

# LG NeON<sup>®</sup> R

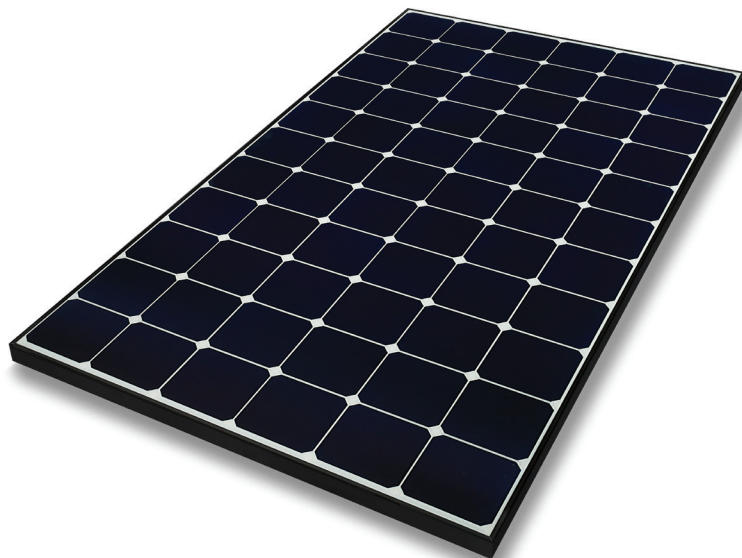
LG440QAC-A6 Preliminary

66

## 440W

LG NeON<sup>®</sup> R is powerful solar module that provides world-class performance. A new cell structure that eliminates electrodes on the front maximizes the utilization of light and enhances reliability.

LG NeON<sup>®</sup> R is a result of LG's efforts to increase customer's values beyond efficiency. LG NeON<sup>®</sup> R features enhanced durability, performance under real-world conditions, an enhanced warranty and aesthetic design suitable for roofs.



## Features



### Roof Aesthetics

LG NeON<sup>®</sup> R has been designed with aesthetics in mind: the lack of any electrodes on the front creates an improved, modern aesthetic.



### 25-Year Limited Product Warranty

The NeON<sup>®</sup> R is covered by a 25-year limited product warranty. In addition, up to \$450 of labor costs will be covered in the rare case that a module needs to be repaired or replaced.



### Enhanced Performance Warranty

The LG NeON<sup>®</sup> R has an enhanced performance warranty. After 25 years, LG NeON<sup>®</sup> R is guaranteed at least 92.5% of initial performance.



### More generation per square meter

The LG NeON<sup>®</sup> R has been designed to significantly enhance its output, making it efficient even in limited space.

When you go solar, ask for the brand you can trust: LG Solar

## About LG Electronics USA, Inc.

LG Electronics is a global leader in electronic products in the clean energy markets by offering solar PV panels and energy storage systems. 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<sup>®</sup> series to the market, which is now available in 32 countries. The NeON<sup>®</sup> (previous MonoX<sup>®</sup> NeON), NeON<sup>®</sup>2, NeON<sup>®</sup>2 BiFacial won the "Intersolar AWARD" in 2013, 2015 and 2016, which demonstrates LG's leadership and innovation in the solar industry.



## LG440QAC-A6

### General Data

|                                  |                                |
|----------------------------------|--------------------------------|
| Cell Properties (Material/Type)  | Monocrystalline / N-type       |
| Cell Maker                       | LG                             |
| Cell Configuration               | 66 Cells (6 x 11)              |
| Module Dimensions (L x W x H)    | 1,910mm x 1,042mm x 40mm       |
| Weight                           | 20.5 kg                        |
| Glass (Material)                 | Tempered Glass with AR Coating |
| Backsheet (Color)                | White                          |
| Frame (Material)                 | Anodized Aluminium             |
| Junction Box (Protection Degree) | IP 68 with 3 Bypass Diodes     |
| Cables (Length)                  | 1,250mm x 2EA                  |
| Connector (Type/Maker)           | MC 4 / MC                      |

### Certifications and Warranty

|                               |                                                                                                                                          |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Certifications**              | IEC 61215-1/-1-1/2 : 2016, IEC 61730-1/2: 2016,<br>UL 61730-1 : 2017, UL 61730-2 : 2017<br>ISO 9001, ISO 14001, ISO 50001<br>OHSAS 18001 |
| Salt Mist Corrosion Test      | IEC 61701:2011 Severity 6                                                                                                                |
| Ammonia Corrosion Test        | IEC 62716 : 2013                                                                                                                         |
| Hail Test                     | 25mm (1") diameter at 23m/s (52mph)                                                                                                      |
| Module Fire Performance       | Type 1 (UL 61730)                                                                                                                        |
| Fire Rating                   | Class C (UL 790, ULC / ORD C 1703)                                                                                                       |
| Solar Module Product Warranty | 25 Years                                                                                                                                 |
| Solar Module Output Warranty  | Linear Warranty*                                                                                                                         |

\*Improved: 1<sup>st</sup> year 98.5%, from 2-24th year: -0.25%/year down, 92.5% at year 25  
\*\*In Progress

### Temperature Characteristics

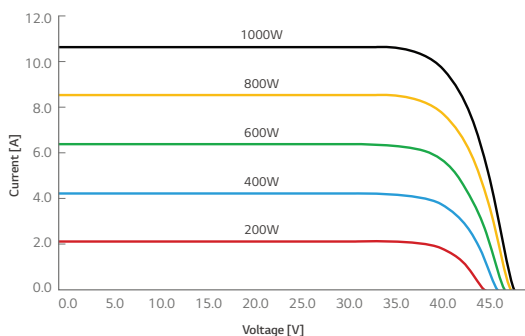
|                  |        |        |
|------------------|--------|--------|
| NMOT*            | [°C]   | 44 ± 3 |
| P <sub>max</sub> | [%/°C] | -0.29  |
| V <sub>oc</sub>  | [%/°C] | -0.24  |
| I <sub>sc</sub>  | [%/°C] | 0.04   |

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

### Electrical Properties (NMOT)

|                                          |             |      |
|------------------------------------------|-------------|------|
| Model                                    | LG440QAC-A6 |      |
| Maximum Power (P <sub>max</sub> )        | [W]         | 334  |
| MPP Voltage (V <sub>mpp</sub> )          | [V]         | 39.1 |
| MPP Current (I <sub>mpp</sub> )          | [A]         | 8.53 |
| Open Circuit Voltage (V <sub>oc</sub> )  | [V]         | 46.0 |
| Short Circuit Current (I <sub>sc</sub> ) | [A]         | 9.03 |

### I-V Curves



### Electrical Properties (STC\*)

|                                                |             |       |
|------------------------------------------------|-------------|-------|
| Model                                          | LG440QAC-A6 |       |
| Maximum Power (P <sub>max</sub> )              | [W]         | 440   |
| MPP Voltage (V <sub>mpp</sub> )                | [V]         | 41.4  |
| MPP Current (I <sub>mpp</sub> )                | [A]         | 10.64 |
| Open Circuit Voltage (V <sub>oc</sub> , ± 5%)  | [V]         | 48.2  |
| Short Circuit Current (I <sub>sc</sub> , ± 5%) | [A]         | 11.20 |
| Module Efficiency                              | [%]         | 22.1  |
| Power Tolerance                                | [%]         |       |

\*STC (Standard Test Condition): Irradiance 1000 W/m<sup>2</sup>, Cell temperature 25°C, AM 1.5  
Measure Tolerance: ± 3%

### Operating Conditions

|                                |          |           |
|--------------------------------|----------|-----------|
| Operating Temperature*         | [°C]     | -40 ~ +85 |
| Maximum System Voltage         | [V]      | 1,000     |
| Maximum Series Fuse Rating     | [A]      | 20        |
| Mechanical Test Load** (Front) | [Pa/psf] | 5,400     |
| Mechanical Test Load** (Rear)  | [Pa/psf] | 4,000     |

\*The operating ambient temperature of these devices may exceed 40°C at full load for all wire sizes if is determined suitable in the field use application.

\*\*Based on IEC 61215-2 : 2016 (Test Load = Design Load x Safety Factor (1.5))

### Packaging Configuration

|                                      |      |                       |
|--------------------------------------|------|-----------------------|
| Number of Modules per Pallet         | [EA] | 25                    |
| Number of Modules per 40' Container  | [EA] | 600                   |
| Number of Modules per 53' Container  | [EA] | TBD                   |
| Packaging Box Dimensions (L x W x H) | [mm] | 1,960 x 1,120 x 1,221 |
| Packaging Box Dimensions (L x W x H) | [in] | 77.2 x 44.1 x 48.1    |
| Packaging Box Gross Weight           | [kg] | 549                   |
| Packaging Box Gross Weight           | [lb] | 1,210                 |

### Dimensions (mm/inch)

