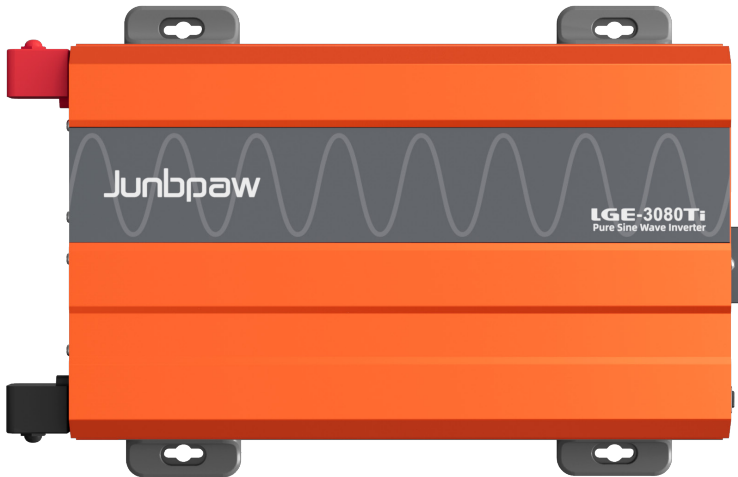


Junbpaw

User Manual

PURE SINE WAVE INVERTER

LGE-1080Ti / LGE-2080Ti / LGE-3080Ti



*Please read the instruction manual carefully before use

Table of Contents

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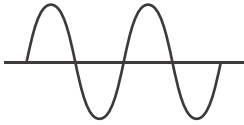
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01 Product Introduction

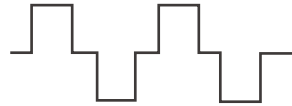
1-1.What is an inverter?

An inverter is an electronic device that converts DC power to AC power. Direct Current (DC) is electricity generated by batteries, while Alternating Current (AC) is the electricity required to operate electrical equipment. An inverter is mainly used when there is no AC power supply.

1-2. Pure sine wave inverter



PURE SINE WAVE(PSW)



MODIFIED SINE WAVE(MSW)

Pure sine wave inverter technology is based on the principle of AC generator sets used in power grids, with a microprocessor (MPU) designed to control the voltage and current waveforms. Our pure sine wave design ensures compatibility and reliability for all AC applications.

The voltage waveform of a pure sine wave on the grid originates from an AC power generator. Nikola Tesla invented the first AC generator in 1882, and since then, alternating current in the form of a sine wave has been produced. The principle involves the conductor windings of the generator set rotating within a magnetic field from the S-pole to the N-pole. This changing magnetic field generates sine wave voltage and current, which are then supplied to the load. Starting from zero, the positive half of the wave gradually rises, peaks, and then falls, followed by a reversal in magnetic field polarity. The negative half wave follows a similar pattern, completing one full cycle within a set period.

The pure sine wave undergoes changes akin to two parabolic curves, with each full cycle consisting of a 10ms positive half wave and a 10ms negative half wave, totaling 20ms. This corresponds to a frequency of 50Hz. The gradual, parabolic nature of the sine wave ensures it is stable and suitable for all AC applications.

02 Safety Instructions

2-1. General Safety Precautions



Warning! Before using the inverter, read the safety instructions.

- Do not expose the inverter to rain, snow, spray, or dust. To minimize the risk of fire, do not cover or block the ventilation openings or install the unit in a zero-clearance compartment.
- To prevent fire or electric shock, ensure all existing wiring is in good electrical condition and properly sized.
- This equipment contains components that may produce arcs or sparks. To avoid fire or explosion, do not install it in a compartment with batteries, flammable materials, or locations requiring ignition-protected equipment, such as spaces containing gasoline-powered machinery, fuel tanks, joints, fittings, or other components of the fuel system.
- Depending on the user scenario, the AC output of the inverter may require a user-installed breaker or fuse. For hardwired AC output applications, an AC socket is not provided. The inverter is equipped with standard AC short-circuit protection.
- Overcurrent protection for the AC output circuit must be provided during installation.
- Additional breakers rated for 20 A branch circuit protection must be provided for GFCI receptacles.
- The following precautions should be taken when working on the inverter:
 - Step 1 Remove watches, rings, or other metal objects.
 - Step 2 Use tools with insulated handles.
 - Step 3 Wear rubber gloves and boots.

This product series consists of off-grid inverters. Connecting any other AC power source to the inverter's AC output is strictly prohibited.

02 Safety Instructions

2-2. Other Safety Notes

- Upon receipt, examine the carton box for any damage. If you have found any signs of damage, please notify the company you purchased the unit from.
- Do not operate near water.
- Do not open or disassemble the inverter, as the warranty may be voided.
- The DC side connections should be firm and tight.
- Grounding: Reliable grounding should be maintained.
- Do not drop a metal tool on the battery. The resulting spark or short-circuit on the battery, or on the other electrical pan may cause an explosion.
- Install the inverter in a well-ventilated area. Do not block the front air vents or the rear air exhausts of the unit.
- Wiring: Adequate input power must be supplied to the inverter for proper use; correct wiring sizes must be ensured.
- Mount the inverter so that the axis of the fan is horizontal.
- Do not operate the inverter close to combustible gas or open fire.
- Do not operate appliances that may feed power back into the inverter.
- Temperature: The inverter should be operated in an ambient temperature range of -30°C to 60°C ; otherwise, the output efficiency may be affected. Airflow to the inverter must not be blocked.

03

Functional features Introduction

3-1. System

The unit is a highly reliable DC-AC inverter system, designed with advanced power electronic and microprocessor technology offering the following features:

- Pure sine wave output waveform O/P voltage THD<3%.
- Intelligent software for power management.
- Loading and temperature-controlled cooling fan.
- Dry contact terminal.
- Advanced Protection Features
 - Input over/under voltage protection
 - Internal over-temperature protection
 - Input reverse polarity protection (Fuse)
 - Output overload protection
 - Output short circuit protection
- SPWM technology is controlled by MCU micro-processing, pure sine wave output.
- Unique dynamic current loop control technology to ensure reliable operation of the inverter.
- Strong load adaptability, including inductive load, capacitive load, resistive load, and mixed load.

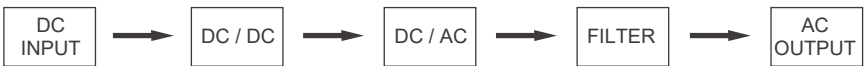
03

Functional features Introduction

3-2. Protective function

- 1) Low-voltage alarm: The buzzer sounds 2 times with a 1Hz gap.
- 2) Low voltage protection: The buzzer alarm continuously sounds for 3 times, with a 1Hz gap.
- 3) Low-voltage recovery: The low-voltage rise automatically restores the output, and the buzzer sounds 3 times before the alarm is cancelled.
- 4) Overvoltage protection: The buzzer sounds 4 times, with a 1Hz gap.
- 5) Overvoltage recovery: The voltage is reduced automatically to restore the output, and the buzzer sounds 4 times before the alarm is cancelled.
- 6) Thermal protection: $85^{\circ} \pm 5^{\circ}$, when overheat protection is activated, the buzzer sounds 5 times, with a 1Hz gap.
- 7) Overload protection:
 - a.overload 100%~115% 60s Turn off,
 - b.overload 116%~150% 3s Turn off,
 - c.overload 151%~200% 1s Turn off,
 - d.overload>200%,
 - e.200ms Turn off, the buzzer blared.
- 8) Short circuit protection: Output short circuit protection 3s shutdown lock.
- 9) GFCI protection:socket built-in GFCI protector, detected electrical leakage, socket automatically trip, and turn off the output.
- 10) GFCI Working Status
 - a.Green light:GFCI working properly; Cyclic testing every 15 minutes.
 - b.Red light blinking: GFCI Self-Testing.GFCI tripped, press RESET button;Check the power circuit if can not reset.

3-3. Block Diagram



04 Specification

4-1.electrical code LGE-1080Ti standard

MODEL NO.		LGE-1080Ti		
OUTPUT	Rated Power (Typ.)	1080W		
	Maximum Output Power (1 Min)	>1080W~ 1242W (100%~ 115%)		
	Surge Power (Max. 300 ms)	>3000W		
	AC Voltage	100/110/120VAC		
	Frequency	50/60 Hz±0.5%		
	Waveform	Pure sine wave (THD<3%)		
	AC Regulation (Typ.)	±5%		
	Voltage Switching	1.Adjustable 110V/120V, S3=120V, S4=110V; 2.Adjustable 100V/110V, S3=110V, S4=100V		
	Frequency Switching	Adjustable 50/60Hz S1=60Hz, S2=50Hz (Frequency switching supports cold switching only)		
	USB	Output voltage: 5V output current: 2.1A maximum power: 10.5W		
	LED Indicator	Input Voltage level,output load level and faulty statust		
INPUT	DC Voltage	12VDC	24 VDC	48 VDC
	Voltage Range	10.5~ 16.5VDC	21.0~33.0VDC	42.0~66 .0VDC
	No Load Current	0.5A	0.18A	0.2A
	Efficiency (max)	91%	93%	93%
	Remote Standby Mode	≤ 0.08W	≤ 0.08W	≤ 0.08W
	PROTECTION	Input Under - Voltage Protection	10.0 ± 0.3VDC	20.0± 0.5VDC
Input Under - Voltage Recovery		12.5 ± 0.3VDC	25.0± 0.5VDC	50.0 ± 1.0VDC
Input Over - Voltage Protection		16.5 ± 1.0VDC	33.0± 1.0VDC	63.0 ± 1.0VDC
Input Over - Voltage Recovery		15.0 ± 0.5VDC	30.0± 0.5 VDC	58.0 ± 1.0VDC
Output Overload		1080W ≥ 115%		
		1minute automatic shutdown output , automatic lock, restart to recover		
Output Short Circuit		Output short circuit protection 3s shutdown lock, restart to recover		
Over Temperature		85℃ ±5 ℃		
DC Input Reverse Polarity		By internal fuse open		
SAFETY & EMC	Withstand Voltage	Bat I/P-AC O/P:3.0 KVAC AC O/P -FG:1.5 KVAC		
	Isolation Resistance	Bat I/P-AC O/P, Bat I/P - FG, AC O/P-FG:10 0 M ohms / 50 0VDC/ 25 ℃/70% RH		
	EMC Emission	Compliance to FCC classA, E- Mark EACTPTC 02 0.EN55 0 3 2 classA, 72/ 24 5/ CEE,9 5/5 4/ CE		
	EMC Immunity	Compliance to EAC TPTC 020 , EN61000-4-2 , 3 ,4 ,5 ,6 , 8 , 11		
ENVIRONMENT	Working Temp	-30℃ ~ 60℃		
	Working Humidity	20~90% RH		
	Storage Temp, Humidity	-30~70℃ / -22~+158F , 10~95% RH non-condensing		
OTHERS	Dimension	312*185*70mm		
	Gross Weight	≈ 4.06 KG		

Note1 - Normal Condition: Vin=12.5V / 25V / 50V Vo=100 / 110 / 120 VAC 80% Full load (PF=1.0)

Note2 - Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

MODEL NO.		LGE-2080Ti		
OUTPUT	Rated Power (Typ.)	2080W		
	Maximum Output Power (1 Min)	>2080W~ 2392W (100%~ 115%)		
	Surge Power (Max. 300 ms)	>6000W		
	AC Voltage	100/110/120VAC		
	Frequency	50/60 Hz±0.5%		
	Waveform	Pure sine wave (THD<3%)		
	AC Regulation (Typ.)	±5%		
	Voltage Switching	1.Adjustable 110V/120V, S3=120V, S4=110V; 2.Adjustable 100V/110V, S3=110V, S4=100V		
	Frequency Switching	Adjustable 50/60Hz, S1=60Hz, S2=50Hz (Frequency switching supports cold switching only)		
	USB	Output voltage: 5V output current: 2.1A maximum power: 10.5W		
	LED Indicator	Input Voltage level,output load level and faulty status		
INPUT	DC Voltage	12VDC	24 VDC	48 VDC
	Voltage Range	10.5~ 16.5VDC	21.0~33.0VDC	42.0~66 .0VDC
	No Load Current	0.55A	0.35A	0.25A
	Efficiency (max)	91%	93%	94%
	Remote Standby Mode	≤ 0.08W	≤ 0.08W	≤ 0.08W
PROTECTION	Input Under - Voltage Protection	10.0 ± 0.3VDC	20.0± 0.5VDC	41.0 ± 1.0VDC
	Input Under - Voltage Recovery	12.5 ± 0.3VDC	25.0± 0.5VDC	50.0 ± 1.0VDC
	Input Over - Voltage Protection	16.5 ± 1.0VDC	33.0± 1.0VDC	63.0 ± 1.0VDC
	Input Over - Voltage Recovery	15.0 ± 0.5VDC	30.0± 0.5 VDC	58.0 ± 1.0VDC
	Output Overload	2080W ≥ 115%		
		1minute automatic shutdown output , automatic lock, restart to recover		
	Output Short Circuit	Output short circuit protection 3s shutdown lock, restart to recover		
	Over Temperature	85 C±5 C		
DC Input Reverse Polarity	By internal fuse open			
SAFETY & EMC	Withstand Voltage	Bat I/P-AC O/P:3.0 KVAC AC O/P -FG:1.5 KVAC		
	Isolation Resistance	Bat I/P-AC O/P, Bat I/P - FG, AC O/P -FG:10.0 M ohms / 50.0VDC/ 25 C/70% RH		
	EMC Emission	Compliance to FCC classA , E- Mark EACTPTC 02.0.EN55 0 3 2 classA, 72/ 24 5/ CEE,9 5/5 4/ CE		
	EMC Immunity	Compliance to EAC TPTC 020 , EN61000-4-2 ,3 ,4 ,5 ,6 ,8 , 11		
ENVIRONMENT	Working Temp	-30 C~ 60 C		
	Working Humidity	20~90% RH		
	Storage Temp, Humidity	-30~70 C/ -22~+158F , 10~95% RH non-condensing		
OTHERS	Dimension	364.5*243*70mm		
	Gross Weight	≈ 6.04 KG		

Note1 - Normal Condition: Vin=12.5V / 25V / 50V Vo=100 / 110 / 120 VAC 80% Full load (PF=1.0)

Note2 - Warning: This is a class A product . In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures .

04 Specification

4-3.electrical code LGE-3080Ti standard

MODEL NO.		LGE-3080Ti		
OUTPUT	Rated Power (Typ.)	3080W		
	Maximum Output Power (1 Min)	>3080W~ 3542W (100%~115%)		
	Surge Power (Max. 300 ms)	>9000W		
	AC Voltage	100/110/120VAC		
	Frequency	50/60 Hz±0.5%		
	Waveform	Pure sine wave (THD<3%)		
	AC Regulation (Typ.)	±5%		
	Voltage Switching	1.Adjustable 110V/120V, S3=120V, S4=110V; 2.Adjustable 100V/110V, S3=110V, S4=100V		
	Frequency Switching	Adjustable 50/60Hz, S1=60Hz, S2=50Hz (Frequency switching supports cold switching only)		
	USB	Output voltage: 5V output current: 2.1A maximum power: 10.5W		
	LED Indicator	Input Voltage level,output load level and faulty status		
INPUT	DC Voltage	12VDC	24 VDC	48 VDC
	Voltage Range	10.5~ 16.5VDC	21.0~33.0VDC	42.0~66.0VDC
	No Load Current	0.6A	0.45A	0.25A
	Efficiency (max)	91%	92%	93%
	Remote Standby Mode	≤ 0.08W	≤ 0.08W	≤ 0.08W
PROTECTION	Input Under - Voltage Protection	10.0 ± 0.3VDC	20.0± 0.5VDC	41.0 ± 1.0VDC
	Input Under - Voltage Recovery	12.5 ± 0.3VDC	25.0± 0.5VDC	50.0 ± 1.0VDC
	Input Over - Voltage Protection	16.5 ± 1.0VDC	33.0± 1.0VDC	63.0 ± 1.0VDC
	Input Over - Voltage Recovery	15.0 ± 0.5VDC	30.0± 0.5 VDC	58.0 ± 1.0VDC
	Output Overload	3080W ≥ 115%		
		1minute automatic shutdown output , automatic lock, restart to recover		
	Output Short Circuit	Output short circuit protection 3s shutdown lock, restart to recover		
	Over Temperature	85°C±5°C		
DC Input Reverse Polarity	By internal fuse open			
SAFETY& EMC	Withstand Voltage	Bat I/P-AC O/P:3.0 KVAC AC O/P -FG:1.5 KVAC		
	Isolation Resistance	Bat I/P-AC O/P, Bat I/P - FG, AC O/P- FG:10.0 M ohms / 50 0VDC/ 25 °C/70% RH		
	EMC Emission	Compliance to FCC classA , E- Mark EACTPTC 02.0,EN55 0 3.2 classA, 72/ 24.5/ CEE,9.5/5.4/ CE		
	EMC Immunity	Compliance to EAC TPTC 020 , EN61000-4-2 ,3 ,4 ,5 ,6 ,8 , 11		
ENVIRONMENT	Working Temp	-30°C ~ 60°C		
	Working Humidity	20~90% RH		
	Storage Temp, Humidity	-30~70°C / -22~+158F , 10~95% RH non-condensing		
OTHERS	Dimension	404.5*265*70mm		
	Gross Weight	≈ 6.83 KG		

Note1 - Normal Condition: Vin=12.5V / 25V / 50V V0=100 / 110 / 120 VAC 80% Full load (PF=1.0)

Note2 - Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the use may be required to take adequate measures.

05 Panel Description



Figure 1

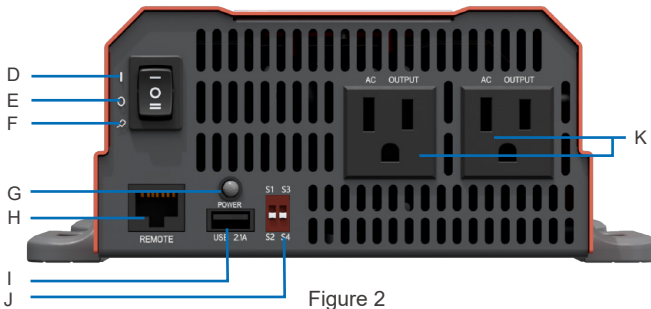


Figure 2

POWER: 1080W

Model	LGE-1080Ti	
A	Fan	1. temperature detection, forced air cooling; 2. Start the fan with load power;
B	Negative Battery Terminal	Connect the negative terminal of the battery
C	Positive Battery Terminal	Connect the positive terminal of the battery
D	Open	Inverter switch is on
E	Close	Inverter switch is off
F	Remote control	Remote control switch is on
G	Indicator light	Green: Inverter normal output, low voltage warning Red: short circuit, over temperature, over voltage, over load, under voltage protection
H	Remote port	RJ45 network interface
I	USB Charging	output voltage:5V ; output current:2.1A ; maximum power:10.5W
J	S1,S2	Frequency Switching: Adjustable 50/60Hz, S1=60Hz, S2=50Hz (Frequency switching supports cold switching only)
	S3,S4	1.Voltage Switching: Adjustable 110V/120V , S3=120V, S4=110V 2.Adjustable 100V/110V,S3=110V,S4=100V
K	Terminal output (AC)	AC outlets socket

05 Panel Description

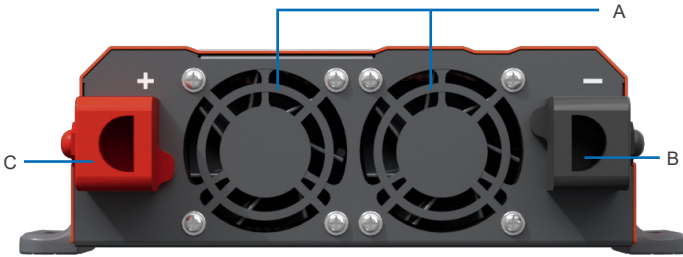


Figure 3

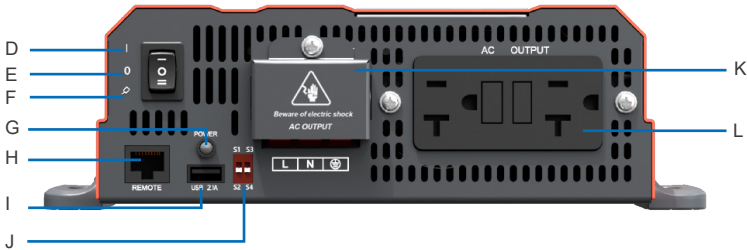


Figure 4

POWER: 2080W

Model	LGE-2080Ti	
A	Fan	1. temperature detection, forced air cooling; 2. Start the fan with load power;
B	Negative Battery Terminal	Connect the negative terminal of the battery
C	Positive Battery Terminal	Connect the positive terminal of the battery
D	Open	Inverter switch is on
E	Close	Inverter switch is off
F	Remote control	Remote control switch is on
G	Indicator light	Green: Inverter normal output, low voltage warning Red: short circuit, over temperature, over voltage, over load, under voltage protection
H	Remote port	RJ45 network interface
I	USB Charging	output voltage:5V ; output current:2.1A ; maximum power:10.5W
J	S1,S2	Frequency Switching: Adjustable 50/60Hz, S1=60Hz, S2=50Hz (Frequency switching supports cold switching only)
	S3,S4	1.Voltage Switching: Adjustable 110V/120V , S3=120V, S4=110V 2.Adjustable 100V/110V,S3=110V,S4=100V
K	Terminal output (AC)	AC outlets terminal (GFCI)
L	Terminal output (AC)	AC outlets socket (GFCI)

05 Panel Description

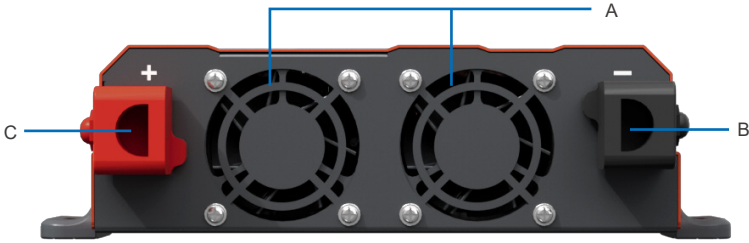


Figure 5



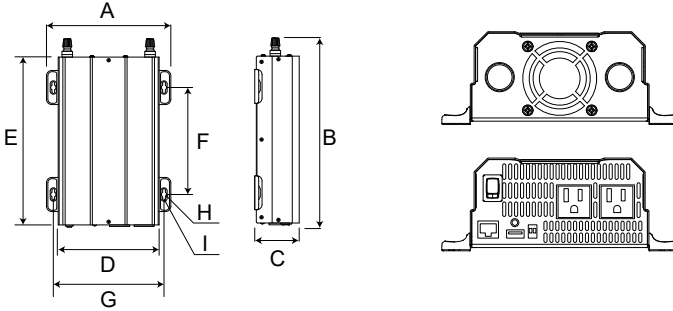
Figure 6

POWER: 3080W

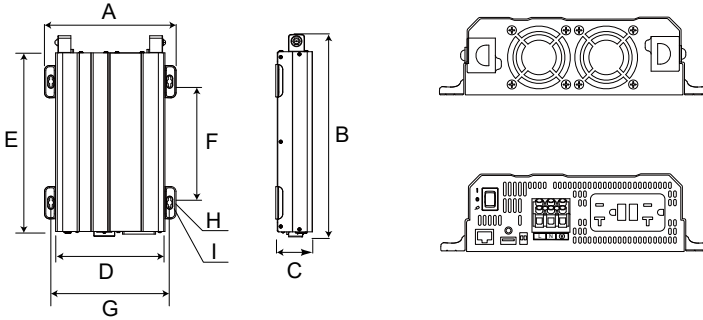
Model	LGE-3080Ti	
A	Fan	1. temperature detection, forced air cooling; 2. Start the fan with load power;
B	Negative Battery Terminal	Connect the negative terminal of the battery
C	Positive Battery Terminal	Connect the positive terminal of the battery
D	Open	Inverter switch is on
E	Close	Inverter switch is off
F	Remote control	Remote control switch is on
G	Indicator light	Green: Inverter normal output, low voltage warning Red: short circuit, over temperature, over voltage, over load, under voltage protection
H	Remote port	RJ45 network interface
I	USB Charging	output voltage:5V ; output current:2.1A ; maximum power:10.5W
J	S1,S2	Frequency Switching: Adjustable 50/60Hz, S1=60Hz, S2=50Hz (Frequency switching supports cold switching only)
	S3,S4	1.Voltage Switching: Adjustable 110V/120V , S3=120V, S4=110V 2.Adjustable 100V/110V, S3=110V, S4=100V
K	Terminal output (AC)	AC outlets terminal (GFCI)
L	Terminal output (AC)	AC outlets socket (GFCI)

06 Dimensions

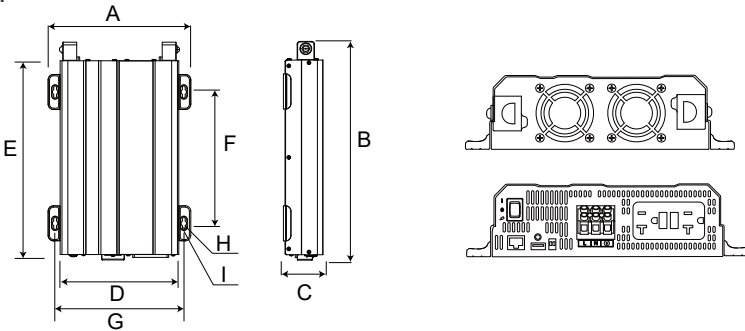
LGE-1080Ti



LGE-2080Ti

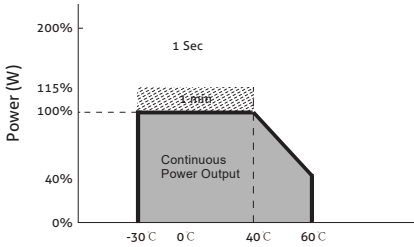


LGE-3080Ti

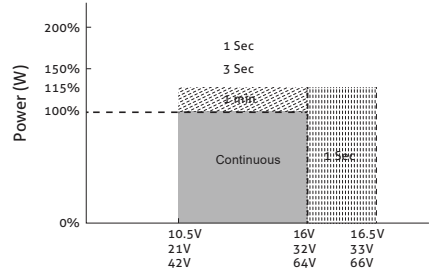


Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)
LGE-1080Ti	185	312	70	140	270	154	158.5	Ø10	Ø5.2
LGE-2080Ti	243	364	70	198	320	204	211	Ø10	Ø5.2
LGE-3080Ti	265	404.5	70	220	360	244	239	Ø10	Ø5.2

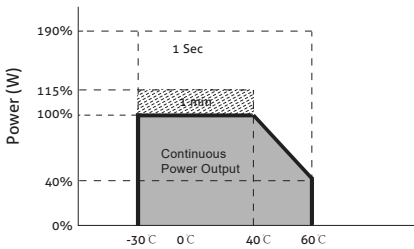
07 Temperature Power Curve



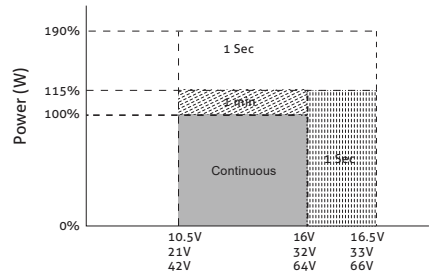
Ambient Temperature (C)
LGE-1080Ti
curve 1



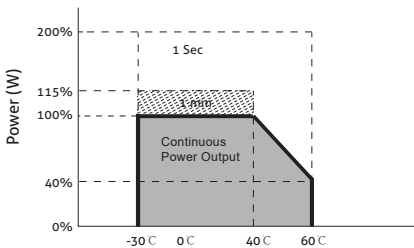
Battery input voltage (V)
LGE-1080Ti
curve 2



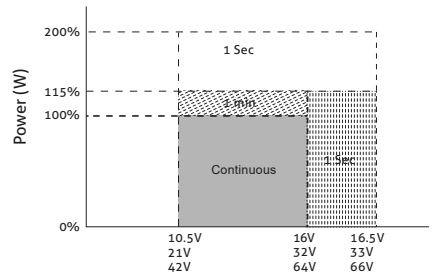
Ambient Temperature (C)
LGE-2080Ti
curve 1



Battery input voltage (V)
LGE-2080Ti
curve 2











Ambient Temperature (C)
LGE-3080Ti
curve 1



Battery input voltage (V)
LGE-3080Ti
curve 2

08 Socket and Wire

Socket type			 (Terminal inside case only, no AC socket)					 (Terminal inside case only, no AC socket)
	Standard	Optional	Optional	Standard	Optional	Optional	Optional	Optional
Country	USA	GFCI (60Hz)	—	—	AUSTRALIA	U.K	EUROPE	—

09 Accessories

Model	Input Voltage	DC Battery Cable	Fuse	Battery Capacity
LGE-1080Ti	12V	3AWG	30A*6	≥180Ah
	24V	6AWG	20A*4	≥80Ah
	48V	8AWG	10A*4	≥40Ah
LGE-2080Ti	12V	2AWG	40A*8	≥320Ah
	24V	3AWG	40A*4	≥160Ah
	48V	6AWG	20A*4	≥80Ah
LGE-3080Ti	12V	4*2AWG (2 positive and 2 negative)	40A*12	≥480Ah
	24V	2AWG	40A*6	≥240Ah
	48V	3AWG	20A*6	≥120Ah

Wire rod

3 ft



Positive electrode connecting wire



Negative electrode connecting wire

09

Accessories

Control methods

LCD remote control display and RJ45 cable, cable length 5 meters (standard)



External display screen



RJ45 cable

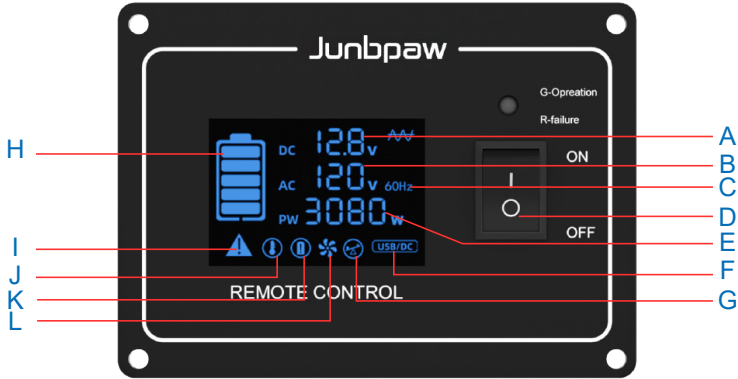


Copper terminal

Packing Information

LGE Serier	DC input	AC output	Package Includes		
			Accessories	Size/Material	Count
LGE-1080Ti	12V	110V/120V	3AWG Cable(Red)	3 ft/PVC	1
			3AWG Cable(Black)	3 ft/PVC	1
			Remote LCD	0.36*0.28*0.098 ft	1
			RJ45 Network Cable	16.4 ft	1
	24V	110V/120V	6AWG Cable(Red)	3 ft/PVC	1
			6AWG Cable(Black)	3 ft/PVC	1
			Remote LCD	0.36*0.28*0.098 ft	1
			RJ45 Network Cable	16.4 ft	1
	48V	110V/120V	8AWG Cable(Red)	3 ft/PVC	1
8AWG Cable(Black)			3 ft/PVC	1	
Remote LCD			0.36*0.28*0.098 ft	1	
LGE-2080Ti	12V	110V/120V	2AWG Cable(Red)	3 ft/PVC	1
			2AWG Cable(Black)	3 ft/PVC	1
			Remote LCD	0.36*0.28*0.098 ft	1
			RJ45 Network Cable	16.4 ft	1
	24V	110V/120V	3AWG Cable(Red)	3 ft/PVC	1
			3AWG Cable(Black)	3 ft/PVC	1
			Remote LCD	0.36*0.28*0.098 ft	1
			RJ45 Network Cable	16.4 ft	1
	48V	110V/120V	6AWG Cable(Red)	3 ft/PVC	1
6AWG Cable(Black)			3 ft/PVC	1	
Remote LCD			0.36*0.28*0.098 ft	1	
LGE-3080Ti	12V	10V/120V	RJ45 Network Cable	16.4 ft	1
			Copper terminal	OT50-8	4
			Remote LCD	0.36*0.28*0.098 ft	1
			RJ45 Network Cable	16.4 ft	1
	24V	110V/120V	Copper terminal	OT50-8	2
			Remote LCD	0.36*0.28*0.098 ft	1
			RJ45 Network Cable	16.4 ft	1
	48V	110V/120V	Copper terminal	OT25-8	2
			Remote LCD	0.36*0.28*0.098 ft	1
			RJ45 Network Cable	16.4 ft	1

10 Remote Control



Model	External display screen	
A	Battery DC voltage	Accuracy±1%
B	Output AC Voltage	Accuracy ±1%
C	Frequncy	50/60Hz
D	Switch Control	
E	Output Power	Accuracy ±5%
F	USB	output 5V 2.1A
G	Overload/Short Circuit Reminder	
H	Power Ratio	20%-100% displayed , 50/60 Hz
I	Failure Warning	
J	Overheating Protection	
K	Voltage Failure	
L	Fan Start	

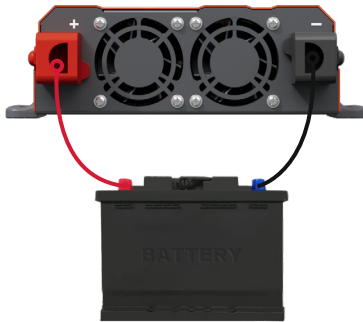
11 Operation Guide

10-1. Connecting the input power

Before making the DC input side connections, the main switch must be “OFF”. First, connect one end of the cable to the positive and negative terminals of the inverter and then connect the other end of the cable to 12V / 24V / 48V battery in the positive and negative terminals of the pool or other DC power supply, [+] is the positive electrode, and [-] is the negative electrode.

The reverse polarity connection can blow the internal fuse and may damage the inverter permanently.

Make sure that all the DC connections are tight (torque to 2.2 2.5 ft-lbs, 3 3.5 Nm). Loose connections could result in overheating and can be a potential hazard.



10-2. Connecting the loads

Calculate the total power consumption of the output load. Make sure that the total power consumption does not exceed the rated power.

If the total power consumption is over the rated power of the inverter, remove the non-critical loads until the total power consumption is below the rated power.

11 Operation Guide

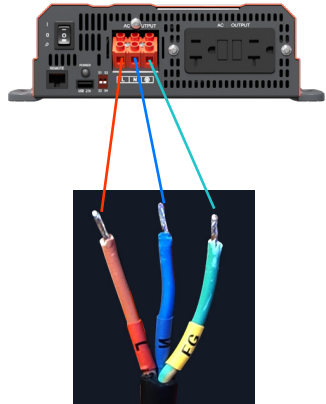
10-3. AC output port

The inverter switch must be in the off state before connecting the cables., as shown in the following figure.

- Ⓛ The live wire
- Ⓝ The neutral line
- Ⓧ The earth wire

Wiring procedure

- Step 1: Connect the earth wire
- Step 2: Connect the neutral wire
- Step 3: Connect the live wire



10-4. Turn ON Inverter

Set the power switch to the “ON” position . The inverter will carry out self-diagnosis and, the LED’s will also appear various colors. Set the power switch to the “OFF” position. The inverter stops and all the lights that are on will go off.

12

Common Problems And Solutions

- **The inverter may be affected by some strong electromagnetic waves, such as nearby motors, power inverters, strong magnetic fields, etc.**

1. The inverter indicator is not lit:

Cause: The battery and inverter are not connected.

Solution: Check and connect the battery to the inverter.

Cause: The battery polarity is reversed, and the fuse is blown.

Solution: Replace the fuse.

2. Low output voltage:

Cause: Overload—The load current exceeds the nominal rating, and some loads are turned off.

Solution: Reduce the load or turn off some appliances.

Cause: The input voltage is too low.

Solution: Ensure the input voltage is within the normal range.

3. Low voltage alarm:

Cause: The battery is out of power.

Solution: Recharge the battery.

Cause: The battery voltage is too low or the contact is poor.

Solution: Check the battery terminals, clean them with a dry cloth, and recharge the battery.

4. Inverter has no output:

Cause: The battery voltage is too low.

Solution: Recharge or replace the battery.

Cause: The load current is too high.

Solution: Reduce the load and restart the inverter.

Cause: The inverter is in over-temperature protection.

Solution: Allow the inverter to cool down and ensure it is placed in a well ventilated area.

Cause: The inverter failed to start and restarted.

Solution: Check for any issues causing the restart.

Cause: The terminal is reversed, and the fuse is blown.

Solution: Replace the fuse and correct the connections.



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