LG NeON®H

LG435N2T-E6

144

435W

The LG NeON® H is designed to absorb sunlight both from the front and the rear sides of its NeON® cell by using a transparent backsheet. The dual faces of the cell result in higher energy generation.

25 YEAR PRODUCT • PERFORMANCE WARRANTY

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Features

25-Year Limited Product Warranty

The NeON® H is covered by a 25-year limited product warranty.

Bifacial Energy Yield

LG NeON® H modules use highly efficient bifacial solar cell, "NeON" applied Cello technology. Through the Cello technology, LG NeON® H can achieve up to 30% more energy than standard PV modules.

Better Performance on a Sunny Day

LG NeON® H now performs better on sunny days, thanks to its improved temperature coefficient.

More Generation on a Cloudy Day

The LG NeON® H performs well on cloudy days; weak sunlight conditions cause a low energy reduction.

When you go solar, ask for the brand you can trust: LG Solar

About LG Electronics USA, Inc.

LG Electronics is a global leader in electronic products in the clean energy markets by offering solar PV panels and energy storage systems. 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 NeON® (previous MonoX® NeON), NeON®2, NeON®2 BiFacial won the "Intersolar AWARD" in 2013, 2015 and 2016, which demonstrates LG's leadership and innovation in the solar industry.

LG Life's Good

LG NeON®H

LG435N2T-E6

General Data

Cell Properties (Material/Type)	Monocrystalline/N-type
Cell Maker	LG
Cell Configuration	144 Cells (6 x 24)
Number of Busbars	9EA
Module Dimensions (L x W x H)	2,130mm x 1,042mm x 40 mm
Weight	23 kg
Glass (Thickness/Material)	2.8mm/Tempered Glass with AR Coating
Backsheet (Color)	Transparent
Frame (Material)	Anodized Aluminium
Junction Box (Protection Degree)	IP 68 with 3 Bypass Diodes
Cables (Length)	1,400mm x 2EA
Connector (Type/Maker)	MC 4/MC

Certifications and Warranty

Certifications*	IEC 61215-1/-1-1/2:2016, IEC 61730-1/2:2016, UL 61730
	ISO 9001, ISO 14001, ISO 50001
	OHSAS 18001
Salt Mist Corrosion Test	IEC 61701:2012 Severity 6
Ammonia Corrosion Test	IEC 62716:2013
Module Fire Performance	Type 1 (UL 1703)
Fire Rating	Class C (UL 790)
Solar Module Product Warranty	25 Years
Solar Module Output Warranty	Linear Warranty*

*Initial 107%, 1st year 105.4%, After 1st year: -0.35%/year, 96.9% at year 25 (Based on BiFi100)

Temperature Characteristics

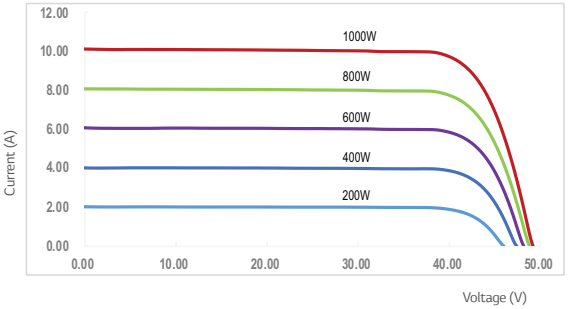
NMOT*	[°C]	42 ± 3
Pmax	[%/°C]	-0.36
Voc	[%/°C]	-0.26
Isc	[%/°C]	0.03

*NMOT (Nominal Module Operating Temperature): Irradiance 800 W/m², Ambient temperature 20°C, Wind speed 1 m/s, Spectrum AM 1.5

Electrical Properties (NMOT)

Model		LG435N2T-E6		
		STC*	BiFi100**	BiFi200**
Maximum Power (Pmax)	[W]	327	349	372
MPP Voltage (Vmpp)	[V]	38.2	38.2	38.2
MPP Current (Impp)	[A]	8.55	9.14	9.73
Open Circuit Voltage (Voc)	[V]	45.9	45.9	45.9
Short Circuit Current (Isc)	[A]	8.98	9.60	10.22

I-V Curves



Electrical Properties

Model		LG435N2T-E6		
		STC*	BiFi100**	BiFi200**
Maximum Power (Pmax)	[W]	435	465	495
MPP Voltage (Vmpp)	[V]	40.7	40.7	40.7
MPP Current (Impp)	[A]	10.70	11.44	12.17
Open Circuit Voltage (Voc)	[V]	48.7	48.7	48.7
Short Circuit Current (Isc)	[A]	11.15	11.92	12.68
Module Efficiency	[%]	19.6	21.0	22.3
Pmax Bifaciality Coefficient	[%]	75 ± 5		
Power Tolerance	[%]	0 ~ +3		

*STC (Standard Test Condition): Irradiance 1000W/m², Cell temperature 25°C, AM 1.5, Measure Tolerance: ± 3%
**The electrical properties of BiFi100 and BiFi200 measure under the front side irradiance 1000W/m² + (100W/m² or 200W/m²)* BiFi. Use 100W/m² for BiFi100 and 200W/m² for BiFi200.
2) IEC/ UL Certifications is scheduled to proceed.

Operating Conditions

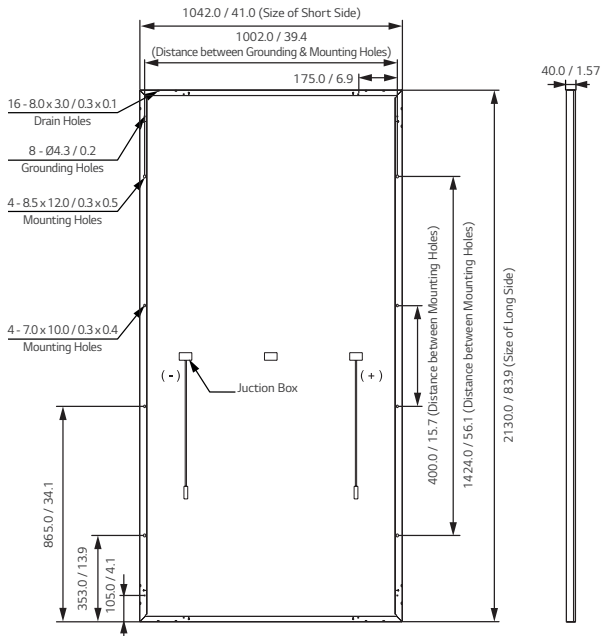
Operating Temperature	[°C]	-40 ~+90
Maximum System Voltage	[V]	1,000(IEC)/1500(UL)
Maximum Series Fuse Rating	[A]	20
Mechanical Test Load* (Front)	[Pa/psf]	5,400/113
Mechanical Test Load* (Rear)	[Pa/psf]	3,000/63

*Test Load = Design Load x Safety Factor (1.5)

Packaging Configuration

Number of Modules per Pallet	[EA]	25
Number of Modules per 40' Container	[EA]	550
Number of Modules per 53' Container	[EA]	750
Packaging Box Dimensions (L x W x H)	[mm]	2,172 x 1,120 x 1,213
Packaging Box Dimensions (L x W x H)	[in]	85.5 x 44.1 x 47.8
Packaging Box Gross Weight	[kg]	593
Packaging Box Gross Weight	[lb]	1,307

Dimensions (mm/inch)



LG Life's Good

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Product specifications are subject to change without notice.
LG435N2T-E6.pdf
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SUNNY BOY
3.0-US / 3.8-US / 5.0-US / 6.0-US / 7.0-US / 7.7-US

Value-Added Improvements

- Superior integration with SMA's MLPE Power+ Solution
- World's first Secure Power Supply* now offers up to 2,000 W
- Full grid management capabilities ensure a utility-compliant solution for any market

Reduced Labor

- New Installation Assistant with direct access via smartphone minimizes time in the field
- Advanced communication interface with fewer components creates 50% faster setup and commissioning

Unmatched Flexibility

- SMA's proprietary OptiTrac™ Global Peak technology mitigates shade with ease
- Multiple independent MPPTs accommodate hundreds of stringing possibilities

Trouble-Free Servicing

- Two-part enclosure concept allows for simple, expedited servicing
- Equipped with SMA Smart Connected, a proactive service solution that is integrated into Sunny Portal

SUNNY BOY 3.0-US / 3.8-US / 5.0-US / 6.0-US / 7.0-US / 7.7-US

Reduce costs across your entire residential business model

The residential PV market is changing rapidly. Your bottom line matters more than ever—so we've designed a superior residential solution to help you decrease costs at every stage of your business operations. The Sunny Boy 3.0-US/3.8-US/5.0-US/6.0-US/7.0-US/7.7-US join the SMA lineup of field-proven solar technology backed by the world's #1 service team, along with a wealth of improvements. Simple design, improved stocking and ordering, value-driven sales support and streamlined installation are just some of the ways that SMA helps your business operate more efficiently. And, Sunny Boy's superior integration with the innovative Power+ Solution means installers have even more flexibility in addressing their toughest challenges. Finally, SMA Smart Connected will automatically detect errors and initiate the repair and replacement process so that installers can reduce service calls and save time and money.

Technical data	Sunny Boy 3.0-US		Sunny Boy 3.8-US		Sunny Boy 5.0-US	
	208 V	240 V	208 V	240 V	208 V	240 V
Input (DC)						
Max. PV power	4800 Wp		6144 Wp		8000 Wp	
Max. DC voltage	600 V					
Rated MPP voltage range	155 - 480 V		195 - 480 V		220 – 480 V	
MPPT operating voltage range	100 – 550 V					
Min. DC voltage / start voltage	100 V / 125 V					
Max. operating input current per MPPT	10 A					
Max. short circuit current per MPPT	18 A					
Number of MPPT tracker / string per MPPT tracker	2/1				3 / 1	
Output (AC)						
AC nominal power	3000 W	3000 W	3330 W	3840 W	5000 W	5000 W
Max. AC apparent power	3000 VA	3000 VA	3330 VA	3840 VA	5000 VA	5000 VA
Nominal voltage / adjustable	208 V / ●	240 V / ●	208 V / ●	240 V / ●	208 V / ●	240 V / ●
AC voltage range	183 – 229 V	211 – 264 V	183 – 229 V	211 – 264 V	183 – 229 V	211 – 264 V
AC grid frequency	60 Hz / 50 Hz					
Max. output current	14.5 A	12.5 A	16.0 A	16.0 A	24.0 A	21.0 A
Power factor (cos ϕ)	1					
Output phases / line connections	1 / 2					
Harmonics	< 4 %					
Efficiency						
Max. efficiency	97.2 %	97.6 %	97.3 %	97.6 %	97.3 %	97.6 %
CEC efficiency	96.2 %	96.3 %	96.4 %	96.7 %	96.7 %	96.9 %
Protection devices						
DC disconnect device / DC reverse polarity protection	● / ●					
Ground fault monitoring / Grid monitoring	●					
AC short circuit protection	●					
All-pole sensitive residual current monitoring unit (RCMU)	●					
Arc fault circuit interrupter (AFCI)	●					
Protection class / overvoltage category	I / IV					
General data						
Dimensions (W / H / D) in mm (in)	535 x 730 x 198 (21.1 x 28.5 x 7.8)					
Packaging dimensions (W / H / D) in mm (in)	600 x 800 x 300 (23.6 x 31.5 x 11.8)					
Weight / packaging weight	26 kg (57 lb) / 30 kg (66 lb)					
Temperature range: operating / non-operating	-25°C ...+60°C / -40°C ...+60°C					
Environmental protection rating	NEMA 3R					
Noise emission (typical)	39 dB(A)					
Internal power consumption at night	< 5 W					
Topology / Cooling concept	Transformerless / Convection					
Features						
Ethernet ports	2					
Secure Power Supply	●*					
Display (2 x 16 characters)	●					
2.4 GHz WLAN / External WLAN antenna	●/○					
Cellular (4G / 3G) / Revenue Grade Meter	○/○**					
Warranty: 10 / 15 / 20 years	●/○/○					
Certificates and approvals	UL 1741, UL 1741 SA incl. CA Rule 21 RSD, UL 1998, UL 1699B Ed. 1, IEEE1547, FCC Part 15 (Class A & B), CAN/CSA V22.2 107.1-1, HECO Rule 14H, PV Rapid Shutdown System Equipment					
● Standard features ○ Optional features – Not available						
NOTE: US inverters ship with gray lids. Data at nominal conditions * Not compatible with the SunSpec Rapid Shutdown functionality **Standard in SBX.X-1TP-US-41						
Type designation	SB3.0-1SP-US-41 / SB3.0-1TP-US-41		SB3.8-1SP-US-41 / SB3.8-1TP-US-41		SB5.0-1SP-US-41 / SB5.0-1TP-US-41	

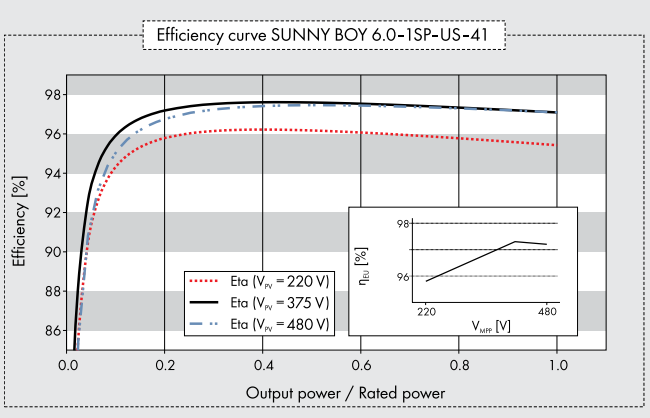
Accessories

External WLAN antenna
EXTANT-US-40

SMA Rooftop
Communication Kit
ROOFCOMMKIT-P2-US

Revenue Grade
Meter Kit
RGM05KIT-US-10

Cellular Modem Kit
CELLMODKIT-US-10



SIMPLE, FLEXIBLE DESIGN

Speed the completion of customer proposals and maximize the efficiency of your design team with the Sunny Boy-US series, which provides a new level of flexibility in system design by offering:

» Hundreds of stringing configurations and multiple independent MPPTs

» SMA's proprietary OptiTrac™ Global Peak shade mitigation technology

» Diverse application options including on- and off-grid compatibility

VALUE-DRIVEN SALES ENABLEMENT

SMA wants to enable your sales team by arming them with an abundance of feature/benefit support. Show your customers the value of the Sunny Boy-US series by utilizing:

» Secure Power Supply, now with 2,000 W of opportunity power in the event of a grid outage, as an increased value-add or upsell opportunity

» SMA's 35 year history and status as the #1 global inverter manufacturer instills homeowners with peace of mind and the long-term security they demand from a PV investment

» An economical solution for shade mitigation and the challenges of complex roofs

IMPROVED STOCKING AND ORDERING

Ensure that your back office business operations run smoothly and succinctly while mitigating potential errors. The Sunny Boy-US series can help achieve cost savings in these areas by providing:

» An integrated DC disconnect that simplifies equipment stocking and allows for a single inverter part number

» All communications integrated into the inverter, eliminating the need to order additional equipment

STREAMLINED INSTALLATION AND COMMISSIONING

Expedite your operations in the field by taking advantage of the new Sunny Boy's installer-friendly feature set including:

» Direct access via smartphone and utilization of SMA's Installation Assistant, which minimizes time/labor spent in the field and speeds the path to commissioning

» Simple commissioning and monitoring setup in a single online portal

» New! Advanced communication interface with fewer components allows for 50% faster commissioning

SUPERIOR SERVICE

SMA understands the factors that contribute to lifetime PV ownership cost, that's why the Sunny Boy-US series was designed for maximum reliability and backstopped by an unmatched service offering. Benefit from:

» SMA Smart Connected, a proactive service solution integrated into Sunny Portal that automatically detects errors and initiates the repair and replacement process

» The #1 service team in the PV industry, as recognized by IMS research, with experience servicing an installed base of more than 55 GW