

THE NEXT EVOLUTION LEAP

LG NeON[®] 2BiFacial

UP TO 520 WATT
IN TOTAL

BIFACIAL MODULE

TRANSPARENT
BACKSHEET



LG NeON[®] 2 BiFacial – UNLEASH THE POWER!

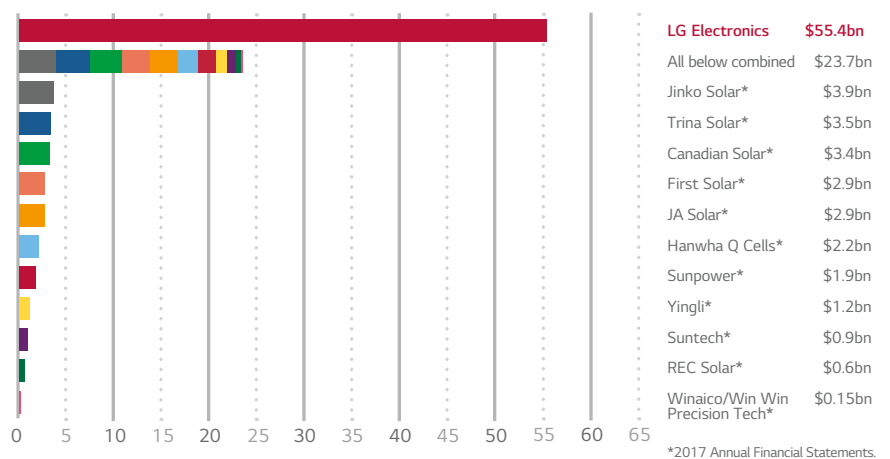
The LG NeON[®] 2 BiFacial is based on the well-known high-performance module LG NeON[®] 2. Already on the front side, the LG400N2T-A5 module reaches with its 72 highly efficient, mono-crystalline cells a basic power of 400 Watt peak (Wp). Through the use of bi-facial cells and a transparent back sheet, the power of the LG NeON[®] 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[®] 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.

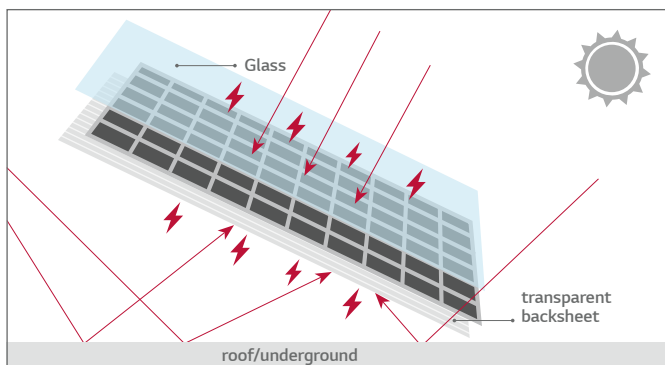
The Warrantor's 2017 Global Sales in Billions of US Dollars



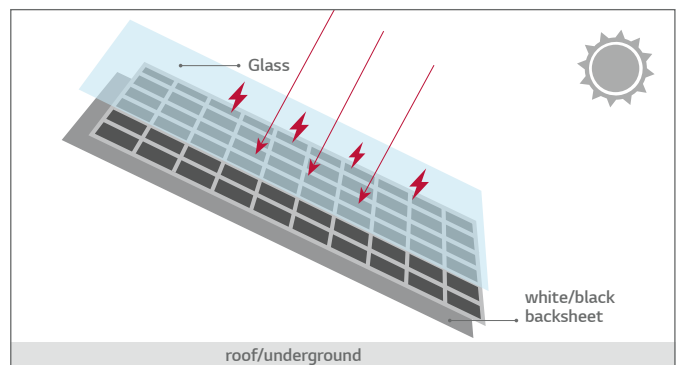
LG NeON[®] 2 BiFacial – BONUS!

Traditional, single-sided active cells and modules can absorb incident light only on the front side and convert it to electricity. The LG NeON[®] 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[®] 2 BiFacial

LG400N2T-A5 | LG390N2T-A5

72 cell

LG NeON[®] 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[®] 2 BiFacial compared with normal monofacial modules.



- CELLO technology
- transparent backsheet

KEY FEATURES



Enhanced Performance Warranty

LG NeON[®] 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.



Bifacial Energy Yield

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



Better Performance on a Sunny Day

LG NeON[®] 2 BiFacial now performs better than many other modules on sunny days thanks to its improved temperature coefficient.



More Power also on a Cloudy Day

LG NeON[®] 2 BiFacial gives good performance even on a cloudy day due to its very good weak sunlight performance.



High Power Output

LG NeON[®] 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.



Almost Zero LID (Light Induced Degradation)

The n-type cells used in LG NeON[®] 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[®] series to the market, which is now available in 32 countries. The LG NeON[®] (previous: MonoX[®] NeON), NeON[®]2, NeON[®]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 (STC²)

| | | LG400N2T-A5 | Bifacial Gain ³ | | | | LG390N2T - A5 | Bifacial Gain ³ | | | |
|---|------|-------------|----------------------------|-------|-------|-------|---------------|----------------------------|-------|-------|-------|
| | | | 5% | 10% | 20% | 30% | | 5% | 10% | 20% | 30% |
| Maximum Power (P _{max}) | [W] | 400 | 420 | 440 | 480 | 520 | 390 | 410 | 429 | 468 | 507 |
| MPP Voltage (V _{mpp}) | [V] | 41.5 | 41.5 | 41.5 | 41.6 | 41.6 | 41.4 | 41.4 | 41.4 | 41.5 | 41.5 |
| MPP Current (I _{mpp}) | [A] | 9.65 | 10.13 | 10.61 | 11.55 | 12.51 | 9.43 | 9.90 | 10.36 | 11.28 | 12.22 |
| Open Circuit Voltage (V _{oc}) | [V] | 49.7 | 49.7 | 49.7 | 49.8 | 49.8 | 49.2 | 49.2 | 49.2 | 49.3 | 49.3 |
| Short Circuit Current (I _{sc}) | [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 | | | | | | | | | |
| P _{max} Bifaciality Coefficient ⁴ | [%] | 76 | | | | | | | | | |
| Power Tolerance | [%] | 0 ~ +3 | | | | | | | | | |

² STC (Standard Test Condition): Irradiance 1,000 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.

³ Depending on mounting height and albedo of the underground.

⁴ P_{max} Bifaciality Coefficient 25 years guarantee, based on front output guarantee. Tolerance ± 7%.

Mechanical Properties

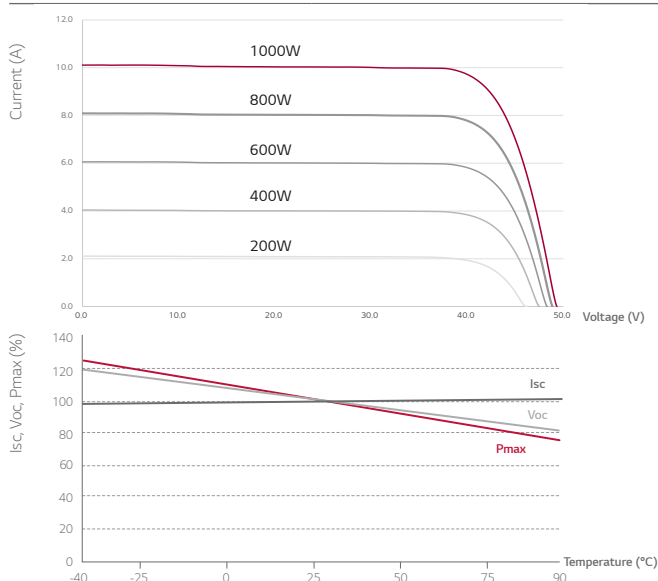
| | |
|------------------------|----------------------------------|
| Cells | 6 x 12 |
| Cell Type | Monocrystalline / N-type |
| Cell Dimensions | 161.7 x 161.7 mm |
| # of Busbar | 12 (Multi Wire Busbar) |
| Dimensions (L x W x H) | 2,064 x 1,024 x 40 mm |
| Front Load | 5,400 Pa |
| Rear Load | 4,300 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 (NOCT⁵)

| Model | | LG400N2T-A5 | LG390N2T-A5 |
|--|-----|-------------|-------------|
| Maximum Power (P _{max}) | [W] | 296 | 289 |
| MPP Voltage (V _{mpp}) | [V] | 38.4 | 38.3 |
| MPP Current (I _{mpp}) | [A] | 7.71 | 7.54 |
| Open Circuit Voltage (V _{oc}) | [V] | 46.5 | 45.9 |
| Short Circuit Current (I _{sc}) | [A] | 8.21 | 8.17 |

⁵ NOCT (Nominal Operating Cell Temperature): Irradiance 800 W/m², ambient temperature 20 °C, wind speed 1 m/s

Characteristic Curves



Certifications and Warranty

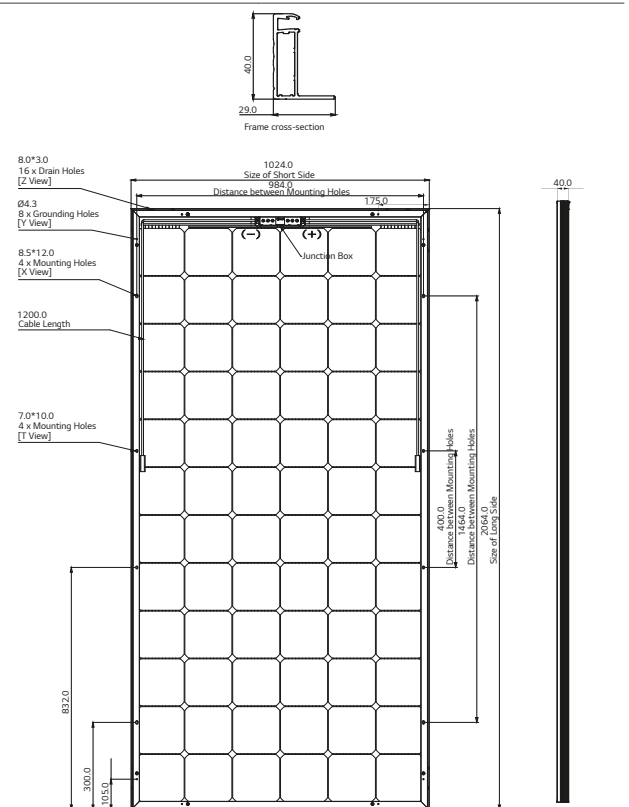
| | |
|-------------------------------------|--------------------------------------|
| Certifications | IEC 61215, IEC 61730-1/-2 |
| | IEC 61701 (Salt mist corrosion test) |
| | IEC 62716 (Ammonia corrosion test) |
| | ISO 9001 |
| Fire Resistance Class | Class C, Fire Class 1 (Italy) |
| Product Warranty | 25 Years |
| Output Warranty of P _{max} | Linear Warranty ¹ |

¹ 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 |
| P _{max} | [%/°C] | -0.36 |
| V _{oc} | [%/°C] | -0.27 |
| I _{sc} | [%/°C] | 0.03 |

Dimensions (mm)



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

