Rathbone Broadcast Batteries, LLC.,
Detailed Lithium Ion Battery Charger Specification

1. SCOPE

Product Description

This Specification defines the input, performance characteristics, environment, noise and safety requirements for the lithium ion rechargeable battery pack charger. It contains specific electrical and qualification requirements. The charger is designed to charge film series li-ion battery packs. This charger contains one 4pin DC output socket for recharging the film Li-ion battery packs. an internal safety circuit that will open the current path when excessive voltage is supplied or excessive voltage or current is drained.

This specification shall be applied to film Li-ion rechargeable battery pack charger, which is manufactured by Sunpow Industrial Limited.

1.2 Parameter Specification

Unless specification otherwise,all parameters muse be met over the limit of temperature load,and input voltage.

2. INPUT REQUIREMENTS

2.1 INPUT VOLTAGES

Normal Voltage: 100 to 240 Vrms

Voltage range : 90 to 264 Vrms

2.2 INPUT FREQUENCY:

Normal Frequency: 50 to 60HZ

Variation Frequency: 47 to 63HZ

2.3 INPUT CURRENT:

□2.5Amps at 100Vac input

□1.5Amps at 240Vac input

2.4 INRUSH CURRENT:

25Amps Max Cold start at 100VAC input, with rated load and 25□ ambient

50Amps Max Cold start at 24VAC input,with rated load and 25□ ambient

2.5 INSULATION RESISTANCE

Insulation resistance shall be more than 500MΩ at 500Vdc between

Primary Live, Neutral line and secondary.

2.6 PRIMARY OVER CURRENT PROTECTION

An adequate internal fuse on the AC input line shall be provided.

2.7 CONFIGURATION

3Conductors<Live, Neutral,Gnd>

2.8 HI-POT TESTS (DIELECTRIC WITHSTAND VOLTAGE)

2-8-1 INPUT TO OUTPUT :3000VAC 10Ma FOR 1 MINUTE

3. OUTPUT REQUIREMENTS

3.1 BATTERY CHARGER OUTPUT REQUIREMENTS(LOAD:C.R)

3-1-1	OUTPUT VOLTAGE:	+16.8V
3-1-2	OUTPUT VOLTAGE RANGE (NO LOAD)	16.65-16.85
3-1-3	NOMINAL CHARGE CURRENT	10.0A
3-1-4	MAX CHARGE CURRENT:	10.5A
3-1-5	Line Regulation	□V±1%

With a half cycle input voltage drop-out, the unit shall operate within the prescribed voltages with a drop-out pulse repetition rate of 500mS.

Conditions: Full load, normal input AC voltage;

Limits: Meet all requirements.

4. OVER CURRENT PROTECTION

When an internal fault occurs, or an external fault is applied to the charger, such that an overload or short circuit is applied to the output, the charger shall shut down. It will enter into normal condition if the fault condition is removed

5. OVER VOLTAGE PROTECTION

The charger will enter to shut sown that means no output while over voltage happened at out put terminal that caused by internal faulty, the output trip voltage shall not exceed 25V with a maximum duration of 250milliseconds. That will be return to normal until charger restart.

6. ENVIRONMENTAL REQUIREMENTS

6.1 TEMPERATURE

OPERATING: 0□ to +35□

STORAGE : -10□ to +80□

6.2 HUMIDITY

OPERATING: 20%to 85% non-condensing

STORAGE : 5%to 95% non-condensing

7. RELIABILITY

7.1 MEAN TIME BETWEEN FAILURE(MTBF)

The power supply shall be designed and produced to have a mean time between

failures (MTBF)of 50000 operating hours at 90％confidence-level while operating under the following condition.

a. AC input voltage: 110Vac and 230Vac
b. Duty cycle :6hours ON,2hours OFF
c. Ambient Temp. : 25□±2□
d. Humidity :Prevailing Conditions

7.2 Life / Power ON Hours

The Power Supply must be designed to operate for 50000 Power-on-hours,about 5yeas

At an ambient temperature of 25□

7.3 BURN IN :4hours at 40□±/-5□ Normal input voltage .80％ of maximum load.

8. MOUNTING CONNECTOR

8.1 AC INPUT CONNECTOR * 1PC

8.2 DC OUTPUT SOCKET CONNECTER * 1PC

9. CAUTION IN USE

Recommend that the following warning, notice and caution are written in the manuals, the guides and so on. Read the manual before using. And because the incorrect use is a reason of heat, fire, damage and the deterioration of the life, certainly keep the following points.

Warning:

1).Do not let the charger terminals (+ and -) contact a wire or any metal (like a metal necklace or a hairpin) , may cause short-circuit.

2).Do not submerge the charger in water, do not wet the charger when store or use the charger.

Notice:

After use the charger please turn off the AC power supply and remove the battery.

Caution:

1).Charge the specified a battery only, charge other type of battery would cause explode.
2).With electricity attack Hazard, use in dry place only.
3).Must be used the appropriate voltage from AC100V to 240V.
4).Do not open or refit the charger.
5).Do not put the screwdriver or metal thread into the charger.
6).Keep away from the baby, children use this charger should be under the guidance by their parents and ensure the charger is correctly used to them at all times.
7).Please pull out the power plug at once when the charging finished.
8).Using the charger under the suggested temperature: 0℃～35℃
9).If the charger is out of use, please remove the power plug from outlet immediately and contact the dealer.