

# THE NEXT EVOLUTION LEAP

LG NeON<sup>®</sup> 2BiFacial

**BIFACIAL MODULE**

**TRANSPARENT  
BACKSHEET**



LG NeON<sup>®</sup> 2BiFacial

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

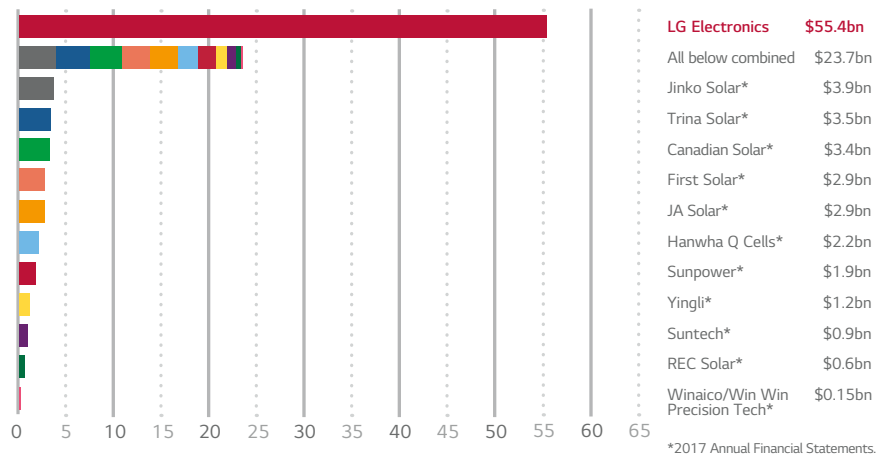
The LG NeON<sup>®</sup> 2 BiFacial is based on the well-known high-performance module LG NeON<sup>®</sup> 2. Already on the front side, the LG405N2T-J5 module reaches with its 72 highly efficient, mono-crystalline cells a basic power of 405 Watt peak (Wp). Through the use of bi-facial cells and a transparent 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.

### 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.

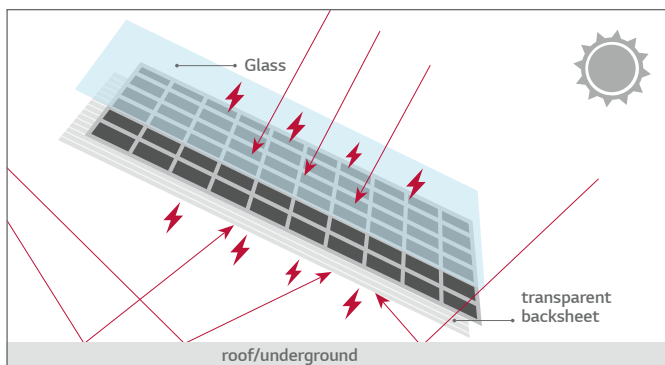
The Warrantor’s 2017 Global Sales in Billions of US Dollars



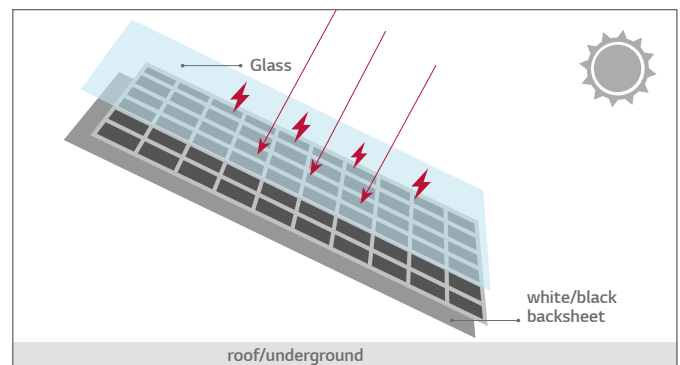
### LG NeON<sup>®</sup> 2 BiFacial – BONUS!

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\*



\* Under BiFi 100 condition, 1st year 104.4%, after 1st year : 0.35 annual degradation, 95.4% for 25 years

## LG NeON<sup>®</sup> 2 BiFacial

LG405N2T-J5 | LG400N2T-J5

### 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



#### 25-year product warranty

In addition to the extended performance warranty, LG has also extended the product warranty for LG NeON<sup>®</sup> 2 BiFacial modules to a strong 25 years.



#### 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.

## 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)	2,024 x 1,024 x 40 mm
Front Load	5,400 Pa
Rear Load	3,000 Pa
Weight	20.3 kg
Connector Type	MC4 / MC
Junction Box	IP68 with 3 Bypass Diodes
Cables	2 x 1200 mm
Glass	High Transmission Tempered Glass
Frame	Anodized Aluminium

\*Mechanical Test Load 5,400Pa / 3,000Pa based on IEC 61215-2 : 2016  
(Test Load = Design Load x Safety Factor(1.5))

## Certifications and Warranty

Certifications	IEC 61215-1/-1-1 / 2:20161), IEC 61730-1/2:20161), IEC 61701:2012 Severity 6 (Salt mist corrosion test)
	IEC 62716:2013 (Ammonia corrosion test)
	ISO 9001, ISO 14001, ISO 50001
	Fire Resistance Class
Product Warranty	25 Years
Output Warranty of Pmax	Linear Warranty <sup>†</sup>

<sup>†</sup> Under BiFi 100 condition, 1st year 104.4%, after 1st year : 0.35 annual degradation, 95.4% for 25 years

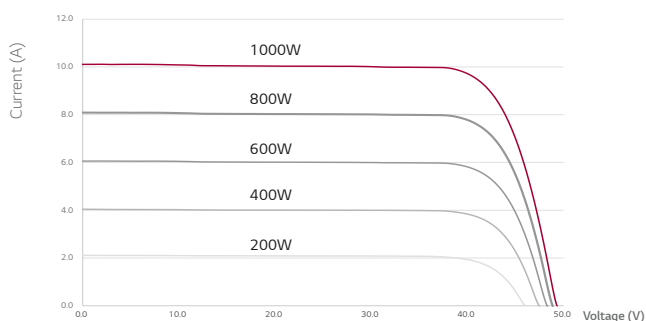
## Temperature Characteristics

NMOT	[ °C ]	42 ± 3
Pmax	[%/°C]	-0.36
Voc	[%/°C]	-0.26
Isc	[%/°C]	0.03

## Packaging Configuration

Number of Modules Per Pallet	[EA]	25
Number of Modules Per 40ft HQ Container	[EA]	550
Packaging Box Dimensions (L x W x H)	[mm]	2.080 x 1.120 x 1.221
Packaging Box Gross Weight	[kg]	551

## Characteristic Curves



## Electrical Properties (STC<sup>3</sup>)

Model		LG405N2T-J5			LG400N2T-J5		
		STC	BIF100 <sup>**</sup>	BIF200 <sup>**</sup>	STC <sup>*</sup>	BIF100 <sup>**</sup>	BIF200 <sup>**</sup>
Maximum Power (Pmax)	[W]	405	430	455	400	425	450
MPP Voltage (Vmpp)	[V]	41.9	41.9	41.9	41.5	41.5	41.5
MPP Current (Impp)	[A]	9.68	10.26	10.86	9.65	10.24	10.84
Open Circuit Voltage (Voc)	[V]	49.8	49.8	49.8	49.7	49.7	49.7
Short Circuit Current (Isc)	[A]	10.26	10.88	11.51	10.22	10.85	11.48
Module Efficiency	[%]	19.5	20.7	22.0	19.3	20.5	21.7
Operating Temperature	[°C]	-40 ~ +90					
Maximum System Voltage	[V]	1.000					
Maximum Series Fuse Rating	[A]	20					
Pmax Bifaciality Coefficient	[%]	70 ± 5					
Power Tolerance	[%]	0 ~ +3					

<sup>3</sup>STC (Standard Test Condition): Irradiance 1,000 W/m<sup>2</sup>, Module Temperature 25 °C, AM 1.5.

<sup>\*\*</sup>The electrical properties of BIF100 and BIF200 measure under the front side irradiance 1000W/m<sup>2</sup> + (100W/m<sup>2</sup> or 200W/m<sup>2</sup>) \* BiFi Use 100W/m<sup>2</sup> for BIF100 and 200W/m<sup>2</sup> for BIF200

## Electrical Properties (NMOT<sup>4</sup>)

Model		LG405N2T-J5			LG400N2T-J5		
		STC	BIF100 <sup>**</sup>	BIF200 <sup>**</sup>	STC <sup>*</sup>	BIF100 <sup>**</sup>	BIF200 <sup>**</sup>
Maximum Power (Pmax)	[W]	304	322	341	300	318	337
MPP Voltage (Vmpp)	[V]	39.4	39.4	39.4	39.0	39.0	39.0
MPP Current (Impp)	[A]	7.72	8.18	8.66	7.69	8.16	8.65
Open Circuit Voltage (Voc)	[V]	47.0	47.0	47.0	46.9	46.9	46.9
Short Circuit Current (Isc)	[A]	8.25	8.75	9.25	8.22	8.72	9.23

<sup>4</sup> NMOT (Nominal Module Operating Temperature): Irradiance 800 W/m<sup>2</sup>, ambient temperature 20 °C, wind speed 1 m/s

## Dimensions (mm)

