APRIL 2019

173_PL-COND_3D_01

44A GLOUCESTER AVENUE

21ST ARCHITECTURE LTD

1.0 INTRODUCTION

1.1 EXECUTIVE SUMMARY

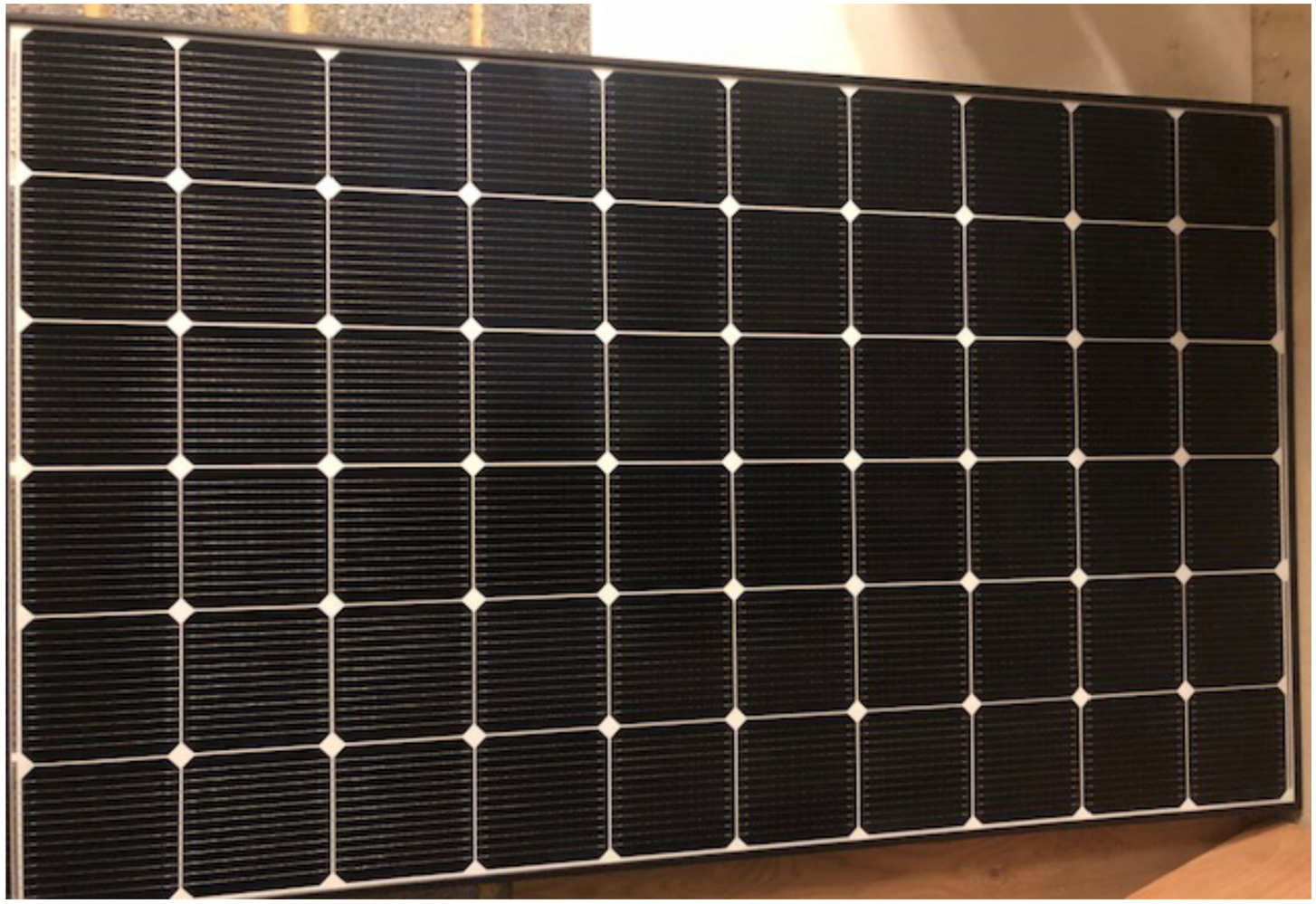
21st Architecture Ltd has produced this document as a response to the Full Planning Application Decision Notice Ref: 2016/7089/P, where the Council has considered the application and decided to grant permission subject to conditions.

This document provides the response to the condition 3d, which requires the provision of "Section drawings showing protrusion of photovoltaic panels to the roof of Building 2at a scale of 1:10 and samples of the new panels to be installed."

2.0 PV Site Sample

2.1 Photovoltaic Sample

Photograph provided from site to show sample photovoltaic panel.



3.0 PV Specification

3.1 Photovoltaic Specification

EN

INTRODUCING THE STAR PERFORMER

LG NeON® 2

UP TO 340 WATTS

LG CELLO DESIGN

6,000PA LOAD

25 YEARS LG Product and Performance Guarantee

LG Life's Good

LG NeON® 2

www.lg-solar.com/uk

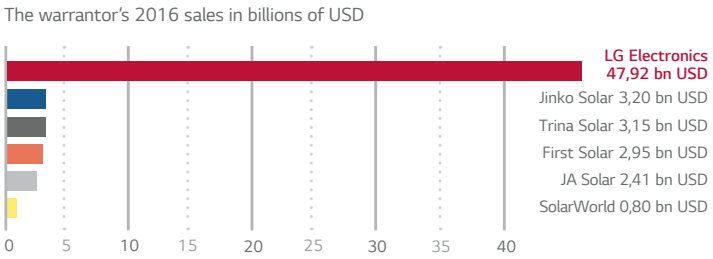
LG NeON® 2 – BETTER. MORE EFFICIENT. GUARANTEED.

LG's NeON® 2 solar module now offers even more performance. Featuring a classy new design and with a total of 60 cells, it can withstand a load of 6,000Pa. LG is extending its product warranty from 15 to 25 years and improving its linear performance guarantee to at least 86 % of nominal output after 25 years.

LOCAL GUARANTOR, GLOBAL SECURITY

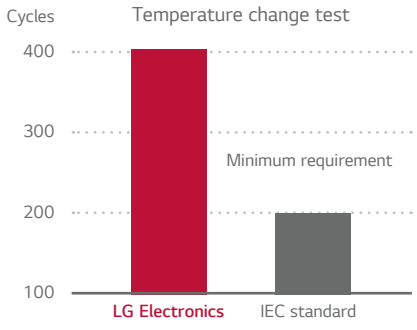
LG Solar is part of LG Electronics, a global and financially strong company, with over 50 years of experience.

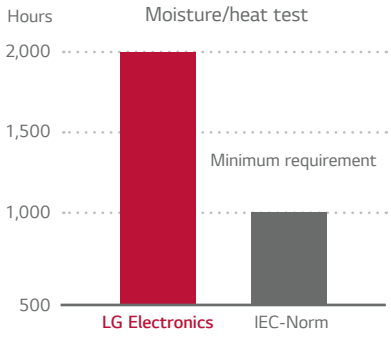
Good to know: LG Electronics is the warrantor for your solar modules. LG Electronics has been present in Europe with many local subsidiaries for decades.



EXCELLENT QUALITY, INDEPENDENTLY TESTED

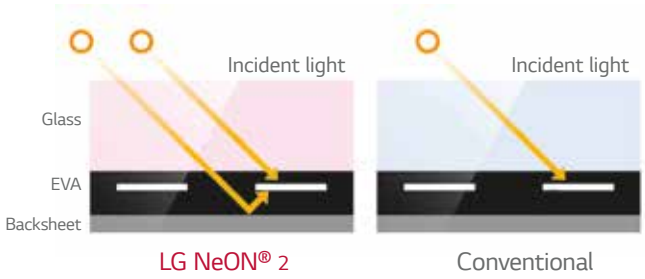
You can rely on LG. We test our products with double the intensity specified in the IEC standard. This quality is valued by installers across Europe, which is why they have awarded our LG solar modules the "Top Brand PV" stamp of quality for the highest recommendation rates for the fourth time in a row.





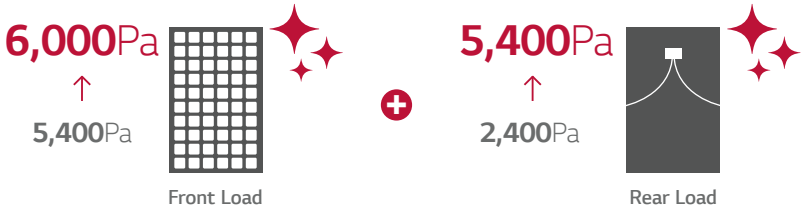
HIGHER OUTPUT, HIGHER YIELD

Semiconductor industry know-how is used to achieve a more even cell surface and thus increase efficiency up to over 21 %. The module can evenly apply incident light from both the front and back of the cell, making LG NeON® 2 cells more efficient than conventional solar cells and producing a higher yield.



POWERFUL DESIGN, GUARANTEED ROBUST

With reinforced frame design, LG NeON® 2 can endure a front load up to 6,000Pa (represents snow height of normal snow of more than 1,8 meters) and a rear load up to 5,400Pa (represents wind speed of up to 93 m/s, compare max. wind speed of Hurricane Katrina 2005 of max. 75 m/s).



Extended Product Warranty

25 yrs

Linear Warranty: 25 yrs*

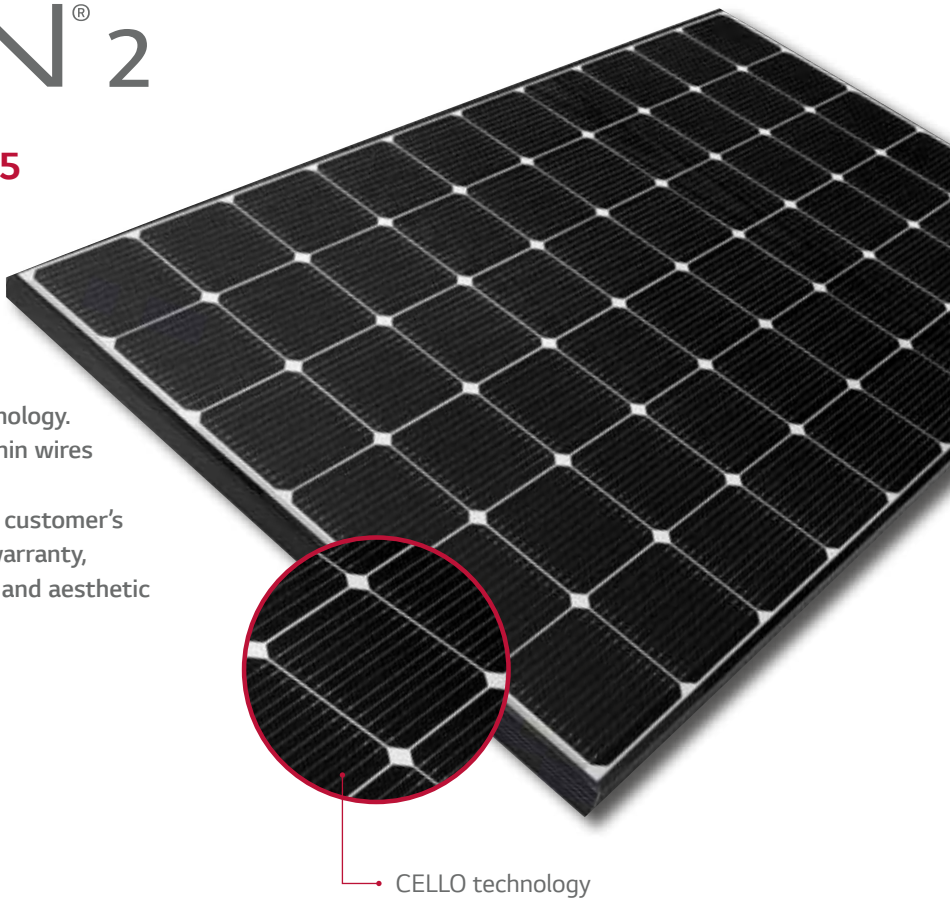
* 1) 1st year. min. 98 %. 2) After 2nd year. max. 0.5 % p annual degradation. 3) Min. 86 % for 25 years.

LG NeON® 2

LG340N1C-A5 | LG335N1C-A5
LG330N1C-A5 |

60 Cells

LG's new module, NeON® 2, adopts CELLO technology. CELLO technology replaces 3 busbars with 12 thin wires to enhance power output and reliability.
NeON® 2 demonstrates LG's efforts to increase customer's values beyond efficiency. It features enhanced warranty, durability, performance under real environment, and aesthetic design suitable for roofs.



KEY FEATURES

Enhanced Performance Warranty

LG NeON® 2 has an enhanced performance warranty. The annual degradation has fallen from -0.55%/year to -0.5%/year.

High Power Output

Compared with previous models, the LG NeON® 2 has been designed to significantly enhance its output efficiency making it efficient even in limited space.

Aesthetic Roof

LG NeON® 2 has been designed with aesthetics in mind; thinner wires that appear all black at a distance. The product can increase the value of a property with its modern design.

Outstanding Durability

With its newly reinforced frame design, LG has extended the warranty of the NeON® 2 from 15 years to 25 years. Additionally, LG NeON® 2 can endure a front load up to 6,000Pa, and a rear load up to 5,400Pa.

Better Performance on a Sunny Day

LG NeON® 2 now performs better on sunny days thanks to its improved temperature coefficient.

Double-Sided Cell Structure

The rear of the cell used in LG NeON® 2 will contribute to generation, just like the front; the light beam reflected from the rear of the module is reabsorbed to generate a great amount of additional power.

About LG Electronics

LG Electronics is a global big player, committed to expanding its operations with the solar market. The company first embarked on a solar energy source research program in 1985, supported by LG Group's vast experience in the semi-conductor, LCD, chemistry and materials industries. In 2010, LG Solar successfully released its first MonoX® series to the market, which is now available in 32 countries. The LG NeON® (previous. MonoX® NeON), NeON®2, NeON®2 BiFacial won the "Intersolar AWARD" in 2013, 2015 and 2016, which demonstrates LG Solar's lead, innovation and commitment to the industry.

LG NeON® 2

Mechanical Properties

Cells	6 x 10
Cell Vendor	LG
Cell Type	Monocrystalline/N-type
Cell Dimensions	161.7 x 161.7 mm
# of Busbar	12 (Multi Wire Busbar)
Dimensions (L x W x H)	1,686 x 1,016 x 40 mm
Static Load	6,000Pa (snow load)
	5,400Pa (wind load)
Weight	18 kg
Connector Type	MC4
Junction Box	IP68 with 3 Bypass Diodes
Length of Cables	2 x 1,000 mm
Front cover	High Transmission Tempered Glass
Frame	Anodized Aluminum

Certifications and Warranty

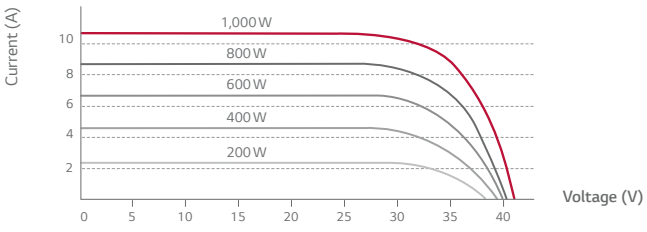
Certifications	IEC 61215, IEC 61730-1/-2
	IEC 62716 (Ammonia Test)
	IEC 61701 (Salt Mist Corrosion Test)
	ISO 9001
Module Fire Performance	Class C, Fire Class 1 (Italy)
Product Warranty	25 years
Output Warranty of Pmax (Measurement Tolerance ± 3%)	25 years linear warranty[1]

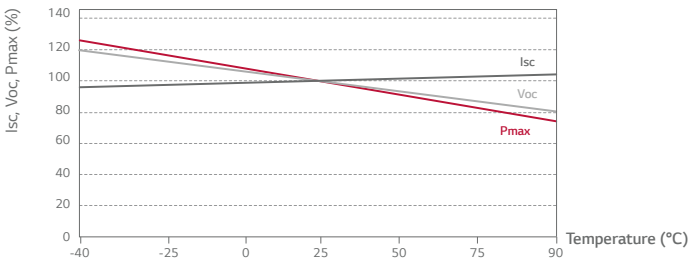
[1] 1) 1st year: min. 98 %. 2) After 2nd year: max. 0.5 % p annual degradation.
3) Min. 86 % for 25 years.

Temperature Coefficients

NOCT	45 ± 3 °C
Pmpp	-0.37 %/°C
Voc	-0.27 %/°C
Isc	0.03 %/°C

Characteristic Curves





Electrical Properties (STC[2])

Model		LG340N1C-A5	LG335N1C-A5	LG330N1C-A5
Maximum Power Pmax	[W]	340	335	330
MPP Voltage Vmpp	[V]	34.5	34.1	33.7
MPP Current Impp	[A]	9.86	9.83	9.80
Open Circuit Voltage Voc	[V]	41.1	41.0	40.9
Short Circuit Current Isc	[A]	10.53	10.49	10.45
Module Efficiency	[%]	19.8	19.6	19.3
Operating Temperature	[°C]	-40 ~ +90		
Maximum System Voltage	[V]	1,000		
Maximum Series Fuse Rating	[A]	20		
Power Tolerance	[%]	0 ~ +3		

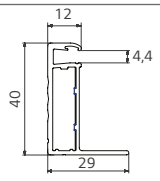
[2] 1) STC (Standard Test Condition): Irradiance 1,000 W/m², Module Temperature 25 °C, AM 1.5.
2) The typical change in module efficiency at 200 W/m² in relation to 1,000 W/m² is -2.0 %.
3) Application Class: A, Safety Class: II.
4) The nameplate power output is measured and determined by LG Electronics at its sole and absolute discretion.

Electrical Properties (NOCT[3])

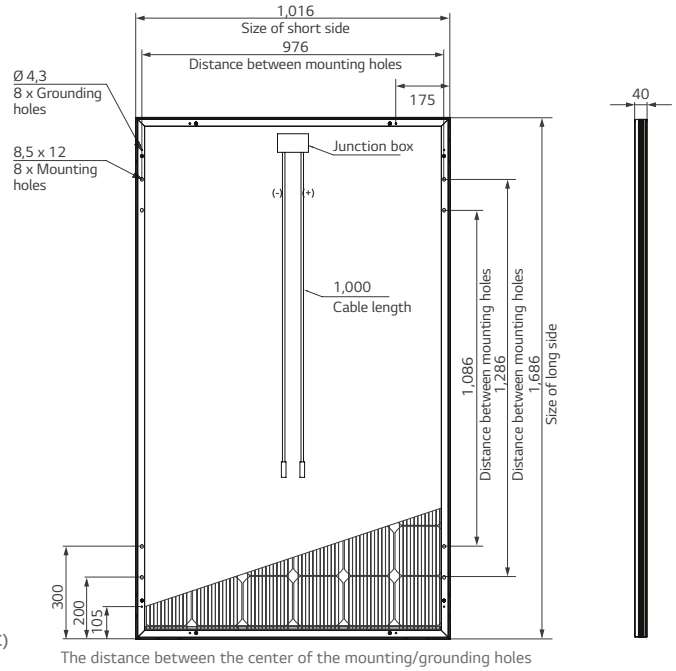
Model		LG340N1C-A5	LG335N1C-A5	LG330N1C-A5
Maximum Power Pmax	[W]	251	247	243
MPP Voltage Vmpp	[V]	31.9	31.5	31.2
MPP Current Impp	[A]	7.86	7.83	7.81
Open Circuit Voltage Voc	[V]	38.3	38.2	38.1
Short Circuit Current Isc	[A]	8.47	8.44	8.41

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

Dimensions (mm)



Frame Cross-section



The distance between the center of the mounting/grounding holes

LG Life's Good

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