

# Advantages of LG NeON2 BiFacial

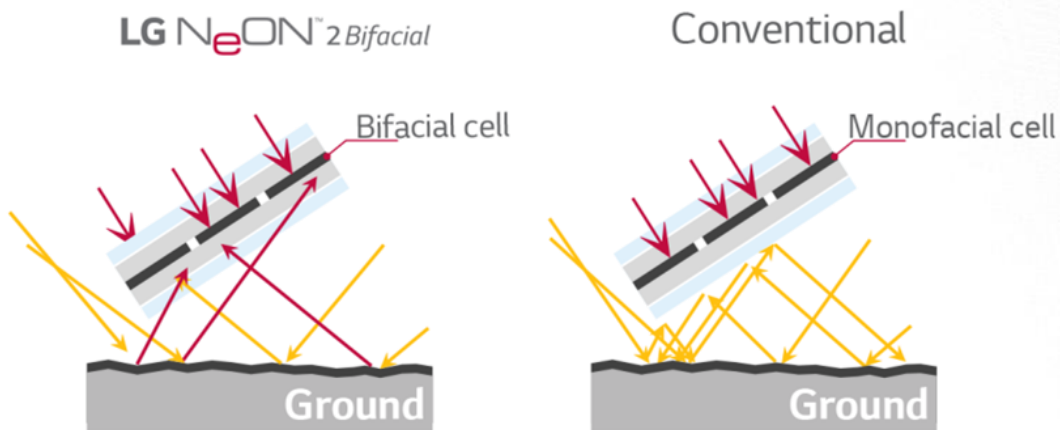
LG NeON<sup>TM</sup>2 *BiFacial*

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LG NeON2 BiFacial provide advantage of more energy yield than monofacial PV module

**Additional yield with bifacial effect**

- Advantage of max 27% more additional yield than monifacial when considering high reflection and install condition (when, LG NeON2 BiFacial compare to NeON2 monofacial)



**Max 27% more additional yield\***

(\*Condition : Ground albedo 0.85, module height 1m, tilt 30deg)

**Yield simulation result**

Albedo	Module height from ground [m]				
	0.2	0.3	0.5	0.7	1
0.15	8.6	9.0	9.3	9.7	10.0
0.3	11.3	11.9	12.5	13.4	13.9
0.5	14.7	15.6	16.6	18.2	19.0
0.7	17.9	19.3	20.6	22.7	23.8
0.85	20.3	21.9	23.5	26.0	27.3

- \* Simulation condition
  - module height 0.2 ~ 1,0m
  - tilt angel 30°
  - reflection 15~85%

# 1. LG NeON2 Bifacial module datasheet

## Electrical Properties

Table 1: Electrical Data for LG300N1T-G4 modules

LG300N1T-G4	*STC	*Bifacial STC (Including backside irradiation contribution in Isc as a percent of STC)		
		10%	20%	30%
Power (W)	300	330	360	390
Vmpp (V)	32.7 ± 5%	32.8	32.8	32.9
Imp (A)	9.18 ± 5%	10.06	10.98	11.89
Voc (V)	40.0 ± 5%	40.1	40.2	40.3
Isc (A)	9.71 ± 5%	10.68	11.65	12.62

Inverter configuration data for ROOF PARALLEL installation



Inverter configuration data for FLAT ROOF installation

\*STC= Irradiance 1000W/m<sup>2</sup>, 25°C, AM 1.5 , \*\*Bifacial STC= Irradiance 1000W/m<sup>2</sup> (front) and 100~300W/m<sup>2</sup> (rear), 25°C, AM 1.5

## Mechanical Properties

Cells	6 x 10
Cell Vendor	LG
Cell Type	Monocrystalline / N-type
Cell Dimensions	156.75 x 156.75 mm / 6 inches
# of Busbar	12 (Multi Wire Busbar)
Dimensions (L x W x H)	1640 x 1000 x 40 mm
Weight	17.0 ± 0.5 kg
Front Load	6000 Pa
Rear Load	5400 Pa
Connector, Type	MC4, IP67
Junction Box	IP67 with 3 bypass diodes
Length of Cables	1000 mm x 2ea
Glass	High Transmission Tempered Glass
Frame	Anodized Aluminum

## Certifications and Warranty

Certifications (In Progress)	IEC 61215, IEC 61730-1/-2, UL
	ISO 9001, IEC 62716 (Ammonia Test),
	IEC 61701(Salt Mist Corrosion Test),
Module Fire Performance	Type 2 (UL 1703)
Product Warranty	12 Years 
Output Warranty of Pmax (Measurement Tolerance ± 3%)	Linear Warranty* 

\* 1) 1st year: 98%, 2) After 2nd year: 0.6%p annual degradation, 3) 83.6% for 25 years

## 2. LG NeON2 Bifacial module gain simulation

- Simulation condition
  - height: 0.2~1m, install angle 10~90°
  - Albedo: 0.15~0.8

Table 2: LG300N1T-G4 Bifacial Gain in Energy (Backside Production) in (%) for south facing modules mounted at 30 degrees

Albedo	Installation height [m]				
	0.2	0.3	0.5	0.7	1
0.15	8.6%	9.0%	9.3%	9.7%	10.0%
0.30	11.3%	11.9%	12.5%	13.4%	13.9%
0.50	14.7%	15.6%	16.6%	18.2%	19.0%
0.70	17.9%	19.3%	20.6%	22.7%	23.8%
0.85	20.3%	21.9%	23.5%	26.0%	27.3%

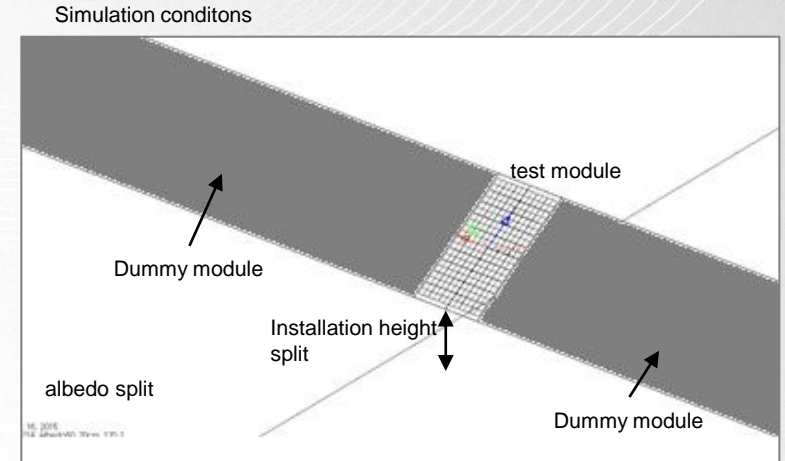


Table 3: Tilt Correction factor for single row module applications (Installation height 0.5m)

Install angle compensation coefficient	Albed °	Installation Tilt Angle (degrees)							
		$\Theta = 10^\circ$	$\Theta = 12^\circ$	$\Theta = 15^\circ$	$\Theta = 20^\circ$	$\Theta = 25^\circ$	$\Theta = 30^\circ$	$\Theta = 60^\circ$	$\Theta = 90^\circ$
0.30		76%	78%	82 %	87%	96%	100%	96%	82%
0.85		73%	75%	79 %	85%	96%	100%	98%	91%

# Ref 1. Performance test Install Scene

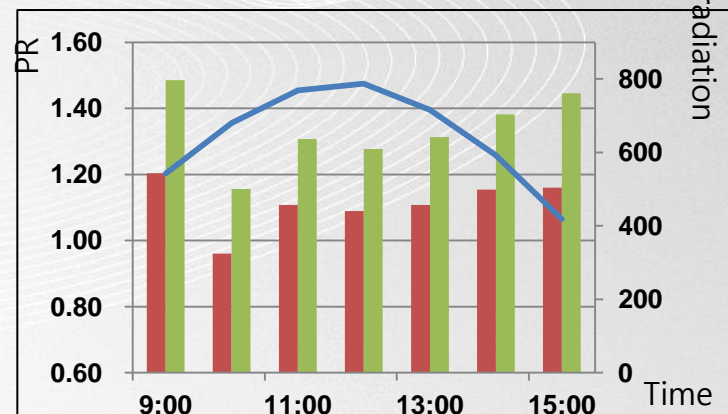
Each install scene showed 19.6% and 9.5% more earn energy than monofacial module

Commercial

※ based on Gumi site test result



- Albedo: 0.82 / Angle : 30degree



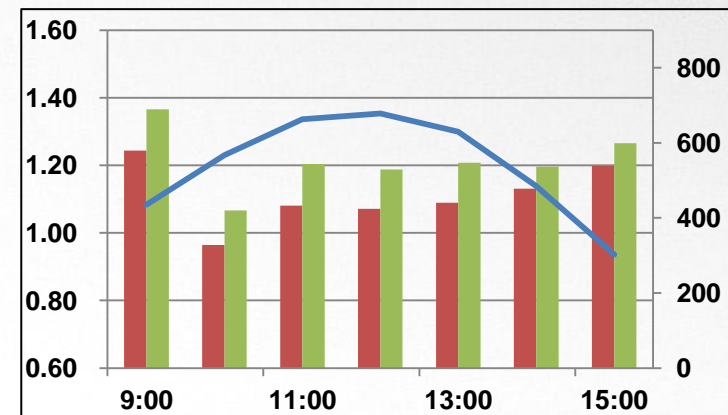
*Bifacial More gain 19.6%/day*

■ Mono ■ Bifacial — Irradiation

Roof Top



- Albedo : 0.82 / Angle : 30degree
- distance between roof : 200mm



*Bifacial More gain 9.6%/day*