

# THE NEXT EVOLUTION LEAP

LG NeON<sup>®</sup> 2BiFacial

UP TO 520 WATT  
IN TOTAL

BIFACIAL MODULE

TRANSPARENT  
BACKSHEET



## LG NeON<sup>®</sup> 2 BiFacial – UNLEASH THE POWER!

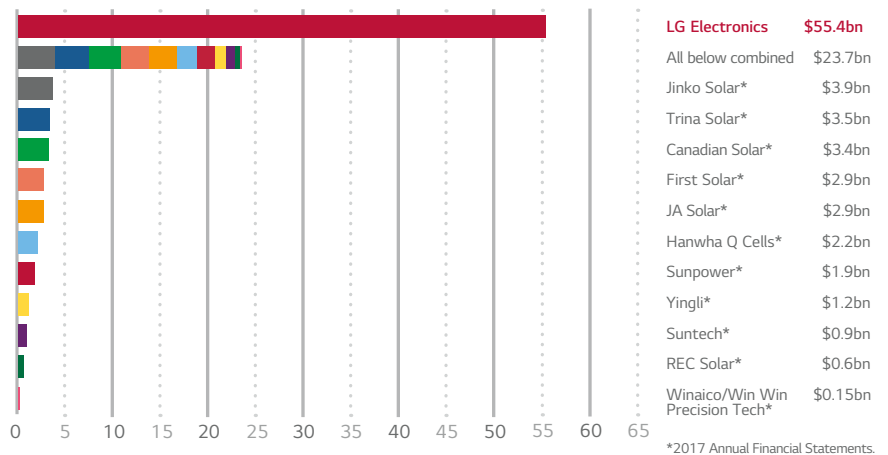
The LG NeON<sup>®</sup> 2 BiFacial is based on the well-known high-performance module LG NeON<sup>®</sup> 2. Already on the front side, the LG400N2T-A5 module reaches with its 72 highly efficient, mono-crystalline cells a basic power of 400 Watt peak (Wp). Through the use of bi-facial cells and a transparent back sheet, the power of the LG NeON<sup>®</sup> 2 solar modules with CELLO technology can now be fully exploited. Thanks to the additional yield from the back side of the module (“bifacial bonus”) the overall performance of the LG NeON<sup>®</sup> 2 BiFacial module increases under optimal conditions up to 520 W.

### 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.

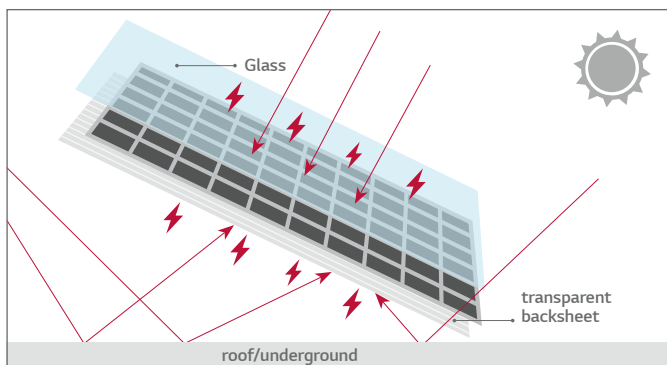
The Warrantor’s 2017 Global Sales in Billions of US Dollars



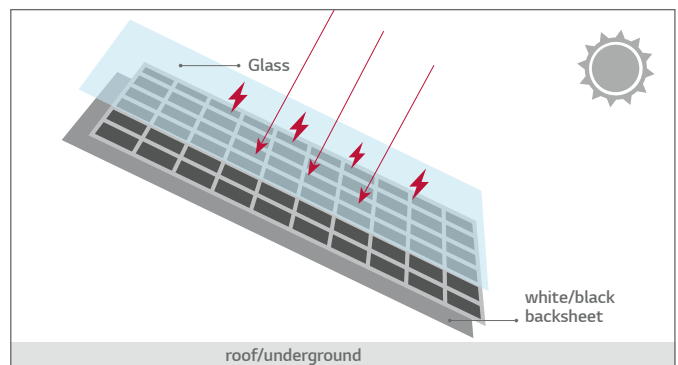
### LG NeON<sup>®</sup> 2 BiFacial – BONUS!

Traditional, single-sided active cells and modules can absorb incident light only on the front side and convert it to electricity. The LG NeON<sup>®</sup> 2 BiFacial, however, has double-sided active cells and a translucent foil on the back. This enables to use both the light falling on the front side and on the back side, and increase energy yield under optimal conditions by up to 30 % compared to a monofacial module of equal nominal power.

#### Bifacial module



#### Monofacial module



## HIGHER YIELD WITH 25-YEARS OF LG PRODUCT AND PERFORMANCE GUARANTEE

### Extended Product Warranty

# 25 yrs

Linear Warranty: 25yrs\*

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



## LG NeON<sup>®</sup> 2 BiFacial

LG400N2T-A5 | LG390N2T-A5

### 72 cell

LG NeON<sup>®</sup> 2 BiFacial is designed to utilize both sides of the PV module for absorbing more light and generating more energy. It also adopts the prizewinning Cello technology which replaces 4 busbars with 12 thin wires to enhance power output and reliability. It is possible to produce a surplus of output energy with LG NeON<sup>®</sup> 2 BiFacial compared with normal monofacial modules.



– CELLO technology  
– transparent backsheet



### KEY FEATURES



#### Enhanced Performance Warranty

LG NeON<sup>®</sup> 2 BiFacial has an enhanced linear performance warranty with a max. annual degradation of -0,5 %. Thus, LG guarantees a min. of 86 % of the nominal power even after 25 years of operation.



#### Better Performance on a Sunny Day

LG NeON<sup>®</sup> 2 BiFacial now performs better than many other modules on sunny days thanks to its improved temperature coefficient.



#### High Power Output

LG NeON<sup>®</sup> 2 BiFacial has been designed using LG's new CELLO technology. The cell efficiency on the rear side is only slightly lower than on the front side.



#### Bifacial Energy Yield

It is possible to produce 30 % more energy than with conventional modules under optimal conditions.



#### More Power also on a Cloudy Day

LG NeON<sup>®</sup> 2 BiFacial gives good performance even on a cloudy day due to its very good weak sunlight performance.



#### Almost Zero LID (Light Induced Degradation)

The n-type cells used in LG NeON<sup>®</sup> 2 BiFacial have almost no boron, which often causes the initial efficiency drop, of conventional modules.

#### 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<sup>®</sup> series to the market, which is now available in 32 countries. The LG 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 Solar's lead, innovation and commitment to the industry.

## Electrical Properties (STC<sup>2</sup>)

	Unit	LG400N2T-A5	Bifacial Gain <sup>3</sup>				LG390N2T - A5	Bifacial Gain <sup>3</sup>			
			5%	10%	20%	30%		5%	10%	20%	30%
Maximum Power (Pmax)	[W]	400	420	440	480	520	390	410	429	468	507
MPP Voltage (Vmpp)	[V]	41.5	41.5	41.5	41.6	41.6	41.4	41.4	41.4	41.5	41.5
MPP Current (Imp)	[A]	9.65	10.13	10.61	11.55	12.51	9.43	9.90	10.36	11.28	12.22
Open Circuit Voltage (Voc)	[V]	49.7	49.7	49.7	49.8	49.8	49.2	49.2	49.2	49.3	49.3
Short Circuit Current (Isc)	[A]	10.22	10.73	11.24	12.26	13.29	10.15	10.15	11.17	12.18	13.20
Module Efficiency	[%]	18.9	19.9	20.8	22.7	24.6	18.5	19.4	20.3	22.1	24.0
Operating Temperature	[°C]	-40 ~ +90									
Maximum System Voltage	[V]	1000									
Maximum Series Fuse Rating	[A]	20									
Pmax Bifaciality Coefficient <sup>4</sup>	[%]	76									
Power Tolerance	[%]	0 ~ +3									

<sup>2</sup> STC (Standard Test Condition): Irradiance 1,000 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.

<sup>3</sup> Depending on mounting height and albedo of the underground.

<sup>4</sup> Pmax Bifaciality Coefficient 25 years guarantee, based on front output guarantee. Tolerance ± 7%.

## Mechanical Properties

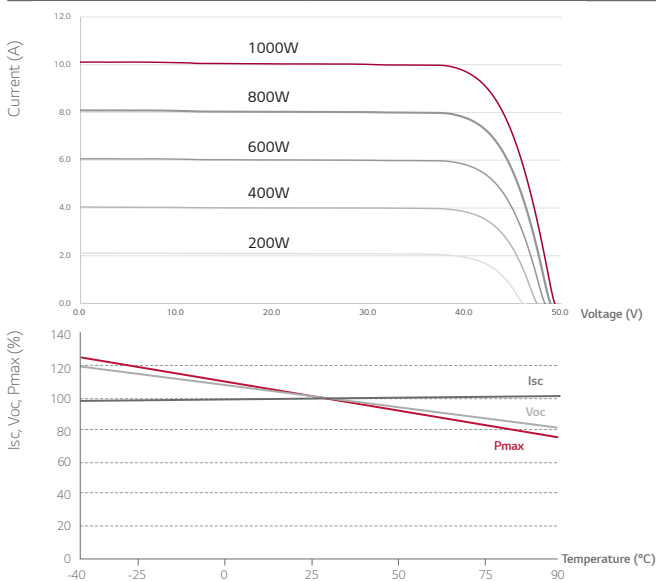
Cells	6 x 12
Cell Type	Monocrystalline / N-type
Cell Dimensions	161.7 x 161.7 mm
# of Busbar	12 (Multi Wire Busbar)
Dimensions (L x W x H)	2,064 x 1,024 x 40 mm
Front Load	5,400 Pa
Rear Load	4,300 Pa
Weight	22.0 kg
Connector Type	MC4
Junction Box	IP68 with 3 Bypass Diodes
Cables	2 x 1200 mm
Glass	High Transmission Tempered Glass
Frame	Anodized Aluminium

## Electrical Properties (NOCT<sup>5</sup>)

Model		LG400N2T-A5	LG390N2T-A5
Maximum Power (Pmax)	[W]	296	289
MPP Voltage (Vmpp)	[V]	38.4	38.3
MPP Current (Imp)	[A]	7.71	7.54
Open Circuit Voltage (Voc)	[V]	46.5	45.9
Short Circuit Current (Isc)	[A]	8.21	8.17

<sup>5</sup> NOCT (Nominal Operating Cell Temperature): Irradiance 800 W/m<sup>2</sup>, ambient temperature 20 °C, wind speed 1 m/s

## Characteristic Curves



## Certifications and Warranty

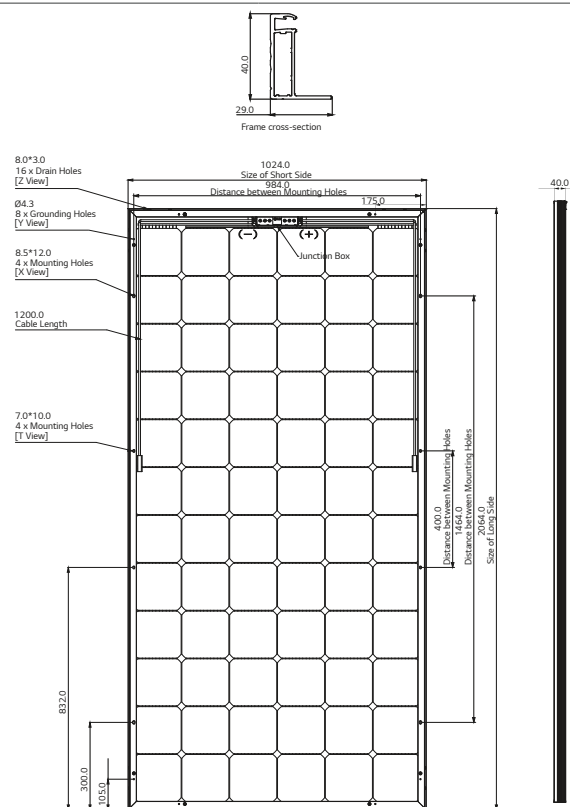
Certifications	IEC 61215, IEC 61730-1/-2
	IEC 61701 (Salt mist corrosion test)
	IEC 62716 (Ammonia corrosion test)
	ISO 9001
Fire Resistance Class	Class C, Fire Class 1 (Italy)
Product Warranty	25 Years
Output Warranty of Pmax	Linear Warranty <sup>1</sup>

<sup>1</sup> 1) 1st year: min. 98%, 2) After 1st year: max. 0.5% annual degradation, 3) Min. 86% for 25 years

## Temperature Characteristics

NOCT	[ °C ]	45 ± 3
Pmax	[%/°C]	-0.36
Voc	[%/°C]	-0.27
Isc	[%/°C]	0.03

## Dimensions (mm)



\* The distance between the center of the mounting/grounding holes.

