ROCK ENERGY COOPERATIVE

Parallel Generation Application Form

RETURN TO:

Rock Energy Cooperative
2815 Kennedy Road
P.O. Box 1758
Janesville, WI 53547-1758

Attention: Energy Services

1. Contact: Applicant is the cooperative member legally responsible for the generating facilities.

Member's Last Name: Doe First: John

Mailing Address: 123 Main Street, Somewhere, WI 99999

Phone: 123-456-7890 Email: JohnDoe@example.com

Emergency Contact Phone Numbers for Responsible Party:

Day: 123-456-7890 Evening: _____ Weekend: _____

Electric Service Account Number: 987654321

By submitting this application, I authorize the appropriate application fee to be charged to this account number. If the application is approved and the installation completed, I understand that I will be subject to an inspection fee that will be charged to this account number. Engineering and distribution studies will be required for generation applications greater than 20 kW. The applicant hereby grants Rock Energy Cooperative the right to access the member's generating facility.

2. Location of Generation Facility

Street Address: 123 Main Street, Somewhere, WI 99999

Latitude – Longitude (optional): _____ County: Rock

3. Applicant's Ownership Interest in Generation Facility

(●) Owner ( ) Co-owner ( ) Lease ( ) Other _____

4. Primary Intent of Generation Facility

(●) Onsite use of power or net energy billing ( ) Standby, emergency, or backup power

5. Electricity Use, Production, and Purchases

a. Anticipated annual electricity consumption of facility or site: 10,000 kWh/yr

b. Anticipated annual electricity production of generation facility: 8,000 kWh/yr

c. Anticipated annual electric purchases (i.e., a – b = ?): 2,000 kWh/yr *

* Value will be negative if there are net sales to the cooperative.

6. Installing Contractor Information

Contractor's Last Name: Sunshine First: Joe

Name of Firm: Joe Sunshine Solar Company

Phone: 123-456-0000 Email: sunshine.joe@joesunshinesolar.com

Mailing Address: 100 E 2nd Street, Somewhere, WI 99999

Should the installing contractor need to disconnect the electrical service during any part of this installation, the installer must contact Rock Energy to schedule a time for Rock Energy crews to perform the disconnect. Cutting the meter seal or making any alterations to Rock Energy's equipment by anyone other than Rock Energy crews will result in a tampering fee being applied to the member's bill.

7. Requested In-Service Date

4/8/2021

8. Provide One-line Schematic Diagram of Facility

☑ Schematic is Attached Number of Pages: 2

9. Generator/Inverter Information

Manufacturer: SolarEdge Model Number: SE6000H-US

Version Number: _____ Serial Number: XXXXXXXXXX

Generation Type (select one): ◉ Single Phase ○ Three Phase

Generation Type (select one): ○ Synchronous ○ Induction ◉ Inverter 1 (# of units) ○ Other _____

Total Generation AC Rating (select one): ◉ 6 kW ○ _____ kVA ○ _____ volts

Primary Energy Source: Solar

Note: If there is more than one generator and/or inverter, attach an additional sheet describing each.

10. Site Plan Showing Location of Lockable External Disconnect Switch (attach additional pages if needed)

11. Liability Insurance

Carrier: Sample Insurance Co. Limits: $500,000

Agent Name: Ann Sample Phone: 123-456-9999

With this application, the member agrees to provide a Certificate of Insurance with Rock Energy Cooperative listed as Additional Insured. Policy limits shall be a minimum of $500,000 per occurrence for generating facilities 10 kilowatts (kW) or less; or $1,000,000 for generating facilities between 11 kW and 100 kW; or $3,000,000 for generating facilities greater than 100 kW. Any variance from the above must be approved by the Cooperative in writing.

12. Design Requirements

a. Has the proposed distributed generation paralleling equipment been certified? (●) Yes ( ) No

b. If not certified, is the equipment field approved for use with small generators? ( ) Yes ( ) No

With submission of this application, the member shall include details of all paralleling equipment (manufacturer's specifications), which must include IEEE & UL listed specifications.

13. Other Comments, Specifications, and Exceptions (attach additional sheets if needed)

14. Required Signatures: Member and Installer (Applications without a member signature shall be considered incomplete and possibly fraudulent.)

To the best of my knowledge, all the information provided in this application form is complete and correct. Incomplete applications shall result in additional application fees for subsequent applications.

Member Signature: John Doe Date: 1/1/2021

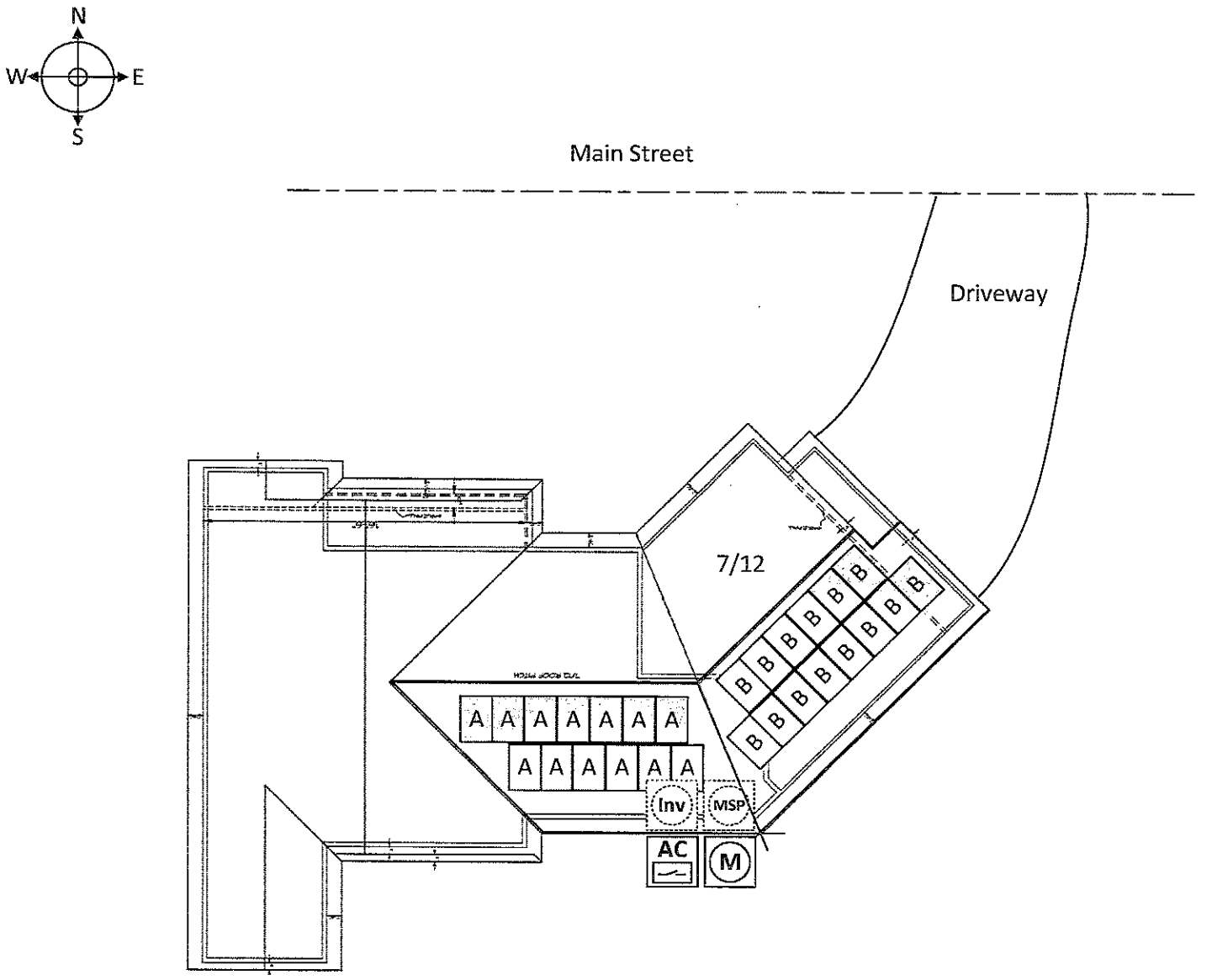
Installer Signature: Joe Sunshine Date: 1/1/2021

*** Please note: This completed form is to be sent or delivered to Rock Energy Cooperative. ***

PAGE NAME

SITE PLAN

Material: shingle



- M — Utility meter
- MSP — Main service panel
- Inv — Inverter
- AC — AC solar disconnect
- DC — DC disconnect
- LC — Load center
- D — Distribution panel
- Bx — Junction/Combiner box
- A | B — Solar modules
- Solar attachment locations
- Vent pipe
- Trench
- Overhead service conductors
- Interior equipment is dashed

SYSTEM DESCRIPTION	6.0 kW Solar PV
MOUNTING SYSTEM	Snap n Rack
MODULES	LG345/350N1C-V5
INVERTER	SolarEdge SE6000H-US

PROPERTY OWNER

John Doe
123 Main Street
Somewhere, WI 99999

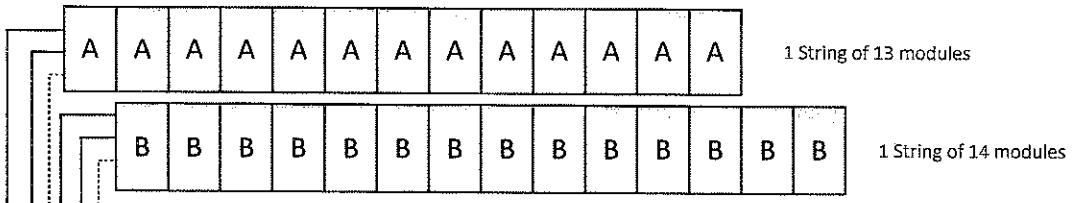
SCALE	1/16" = 1'-0"
DESIGN	Joe Sunshine
DATE	1/1/2021
SHEET	1 of 2

PAGE NAME

ELECTRICAL DIAGRAM

New Construction

New equipment shaded in gray



(4) #10, PV Wire
(1) #6, Bare Cu

Junction Box

(2) #10, THWN-2, Red
(2) #10, THWN-2, Black
(1) #10, THWN-2, Green
¾" EMT, FMC

Inverter SolarEdge
6000H-US

Transformerless
UL 1741

EGC
DC+
DC-
DC+
DC-
L1 L2 N EGC

(1) #8, THWN-2, Red
(1) #8, THWN-2, Black
(1) #8, THWN-2, White
(1) #10, THWN-2, Green
¾" EMT

AC Disconnect
240V, 60A, 3R
Lockable, visible blade

(1) #8, THWN-2, Red
(1) #8, THWN-2, Black
(1) #8, THWN-2, White
(1) #10, THWN-2, Green
¾" EMT

Main Service Panel
240V, 200A bussing

200A

BRAND:

40A

Existing GEC and grounding electrode system

Underground
Service Entrance
L1 L2 N

200A

Existing pedestal

SYSTEM DESCRIPTION: 6.0 kW Solar PV	PROPERTY OWNER: John Doe, 123 Main Street, Somewhere, WI 99999		DESIGN: Joe Sunshine
MOUNTING SYSTEM: Snap n Rack			DATE: 1/1/2021
MODULES: LG345/350N1C-V5		SCALE	SHEET: 2 of 2
INVERTER: SolarEdge SE6000H-US			

INVERTERS

solaredge

Single Phase Inverter

with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US

Optimized installation with HD-Wave technology

- Specifically designed to work with power optimizers
- Record-breaking efficiency
- Fixed voltage inverter for longer strings
- Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12
- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Extremely small
- High reliability without any electrolytic capacitors
- Built-in module-level monitoring
- Outdoor and indoor installation
- Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)

HD wave

Single Phase Inverter
with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US /
SE6000H-US/ SE7600H-US / SE10000H-US / SE11400H-US

	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
OUTPUT								
Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400	VA
Max. AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400	VA
AC Output Voltage Min.-Nom.-Max. (183 - 208 - 229)	-	✓	-	✓	-	-	-	Vac
AC Output Voltage Min.-Nom.-Max. (211 - 240 - 264)	✓	✓	✓	✓	✓	✓	✓	Vac
AC Frequency (Nominal)	59.3 - 60 - 60.5[1]							Hz
Maximum Continuous Output Current 208V	-	16	-	24	-	-	-	A
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5	A
GFDI Threshold	1							A
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes							
INPUT								
Maximum DC Power @240V	4650	5900	7750	9300	11800	15500	17650	W
Maximum DC Power @208V	-	5100	-	7750	-	-	-	W
Transformer-less, Ungrounded	Yes							
Maximum Input Voltage	480							Vdc
Nominal DC Input Voltage	380				400			Vdc
Maximum Input Current 208V	-	9	-	13.5	-	-	-	Adc
Maximum Input Current @240V	8.5	10.5	13.5	16.5	20	27	30.5	Adc
Max. Input Short Circuit Current	45							Adc
Reverse-Polarity Protection	Yes							
Ground-Fault Isolation Detection	600kΩ Sensitivity							
Maximum Inverter Efficiency	99	99.2						%
CEC Weighted Efficiency	99							%
Nighttime Power Consumption	< 2.5							W
ADDITIONAL FEATURES								
Supported Communication Interfaces	RS485, Ethernet, ZigBee (optional), Cellular (optional)							
Revenue Grade Data, ANSI C12.20	Optional[2]							
Rapid Shutdown - NEC 2014 and 2017 690.12	Automatic Rapid Shutdown upon AC Grid Disconnect							
STANDARD COMPLIANCE								
Safety	UL1741, UL1741 SA, UL1699B, CSA C22.2, Canadian AFCI according to T.I.L. M-07							
Grid Connection Standards	IEEE1547, Rule 21, Rule 14 (HI)							
Emissions	FCC Part 15 Class B							
INSTALLATION SPECIFICATIONS								
AC Output Conduit Size / AWG Range	3/4" minimum / 14-6 AWG					3/4" minimum /14-4 AWG		
DC Input Conduit Size / # of Strings / AWG Range	3/4" minimum / 1-2 strings / 14-6 AWG					3/4" minimum / 1-3 strings / 14-6 AWG		
Dimensions with Safety Switch (HxWxD)	17.7 x 14.6 x 6.8 / 450 x 370 x 174					21.3 x 14.6 x 7.3 / 540 x 370 x 185		in / mm
Weight with Safety Switch	22 / 10		25.1 / 11.4	26.2 / 11.9		38.8 / 17.6		lb / kg
Noise	< 25					<50		dBA
Cooling	Natural Convection					Natural convection		
Operating Temperature Range	-13 to +140 / -25 to +60[3] (-40°F / -40°C option)[4]							°F / °C
Protection Rating	NEMA 3R (Inverter with Safety Switch)							

[1] For other regional settings please contact SolarEdge support
[2] Revenue grade inverter P/N: SExxxxH-US000NNC2
[3] For power de-rating information refer to: https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf
[4] -40 version P/N: SExxxxH-US000NNU4

RoHS

LG
Life's Good

25 YEARS
LG Product and Performance Warranty

15 YEARS LONGER THAN INDUSTRY STANDARD OF 10 YEARS

LG NeON®2

LG345/350N1C-V5

THE HIGH PERFORMER

UP TO 20.4% MODULE EFFICIENCY

Awards Received By LG Solar™

EUPD RESEARCH TOP BRAND PV MODULES AUSTRALIA 2019
EUPD RESEARCH TOP BRAND PV MODULES AUSTRALIA 2018
EUPD RESEARCH TOP BRAND PV MODULES AUSTRALIA 2017
EUPD RESEARCH TOP BRAND PV MODULES AUSTRALIA 2016
inter solar award 2016 WINNER
inter solar award 2015 WINNER
inter solar award 2013 WINNER

THE NeON® 2 - 350W - THE PANEL OF THE FUTURE AVAILABLE TODAY

The LG NeON® 2 has seen many improvements, from longer warranties and higher efficiency to lower degradation. This panel is ideal for homes seeking a visually pleasing solar panel and for roofs where space is tight or where future system expansions are considered e.g. to incorporate battery storage.

The LG NeON® 2 panels with their double sided cells and CELLO technology absorb light from the front and the back of the cell. This technology sets a new standard for innovation and was recognised with the 2015 Photovoltaic Innovation Award at the Intersolar Industry Event in Germany. LG also won the 2016 Intersolar award for our new NeON BiFacial range.

Great Visual Appearance

LG NeON® 2 panels have been designed with appearance in mind. Their black cells, black frames and thinner wire busbars give an aesthetically pleasing uniform black appearance. Your home deserves the LG NeON® 2.

25 Years Product Warranty (Parts & Labour)

The LG product warranty is 15 years longer than many competitors standard 10 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® 2's 350W are a similar physical size to many competing 300W panels. This means with the LG NeON® 2 350W you get 16.6% more electricity per square metre than a 300W panel. So you can install more kW of solar on your roof with the LG NeON® 2.

Improved 25 Year Performance Warranty

The initial degradation of the module has been improved from -3% to -2%, in the 1st year and the annual rate of degradation has fallen from -0.7%/year to -0.33%/ year thereafter. This brings an 90.08% warranted output after 25 years, compared to 80.2% for many competing panels.

Made in Korea **Call LG Solar on 1300 152 179** **www.lgenergy.com.au**

LG345N1C-V5 | LG350N1C-V5

LG NeON®2

ABOUT LG SOLAR™

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. 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. Additionally, LG Solar™ won the Australian Top Brand award in 2016, 2017, 2018 and 2019.

With over 200 lesser known brand panels selling in Australia, LG Solar panels offer a peace of mind solution, as they are backed by an established global brand.

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 NeON® 2 models are consistently among the best performing in these tests.

Corrosion Resistance Certification

LG NeON® 2 panels can be installed confidently right up to the coastline as the LG warranty will guarantee these type of installations.

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.

Multi Anti-reflective Coatings Increase Output

LG Solar™ 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.

Improved High Temperature Performance

Solar panels slowly lose ability to generate power as they get hotter. LG NeON® 2, has an improved temperature co-efficient to standard modules, which means in hot weather LG NeON® 2 panels will deliver higher output.

"CELLO" Technology Increases Power

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

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, as the panel degrades less.

Extensive Testing Programme

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

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.

Positive Tolerance (0/+3%)

If you buy a 350 Watt panel then the flash test of this panel will show somewhere between 350W and 360W. 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.

Enhanced low light performance

LG NeON® 2 panels will give better performance under low light, such as early morning or late afternoon compared to many competing panels.

Automated Production in South Korea

All LG solar panels sold in Australia and New Zealand 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® 2 – ENHANCED. MORE EFFICIENT. ADVANCED.

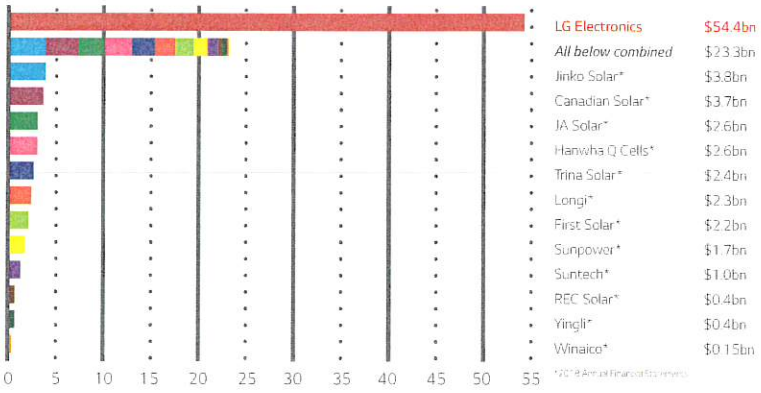
LG NeON® 2 solar panels now offer even more output. Featuring a classy design and with a total of 60 cells, it can withstand under test a static front panel load of 5400 pascals and rear wind load of 4000 pascals. LG has lengthened its product warranty from 10 to 25 years and has improved its linear performance guarantee to 90.08 % of nominal output after 25 years. The LG NeON® 2 is an excellent choice for high performing long lasting solar systems.

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.

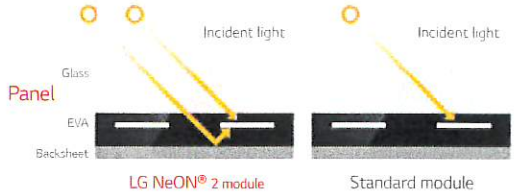
Good to know: LG Electronics Australia Pty Ltd is the warrantor in Australia and NZ for your solar modules. So LG support, via offices in every Australian mainland state and NZ and through our 70 strong, Australia wide dealer network, is only a phone call away.

The Warrantor's 2018 Global Sales in Billions of US Dollars



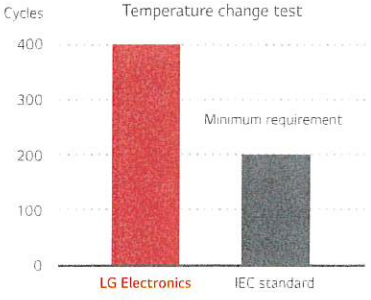
HIGHER OUTPUT, HIGHER YIELD

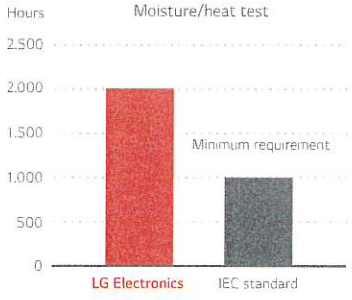
The NeON® Cell produces energy from both the front and the back of the cell. This innovative approach allows the absorption of light from the back of the cell which raises the panel's efficiency and power output. Standard panels only absorb light from the front.



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).



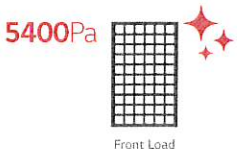


Awards Received By LG Solar™

Our panel range have won a string of International Awards.

POWERFUL DESIGN, GUARANTEED ROBUST

With reinforced frame design, the LG NeON® 2 can under test withstand a front load of 5400 Pa which is the equivalent of 943 kg over the size of the panel. The rear load/wind load of the panel under test is 4000 Pa.



LG offers a 15 year longer product warranty for parts and labour than many competitors 10 years to an impressive 25 years.

10yrs +15yrs

LG345N1C-V5 | LG350N1C-V5

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)	1686 x 1016 x 40 mm
Front Load (test)	5400 Pa
Rear Load (test)	4000 Pa
Weight	17.1 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 matt black coating

Certifications and Warranty

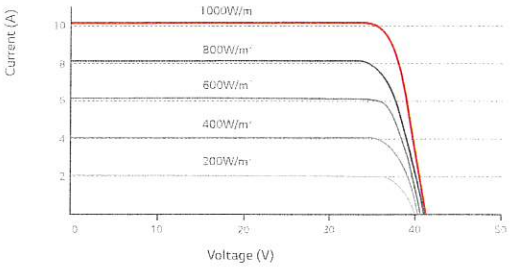
Certifications	ISO 9001, ISO 14001, ISO 50001
	IEC 61215-1/-1-1/2:2016, IEC 61730-1/2:2016, UL1703
	OHSAS 18001
Module Fire Performance	Type 1 (UL 1703), Class C (UL 790, ULC/ORD C 1703)
Product Warranty	25 Years
Output Warranty of Pmax (Measurement Tolerance ± 3%)	Linear Warranty[1]

[1] 1) 1st year 98%, 2) After 1st year 0.33% annual degradation, 3) 90.08% for 25 years.

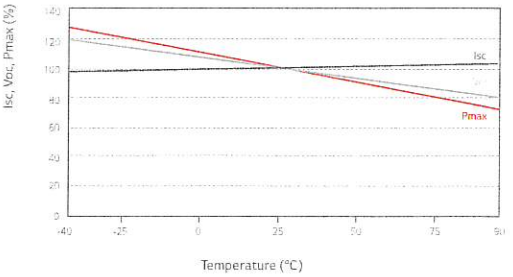
Temperature Characteristics

NMOT	42 ± 3 °C
Pmax	-0.36 %/°C
Voc	-0.27 %/°C
Isc	0.03 %/°C

Current – Voltage characteristics at various irradiance levels



Current – Voltage characteristics at various cell temperatures



Electrical Properties (STC[2])

Module Type	345 W	350 W
Maximum Power Pmax (W)	345	350
MPP Voltage Vmpp (V)	34.9	35.3
MPP Current Impp (A)	9.89	9.92
Open Circuit Voltage Voc (V)	41.2	41.3
Short Circuit Current Isc (A)	10.57	10.61
Module Efficiency (%)	20.1	20.4
Operating Temperature (°C)	-40 ~ +90	
Maximum System Voltage (V)	1000	
Maximum Series Fuse Rating (A)	20	
Power Tolerance (%)	0 ~ +3	

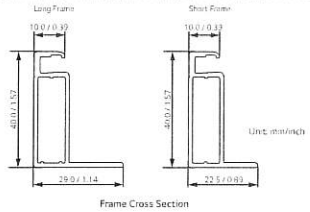
[2] STC (Standard Test Condition): Irradiance 1000 W/m², Module Temperature 25 °C, AM 1.5.
The nameplate power output is measured and determined by LG Electronics at its sole and absolute discretion.

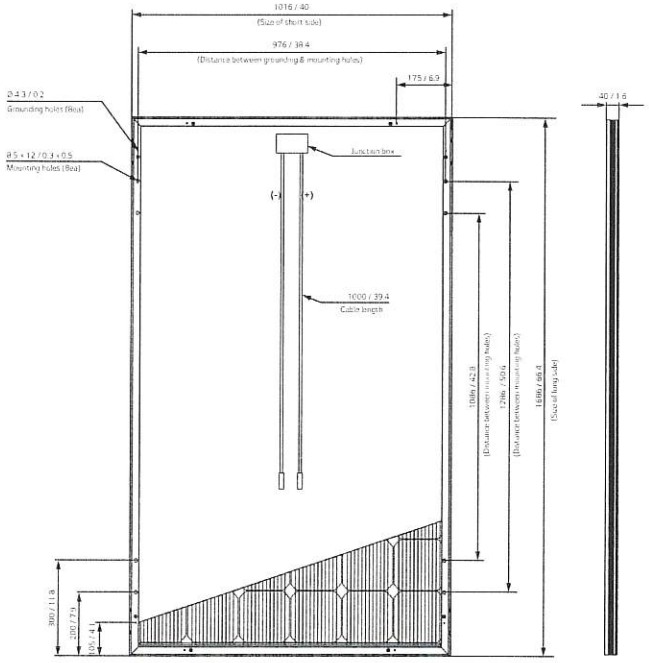
Electrical Properties (NMOT[3])

Module Type	345 W	350 W
Maximum Power Pmax (W)	259	262
MPP Voltage Vmpp (V)	32.8	33.2
MPP Current Impp (A)	7.89	7.91
Open Circuit Voltage Voc (V)	38.8	38.9
Short Circuit Current Isc (A)	8.49	8.52

[3] NMOT (Nominal Module Operating Temperature): Irradiance 800 W/m², ambient temperature 20 °C, wind speed 1 m/s, Spectrum AM 1.5.

Dimensions (mm)





LG Electronics Australia Pty Ltd
Solar Business Group
2 Wonderland Drive, Eastern Creek, NSW 2766
Ph: 1300 152 179
E-Mail: solarsales@lge.com.au
Web:lgenergy.com.au

LG Electronics Inc.
Solar Business Division
Twin Building, Western Tower, 11F,
128, Yeoui-daero, Yeongdeungpo-gu,
Seoul, 07336, Korea
www.lg.com/global/business

Product specifications are subject to change without prior notice.
Date: 08/2019

PERSONAL UMBRELLA LIABILITY

POLICY DECLARATIONS

SAMPLE Insurance Company
P.O. Box 100, Somewhere, WI 99999

BILLING NUMBER	POLICY NUMBER	INSURANCE OFFICE / NO.
XXXXXXXX	XXXXXXXXX	XXXXX SMWH/99999

NAMED INSURED:

DOE JOHN
123 MAIN ST
SOMEWHERE WI 99999

POLICY EFFECTIVE ON: Jan 01, 2021 12:01 A.M. Standard Time at **your** address

DECLARATIONS EFFECTIVE: Jan 02, 2019

THIS DECLARATIONS HAS BEEN ISSUED DUE TO:

Policy Renewal

To report a claim any time day or night, call **1-123-456-9999**.

LIMITS OF LIABILITY

Liability any one occurrence	$	500,000
Self Insured Amount	$	1,000

SCHEDULE OF UNDERLYING INSURANCE

TYPE OF POLICY	NAME OF CARRIER	POLICY NUMBER	LIMITS OF LIABILITY
Auto Liability	SAMPLE Insurance Co	XXXXXXXXX	250/500/100
Personal Liability (Homeowners)	SAMPLE Insurance Co	XXXXXXXXX	300,000 Single Limit

THIS IS NOT A PREMIUM NOTICE

BILLING MODE: Annual unless otherwise stated below	TOTAL PREMIUM AND ASSESSMENTS	$	300.00
ADDITIONALLY INSURED ROCK ENERGY COOPERATIVE	STANDARD PAYMENT PLAN FEE	$	0.00

Ann Sample
AUTHORIZED REPRESENTATIVE

12/1/2020
DATE COUNTERSIGNED