sup>2</sup>, Cell temperature 25°C, AM 1.5 , Measure Tolerance : ± 3 %

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

Module Type	LG415N3C-V6
Maximum Power Pmax (W)	313
MPP Voltage Vmpp (V)	35.7
MPP Current Impp (A)	8.77
Open Circuit Voltage (Voc)	42.8
Short Circuit Current Isc (A)	9.25

### Mechanical Properties

Cell Configuration	132 Cells (6 x 22)
Cell Maker	LG
Cell Properties	Monocrystalline / N-type
Number of Busbars	9EA
Dimensions (L x W x H)	1,880 x 1,042 x 40 mm
Front Load (test)	5400 Pa
Rear Load (test)	4000 Pa
Weight	19.7kg
Connector Type / Maker	MC4 / Stäubli
Junction Box	IP68 with 3 bypass diodes
Length of Cables	1,400 mm x 2 EA
Glass (Material)	Tempered Glass with AR Coating
Frame	Anodised aluminum

### Certifications and Warranty

Certifications	ISO 9001, ISO 14001, ISO 50001 IEC 61215-1 / -1-1 / 2:2016, IEC 61730-1 / 2:2016, UL 61730-1:2017, UL 61730-2:2017 ISO 45001
Salt Mist Corrosion Test	IEC 61701 : 2011 Severity 6
Ammonia Corrosion Test	IEC 62716 : 2013
Fire Rating	Class C (UL 790)
Product Warranty	25 Years
Output Warranty of Pmax (Measurement Tolerance ± 3%)	Linear Warranty <sup>1</sup>

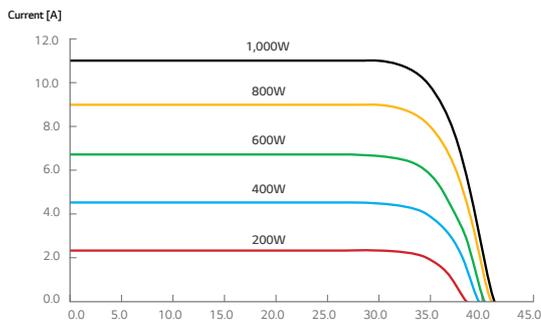
<sup>1</sup> 1) 1st year: 98.5%, 2) After 1st year: 0.33% annual degradation, 3) 90.6% at 25 years.

### Temperature Characteristics

NMOT*	42 ± 3 °C
Pmax	-0.33 %/°C
Voc	-0.26 %/°C
Isc	0.04 %/°C

<sup>3</sup> NMOT (Nominal Module Operating Temperature):  
Irradiance 800W/m<sup>2</sup>, Ambient temperature 20 °C, Wind speed 1 m/s, Spectrum AM 1.5.

### Current - Voltage characteristics at various irradiance levels



### Dimensions (mm)

