

## **Innovation** for a Better Life













# 60 cell

Introducing Mono X<sup>™</sup> NeON module series, which uses highly efficient n-type materials, an elaborate process control adopting a semiconductor processing solution and a double-sided structure. Our R&D concentrates on developing a product that is not only efficient, but strives to increase practical value for customers.











#### **N-Type Material**

Mono X<sup>™</sup> NeON uses n-type cells, boasting higher mobility of electric charge, resulting in higher generation efficiency.



## Near Zero LID (Light Induced Degradation)

The n-type cells used in Mono X<sup>™</sup> NeON have almost no boron, which may cause the initial efficiency to drop, leading to less LID.



#### **Nano Level Control**

Mono  $X^{\text{\tiny{TM}}}$  NeON uses the Nano-level process control predominant in semiconductor processing process, which ensures less electric loss from internal defects.



### **Double-Sided Cell Structure**

The rear of the cell used in Mono  $X^{\text{\tiny TM}}$  NeON is designed to contribute to generation; 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 multinational corporation committed to expanding its capacity with solar energy business as its future growth engine. Our a solar energy source research program was launched in 1985, backed by LG Group's rich experience in semi-conductors, LCD, chemistry and electronic materials industry. We successfully released the first Mono  $X^{\text{TM}}$  series to the market in 2010 which exported to 32 countries in 2 years. In 2013, Mono X™ NeON won "Intersolar Award", which proved its leading innovation in the industry.



#### **Mechanical Properties**

Cells	6 x 10
Cell vendor	LG
Cell type	Monocrystalline
Cell dimensions	156.5 x 156.5 mm / 6 x 6 in
# of busbar	3
Dimensions (L x W x H)	1640 x 1000 x 35 mm
	64.57 x 39.37 x 1.38 in
Static snow load	5400 Pa / 113 psf
Static wind load	2400 Pa / 50 psf
Weight	$16.8 \pm 0.5 \text{ kg} / 36.96 \pm 1.1 \text{ lb}$
Connector type	MC4 connector IP 67
Junction box	IP 67 with 3 bypass diodes
Length of cables	2 x 1000 mm / 2 x 39.37 in
Glass	High transmission tempered glass
Frame	Anodized aluminum

#### **Certifications and Warranty**

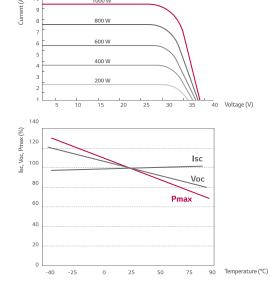
Certifications	IEC 61215, IEC 61730-1/-2, UL 1703,
	ISO 9001, IEC 61701, IEC 62716
Product warranty	10 years
Output warranty of Pmax (measurement Tolerance ± 3%)	Linear warranty*

<sup>\* 1) 1</sup>st year. 98%, 2) After 2nd year. 0.7%p annual degradation, 3) 81.2% for 25 years

#### **Temperature Coefficients**

NOCT	45 ± 2 °C	
Pmpp	-0.41 %/°C	
Voc	-0.29 %/°C	
Isc	0.04 %/°C	

#### **Characteristic Curves**



#### **Electrical Properties (STC\*)**

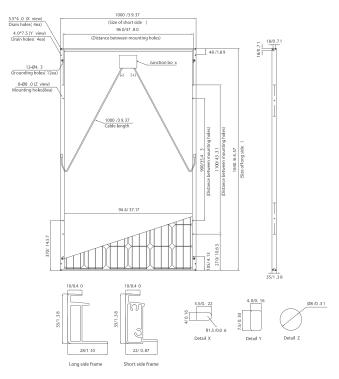
	305 W
MPP voltage (Vmpp)	32.1
MPP current (Impp)	9.52
Open circuit voltage (Voc)	40.0
Short circuit current (Isc)	10.1
Module efficiency (%)	18.6
Operating temperature (°C)	-40 ~ +90
Maximum system voltage (V)	1000 (IEC), 600 (UL)
Maximum series fuse rating	20
Power tolerance (%)	0 ~ +3

#### **Electrical Properties (NOCT\*)**

	305 W	
Maximum power (Pmpp)	223	
MPP voltage (Vmpp)	29.4	
MPP current (Impp)	7.59	
Open circuit voltage (Voc)	37.0	
Short circuit current (Isc)	8.14	
Efficiency reduction (from 1000 W/m2 to 200 W/m2)	< 2%	

<sup>\*</sup> NOCT (Nominal Operating Cell Temperature): Irradiance 800 W/m2, ambient temperature 20 °C, wind speed 1 m/s  $\,$ 

#### Dimensions (mm/in)



 $<sup>\</sup>ensuremath{^{\star}}$  The distance between the center of the mounting/grounding holes.



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<sup>\*</sup> 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.