



Great  
Performance  
with the new  
LG Mono X<sup>®</sup> Plus

# LG Mono X<sup>®</sup> Plus

LG295S1C-A5

LONG LASTING PANELS

STRONG WARRANTIES



## YOUR HOME DESERVES THE Mono X<sup>®</sup> Plus

The latest Mono X<sup>®</sup> Plus benefits from years of LG research. The fifth generation LG Mono X<sup>®</sup> Plus offers long warranties and a higher efficiency, strong framing and Australia's highest wind loading panel.

The LG Mono X<sup>®</sup> Plus will provide decades of clean, reliable energy. Choosing the high quality Mono X<sup>®</sup> Plus is an investment in superior standards of design, manufacture, back up support and warranties. The high quality is the result of our strong commitment to developing a module that delivers reliable, high output for decades for a peace of mind solar solution.



### Great Visual Appearance

LG Mono X<sup>®</sup> Plus panels have been designed with appearance in mind. Their black cells and black frames give an aesthetically pleasing uniform black appearance. Your home deserves the LG Mono X<sup>®</sup> Plus.



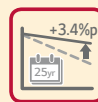
### 12 Years Product Warranty (Parts & Labour)

The LG product warranty is 2 years longer than the industry standard 10 years and covers 12 years. The Warranty is held by LG Electronics Australia and New Zealand. The warranty includes replacement labour and transport.



### More Power per Square Metre

LG Mono X<sup>®</sup> plus 295W panels are a similar physical size to many conventional 260W panels. This means with the LG Mono X<sup>®</sup> plus 295W you get 13.5% more electricity per square meter than a 260W panel. So you can install more kW of solar on your roof with the LG Mono X<sup>®</sup> plus.



### 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 -0.55%/ year thereafter. This brings an 84.8% warranted output after 25 years, compared to 80.2% for many 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 2015 LG solar panels range won the acclaimed Top Brand PV Award in Europe and in 2016 the Top Brand Australia Award 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 a very large, diversified company with over 100 subsidiaries.

## 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 Mono X<sup>®</sup> range models are consistently among the best performing in these tests.



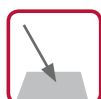
### Additional Certification

LG Mono X<sup>®</sup> Plus 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 to Six Sigma quality control standards, which includes 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.



### Solid High Temperature Performance

Solar panels slowly lose the ability to generate power as they get hotter. LG Mono X<sup>®</sup> Plus has a better temperature co-efficient than many standard modules, which means in hot weather LG Mono X<sup>®</sup> Plus will deliver higher output.



### Excellent low light performance

Great performance under low light conditions due to the LG technology and our own cell manufacturing with low tolerances, ensuring highly consistent performing panels. At 200W/m<sup>2</sup> LG panel efficiency drop is -2% while many standard panels reduce by -4%.



### Reduced LID

The Mono X<sup>®</sup> Plus (LiLy technology) has reduced the initial degradation of solar cells by applying LG new LiLy (LID-improvement for Lifetime Yield) Technology, which controls the reaction of Boron and Oxygen, a key factor of LID (Light Induced Degradation).



### 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.



### 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.



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

If we sell you a 300 Watt panel then the flash test of this panel will show somewhere between 300W and 309W. 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.



### 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.



### 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 Mono X<sup>®</sup> Plus – GREAT PERFORMANCE

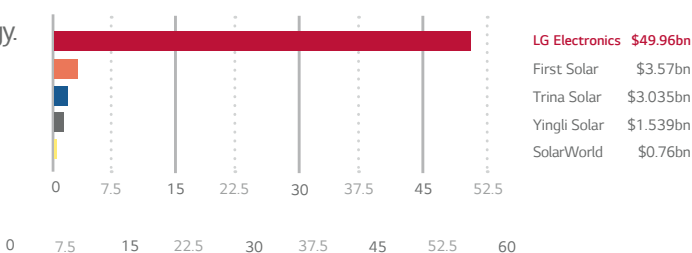
The next generation Mono X<sup>®</sup> Plus by LG combines everything a solar module needs: long service life and ease of installation as well as an elegant exterior, high efficiency and very strong warranty.

### LOCAL WARRANTY, GLOBAL STRENGTH

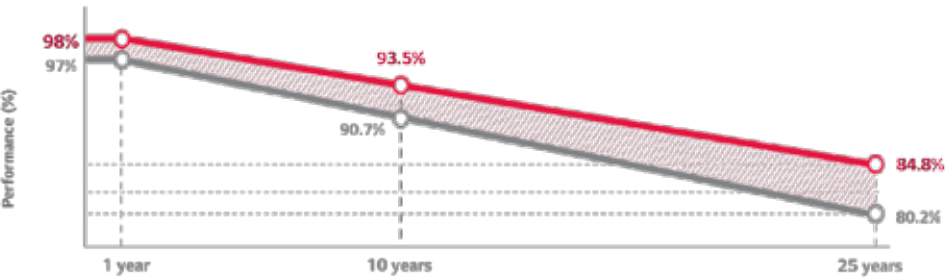
LG Solar is part of LG Electronics Inc., a global and financially strong company, with over 50 years of experience in technology.

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



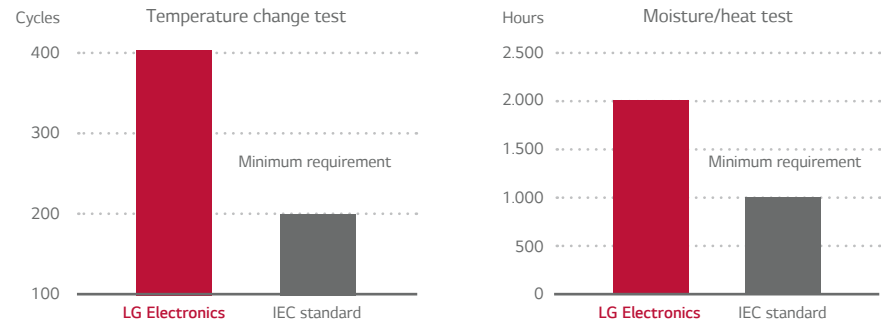
### LiLy TECHNOLOGY, AN LG ADVANTAGE



**Annual Degradation**  
**LG Mono X Plus**  
 1st year: -2%, 2 to 25 years: -0.55% annually  
**P-Mono and P-Poly (Industry Average)**

### EXCELLENT QUALITY, INDEPENDENTLY TESTED

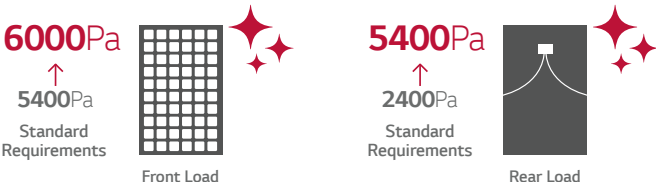
You can rely on LG. We test our products with at least double the intensity specified in the IEC standard. (International Quality Solar Standard).



Our panel range have won a string of International Awards.

### POWERFUL DESIGN, GUARANTEED ROBUST

With reinforced frame design, the LG MonoX<sup>®</sup> Plus 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 + 2yrs

LG offers a two year longer product warranty for parts and labour from an industry average 10 years to an impressive 12 years.

### Mechanical Properties

Cells	6 x 10
Cell Vendor	LG
Cell Type	Monocrystalline / P-type
Cell Dimensions	161.7 x 161.7 mm
# of Busbar	4
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, IP67 (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

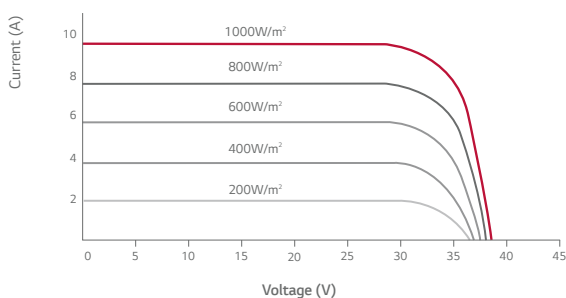
Certifications	ISO 9001
	IEC 61215, IEC 61730-1/-2
	IEC 61701 (Salt Mist Corrosion Test)
	IEC 62716 (Ammonia Corrosion Test)
Module Fire Rating	Class C
Product Warranty	12 Years
Output Warranty of Pmax (Measurement Tolerance ± 3%)	Linear Warranty <sup>1</sup>

<sup>1</sup> 1) 1st year: 98%, 2) After 2nd year: 0.55% annual degradation, 3) 83.6% for 25 years

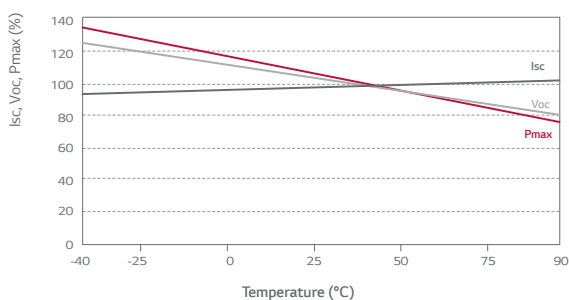
### Temperature Characteristics

NOCT	45 ± 3 °C
Pmax	-0.40 %/°C
Voc	-0.30 %/°C
Isc	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	295 W
Maximum Power Pmax (W)	295
MPP Voltage Vmpp (V)	31.3
MPP Current Impp (A)	9.43
Open Circuit Voltage Voc (V)	38.8
Short Circuit Current Isc (A)	10.02
Module Efficiency (%)	17.2
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. The typical change in module efficiency at 200 W/m<sup>2</sup> in relation to 1000 W/m<sup>2</sup> is -4.5%.

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

Module Type	295 W
Maximum Power Pmax (W)	216
MPP Voltage Vmpp (V)	28.7
MPP Current Impp (A)	7.53
Open Circuit Voltage Voc (V)	35.7
Short Circuit Current Isc (A)	8.06

<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)

