

# LED Light Tech™

## 100 Watt Battery Backup

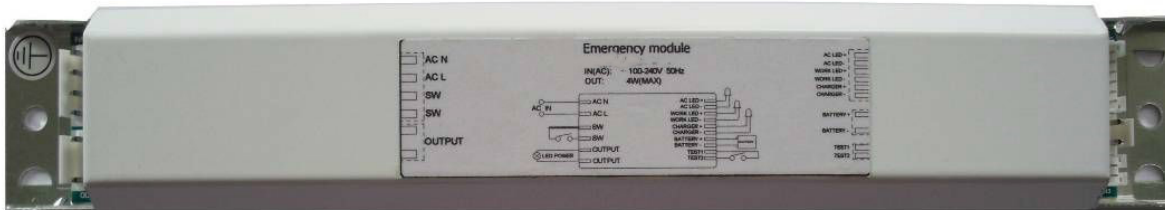
LED Light Technology's LED battery back up reduces output power automatically when it is under the emergency condition to achieve 3 hours of emergency lighting. A power outage is identified automatically and power is reinstated through the battery back up.

**Basic Function :** Input voltage range : 85~265Vac, Input frequency range : 45-65Hz.

When the input power is functioning normally, the battery is charged from emergency module. The input power is carried through the module to supply power to the LED lamp. In emergency mode the module goes into emergency power supply mode and the battery begins to supply power to the LED lamp with limit of max output power.

Charging output adopt pulse mode to provide power supply for battery. Rated power of led lamp is less than 100W and the load is less than 4W under the emergency condition

This device has over current, short circuit, battery low-voltage protection and a battery low-voltage alarm. It can be tested anytime via a test switch.



Working Condition	Max Output power	Input Voltage Range	Input Voltage Frequency	Charging Output Voltage	Charging Output Current	Remark
AC power supply	≤100W	85~265Vac	45~65Hz	0~9.2V	0~240mA	
Emergency condition	≤4W	5-9.2V (battery voltage)	/	/	/	

**DIMENSIONS:**

Length (L) x Width (W) xHeight (H)= 243x40x28.5 (unit : mm)

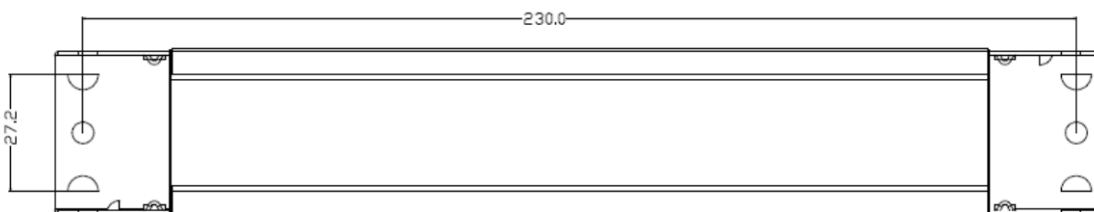
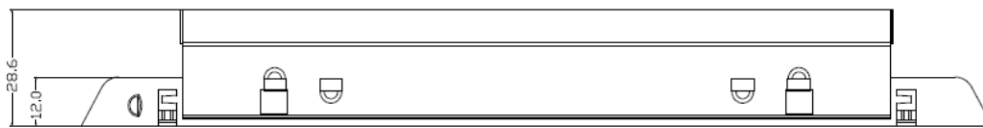
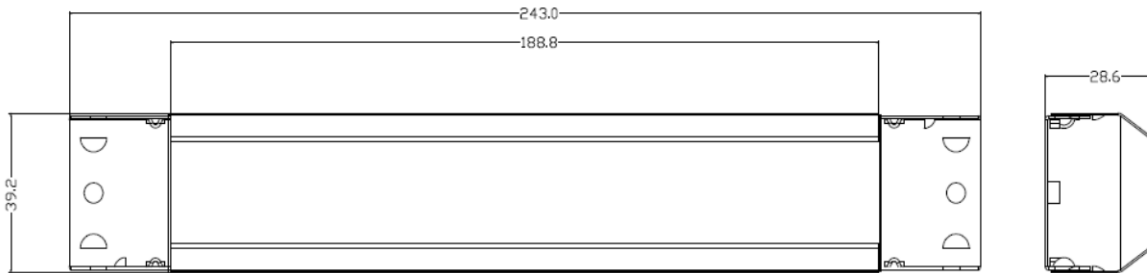
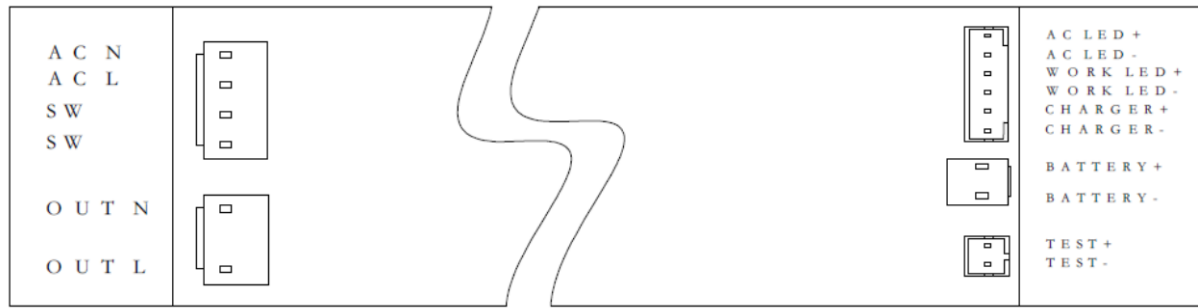
**WARRANTY:**

The product warranty period is 3 years.

**PART NUMBER:** LLT-38-BBU-100



**STRUCTURE AND INPUT, OUTPUT CONNECTOR ASSEMBLY SCHEMATIC DIAGRAMS:**



installation dimension: Length 230mm

**INPUT TERMINAL DEFINITIONS:**

Item	Name	Electric Definition	Remark
1	AC N	AC Input Null line	Blue line
2	AC L	AC Input Live line	Brown line
3	SW	LED lamp control switch line 1	Red line
4	SW	LED lamp control switch line 2	Black line

**AC LED INPUT TERMINAL DEFINITIONS:**

Item	Description	Electric Definition	Remark
1	OUT N	LED lamp Input Null line	Red line
2	NC	removed	-----
3	OUT L	LED lamp Input Live line	White line

**INDICATOR OUTPUT TERMINAL DEFINITION:**

Item	Description	Electric Definition	Remark
1	AC LED+	electric supply indicate LED positive electrode	Green LED
2	AC LED-	electric supply indicate LED negative electrode	
3	WORK LED+	Emergency indicate LED positive electrode	Red LED
4	WORK LED-	Emergency indicate LED negative electrode	
5	CHARGER+	Charging indicate LED positive electrode	Yellow LED
6	CHARGER-	Charging indicate LED negative electrode	

**BATTERY TERMINAL DEFINITION:**

Item	Description	electric definition	Remark	
1	BATTERY+	Charging battery positive electrode	Red Line	Battery has leading wire and plug
2	BATTERY-	Charging battery negative electrode	Black Line	

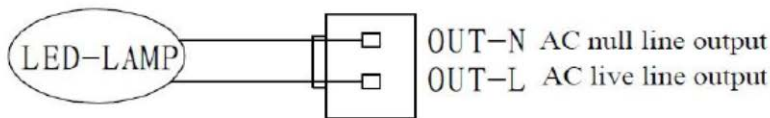
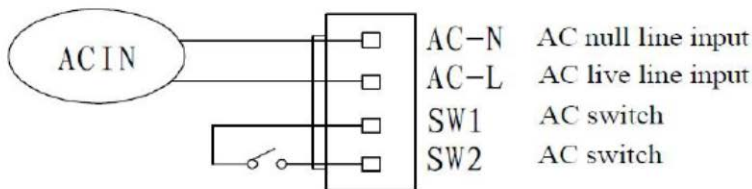


**TEST TERMINAL DEFINITION:**

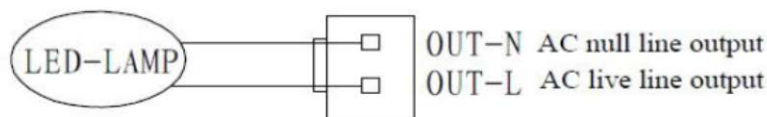
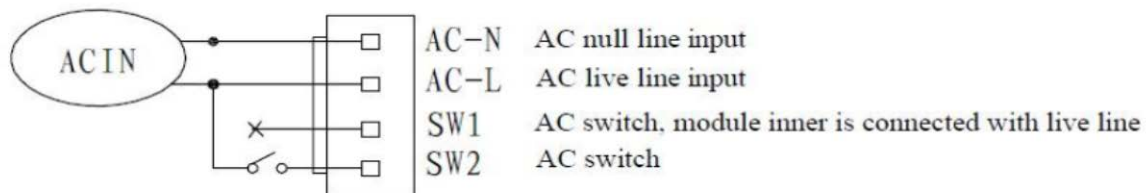
Item	Name	Electric Definition	Remark	
1	TEST+	Test switch positive electrode	Red line	Recommend gentle-
2	TEST-	Test switch negative electrode	Black line	touch style switch

**MODULE INPUT TERMINAL WIRING DIAGRAM:**

Method I:



Method II:



**WORKING ENVIRONMENT CONDITION:**

Item	Content	Qualification	Unit	Remark
1	working temperature	-20~+55	°C	guarantee starting and working normally under -20~+55°C
2	storage temperature	-25~+60	°C	
3	relative humidity	10~95	%	No condensation
4	atmospheric pressure	70~106	kPa	Working normally
5	heating dissipation	natural transmit heat dissipation	/	natural transmit heat dissipation method

**INPUT:**

Item	Content	technical requirements	Rated Value	Unit	Remark
1	Input start-working voltage range	85~264	220/110	Vac	Module works normally under -20~+55°C
2	Input working voltage range	85~264	220/110	Vac	Module start normally under -20~+55°C
3	Input frequency range	45~65	50/60	Hz	Works normally in all range covered
4	Max input current	≤1.5	/	A	Based on using loading power change, max input current must be less than 1.5A.
5	Max input power	≤100	/	W	Power supply by AC, loading power can not be exceed 100W.
6	Max power in emergency	≤4	/	W	Power supply by battery

**CHARGING OUTPUT CHARACTERISTIC:**

Charging Pattern	Charging output voltage range	Charging output current range	Remark
Equal Charge	1-8.4V	200-300mA	constant current of battery charging can support 0V battery charge
FloatingCharge	8.5-9.2V	20-30mA	For the current under trickle charge of battery charging

**PROTECT CHARACTERISTIC**

Item	Content	technical requirements	Unit	Remark
1	Battery low-voltage alarm	5~6	Vdc	Battery alarm with Red indicator flicker
2	Battery low-voltage protection	4.5~5.5	Vdc	Locked output output recover normally after connecting electric supply
3	Output short-circuit protection in	≤3	A	Locked output, emergency output recover normally after connecting electric supply or turn off

**MONITOR AND INDICATION FUNCTION**

Item	Content	Character
1	Battery undervoltage alarm	Under emergency condition, the CHARGER indicator light flicker when voltage of battery port is 5-6 Vdc range.
2	AC LED indicator light	AC indicator light : AC works normally , using indicator light (Φ5 green);when the green indicator is lighting, the electric supply input works normally.
3	CHARGER LED indicator light	CHARGER LED indicator light:using indicator light (Φ5 yellow) : yellow indicator(yellow light with on short-time and off long-time ) ( 100mS on 900mS off ) , means equal charging, / (yellow light with off short –time and on long-time) ( 900mS on 100mS off ) , means float charging.
4	WORK LED indicator light	Emergency function indicator light, using indicator light (Φ5 red) : When red indicator light is lighting, means under emergency condition.

**TEST SWITCH FUNCTION INTRODUCTION**

Under AC condition : module shift to emergency condition after turn on TEST switch; module shift to power supply when turn off TEST switch.

Under emergency condition: touch TEST switch gently(turned off after connect it can turn off emergency function and LED lamp also turn off ; touch TEST switch again gently, LED lighting works normally and recover to emergency function.

**ACCESSORIES REQUEST:**

Each emergency pack should be matched with AC power-supply plug wire(one terminal with 4pcs wire)、output plug wire(one terminal with 2pcs wire)、indicator light plug wire(one terminal with 6pcs wire, soldering with 3pcs LED indicator light)、 switch plug wire (one terminal with 2pcs wire)、 battery module(7.2V/2500mAh one piece battery with one terminal wire , packed separately. ); each shipment need enclose one specification and inspection report .

**SECURITY REQUEST:**

Item	Content		Standard ( test condition )	Test Condition
1	isolation voltage	Input to Output	$\leq 10\text{mA}@1\text{min}@1500\text{Vac}$	Can be bear 50Hz、1500V AC voltage one minute, leakage current $\leq 10\text{mA}$ , no breakdown or flashover phenomenon.
		Input to Enclosure	$\leq 10\text{mA}@1\text{min}@1500\text{Vac}$	
		Output to Enclosure	$\leq 10\text{mA}@1\text{min}@500\text{Vac}$	
2	insulation resistance	Input to Output	$\geq 10\text{M}\Omega@500\text{Vdc}$	The relative humidity is 90% under normal pressure atmosphere; when test voltage is DC 500V; AC and DC of rectifier over the ground, insulation resistance of AC and DC are both not less than 10M $\Omega$ .
		Input to Enclosure	$\geq 10\text{M}\Omega@500\text{Vdc}$	
		Output to Enclosure	$\geq 10\text{M}\Omega@500\text{Vdc}$	

**EMC REQUEST:**

Item	Content	Standard ( test condition )	Remark
1	RE radiated interference	CLASS A , EN55022	
2	CE conducted interference	CLASS A , EN55022	
3	SURGE	wire-wire 1kV;	

**OTHER REQUEST**

Item	Content	Standard ( test condition )	Remark
1	Failure isolation	Make reliable isolation when the product is defective(lose effectiveness) so that the equipment and staff will be not harmed	Defective((lose effectiveness) product cannot be influenced power-supply system
2	acoustic noise	Less than 45dB, measuring distance 1.5m	
3	Heating Dissipation	Natural heat dissipation	
4	Smell	No peculiar smell or harmful smell	
5	MTBF	$\geq 400,000\text{h}$	

**RELIABILITY ENVIRONMENT:**

Item	Content	Qualification	Remark
1	High Temperature Working Condition	Outer shell temperature $\leq +55^{\circ}\text{C}$ Remark : high temperature & high humidity test, full load power up can last 3 hours.	Output voltage is normal with stable property.
2	Low Temperature Working Condition	ambient temperature $-20^{\circ}\text{C}$ Remark : low temperature test , full load power up can last 3 hours.	
3	High Temperature Aging	ambient temperature $+55^{\circ}\text{C}$ Remark : during high temperature aging test, battery can works normally when full load power up can last 48 hours; the battery can work normally after take out to cool for 2 hours	
4	High Temperature stress test	ambient temperature $+55^{\circ}\text{C}$ Remark : high temperature aging test, the upper limit, rated value and lower limit of input voltage range are respectively 10 minute , recycle continuously; all group full load output; the lasting time is 10 days, power supply can work normally.	
5	Storage	Product need be placed into packing carton if not used. The ambient temperature in warehouse is $-25^{\circ}\text{C} \sim +65^{\circ}\text{C}$ , relative humidity is 10%~90%, Not allowed harmful gas , inflammable, explosive product and mordant chemical products in warehouse. And No strong Machinery vibration 、 impact and high-intensity magnetic field there. Packing carton should deviate from ground no less than 20cm high ,no less than 50cm distance from wall 、 heat source 、 window air inlet. The storage period under mentioned condition is 2years usually. It should be inspected held exceed 2 years.	



### STORAGE:

Product should be stored in a box if not being used, warehouse environment temperature keeps -20 ° C to +70 ° C, relative humidity of 5 to 90 percent, Not allowed to have harmful gases, flammable, explosive and corrosive chemicals in warehouse, where need be free of strong Machinery vibration, shock and strong magnetic field, package box should be high from the ground at least 20cm and 50cm away from the wall, heat, window or air intake at least , the storage period keeps 2years under the condition mentioned , Inspect again if exceed 2 years.

### USE:

- Use in a ventilated area
- Use the environmental conditions of the usage manual;
- Do not operate in the volatile gases or flammable environment
- Never remove the cover or touch the internal parts
- Do not internal repair separately and replacement parts;
- Safely insulated is necessary when operation ,either side keeps more than 8mm safe distance away from outside metal shell; Need pad one PVC sheet over 1mm thick to reinforce Insulation if less than 8mm;
- If Smoke or odor occurs during installation immediately cut off the power.

### SAFETY PRECAUTIONS:

- Once the security of the equipment being damaged, stop the device off working and refer to the maintenance regulations.
- When the product equipment from cold to warm environment, condensation may cause the risk of electric leakage ,so the grounding requirements must be strictly enforced; only the qualified personnel approve to connect device to the power supply .
- Keep five minutes working off after power cut off, approve to maintain the equipment after the capacitor achieve full discharge time
- Safety cautions: Abide by safety warning signs, high voltage signs to avoid injury.

### WARRANTY:

The product warranty period is 3 years.

Warranty is voided by the following:

- Unauthorized maintenance that leads to damage ,without LED Light Technology's written permission
- Any retrofit or modifications
- Incorrect operation or use
- Abnormal environmental conditions and fail the specifications mentioned lead to damage
- Damage caused by deliberate acts of human/s
- Damage caused by Acts of God or Natural Disaster