

SPECIFICATION FOR APPROVAL

File NO.: U-SVLO-99-UD

DESCRIPTION: BATTERY PACK

Model	SONY BP95W	Page	Altogether 7 pages
DESIGNED BY		Date	
DESIGN VERIFIED BY		Date	
QE VERIFIED BY		Date	

1、Preface

The purpose of this product specification is to provide technical information for the rechargeable Digital Camera Battery BP95W(for SONY)

2、Model: BP95W

3、Standard

Style	Item	Specification
1	Charging voltage	16.8V
2	Nominal voltage	14.8V
3	Cell model	18650*8
4	Capacity	$\geq 6400\text{mAh}$
5	Dimension (H*W*L)	$37.8 \pm 0.5\text{mm} \times 95.7\text{mm} \pm 0.5\text{mm} \times 151.0 \pm 0.5\text{mm}$
6	Charging current	Standard charging: 0.2C(1280mA) Quick charging: 0.5C(3200mA)
7	Charging method	0.2C (constant current) charge to 16.8V, then charge with constant voltage 16.8V to charging current $\leq 0.01\text{C}$
8	Charging time	Standard charging: 6~7hours Quick charging: 3 hour
9	Max charge current	0.5C
10	Max discharge current	1C
11	Cut-off discharging current protection	13.0A~17.0A
12	Cut-off discharge voltage	12.0V
13	Ambient temperature	For standard charging: 0°C~45°C For discharging: -20°C~60°C
14	Storage within the temperature	-20°C~+45°C
15	Weight	580.0g $\pm 10\text{g}$
16	pack material	ABS

4、Test procedure and Its standard

4.1 Appearance

No defect and leak .

4.2 Test Equipment

Temperature : 20°C $\pm 5^\circ\text{C}$

Humidity : $\leq 75\%$

4.3 Charging and discharging

Style	item	Measuring method	specification
1	Standard Charging	0.5C (constant current) charge to 16.8V, then charge with constant voltage 16.V to charging current \leq 0.01C	no
2	Initial capacity	This capacity means the capacity measured when discharge at 0.2C to 12.0V after standard charging	\geq 6400mAh
3	Charge/ Discharge Cycle Life	One cycle means a charge and discharge cycle — (20°C, 0.5C charging /discharging current, 12.0V cut off voltage) When capacity decrease to 80% of the full capacity, all the cycles is the cycle life of the battery	\geq 300times
4	Temperature characteristics	Alter standard charging,discharge at different temperature (0.2C discharger to12.0V), compare the discharging capacity (Discharge again after 3 hours at different temperature), temperature coefficient is the discharging capacity in this temperature divides the discharging capacity below 20°C	discharging capacity at 10 °C should be \geq 70% discharging capacity at 55°C should be \geq 90%
5	Charging retention	After standard charging, store at 25°C \pm 2°C for 30 days, measure the capacity according to item 2.	Capacity should > 90%
6	Internal impedance	After standard charging, measure the battery at AC 1KHz	\leq 250 m Ω
7	voltage	Open voltage	\geq 15.2V

4.4 Mechanical characteristics

style	item	Measuring method	specification
1	Vibration test	Vibrate the battery after standard charging from three Directions for 90 minutes.Amplitude1.6mm, Frequency 10Hz~55Hz, change1Hz every minutes。	No leak, capacity should be \geq 90% (don't touch the battery for 3 hours)
2	Falling test	Fall the battery after standard charging from 1 meter high to concurrent ground 6 times	No explosion fire and leak

4.5 Safety

style	item	Measuring method	specification
1	Over charge	After full charge ,the battery can be charged for 24 hours at 0.5C constant current	No explosion fire and leak
2	Over discharge	After discharge to 12.0V, the battery can discharge 24 hours at 0.5C constant current with 10 Ω impedance	No explosion fire and leak
3	Short Circuit	After full charge , the positive and negative resistance in Europe with 0.1 Ω short circuit for 1h	No explosion fire and leak
4	Charge to reverse	After full charge, charge battery to reverse with 20.8V DC power	No explosion fire and leak

4.6 Adoption to environment test

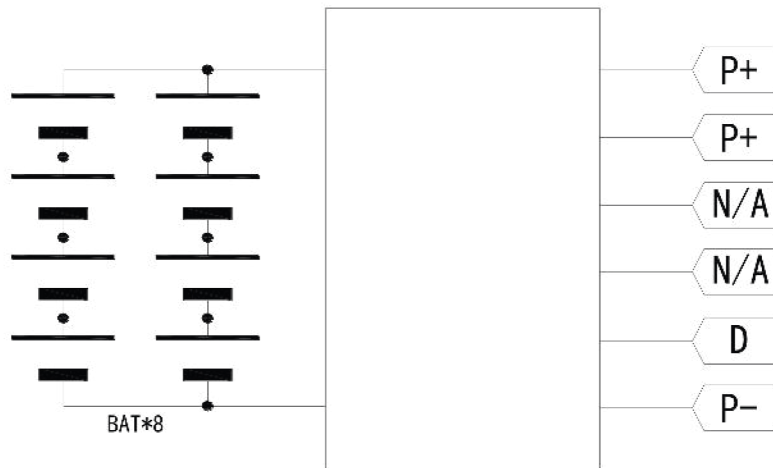
Those not mentioned above should meet to the item of GB/T18287-2013.

5、 Polymer battery protection circuit board

5.1 Characteristics

style	item	Measuring method	specification
1	Over charge	Measure with standard polymer battery protection circuit board tester at 0-45℃	The voltage measured is within $4.30 \pm 0.025V$
2	Over discharge	Measure with standard lithium battery protection circuit board tester at -10-60℃	The voltage measured is within $2.5 \pm 0.08V$
3	Static Flow consumption	Measure with standard lithium battery protection circuit board tester at -10-60℃	The internal current of the PCM protection circuit board without any load and short circuit should be $<65\mu A$
4	Over current protection time	Measure with standard lithium battery protection circuit board tester at -10-60℃	The time needed to be protected when the PCM protection circuit board are overloaded is less than 15ms
5	Over current protection point	Connect the cell of the board to the corresponding contact endpoint of the virtual 15.2 V DC power supply. And can adjust load on the external positive and negative polarization of the protection board	Make the protection board into the over load protection State
6	Internal Impedance	Connect the cell of the board to the contact endpoint of the virtual 15.2 V DC power supply. And connect the external positive and negative polarization of the protection board with 10Ωload.	The negative polarization contact endpoint of the cell and the external negative polarization of the protection board divide the external load current should be $<25m\Omega$

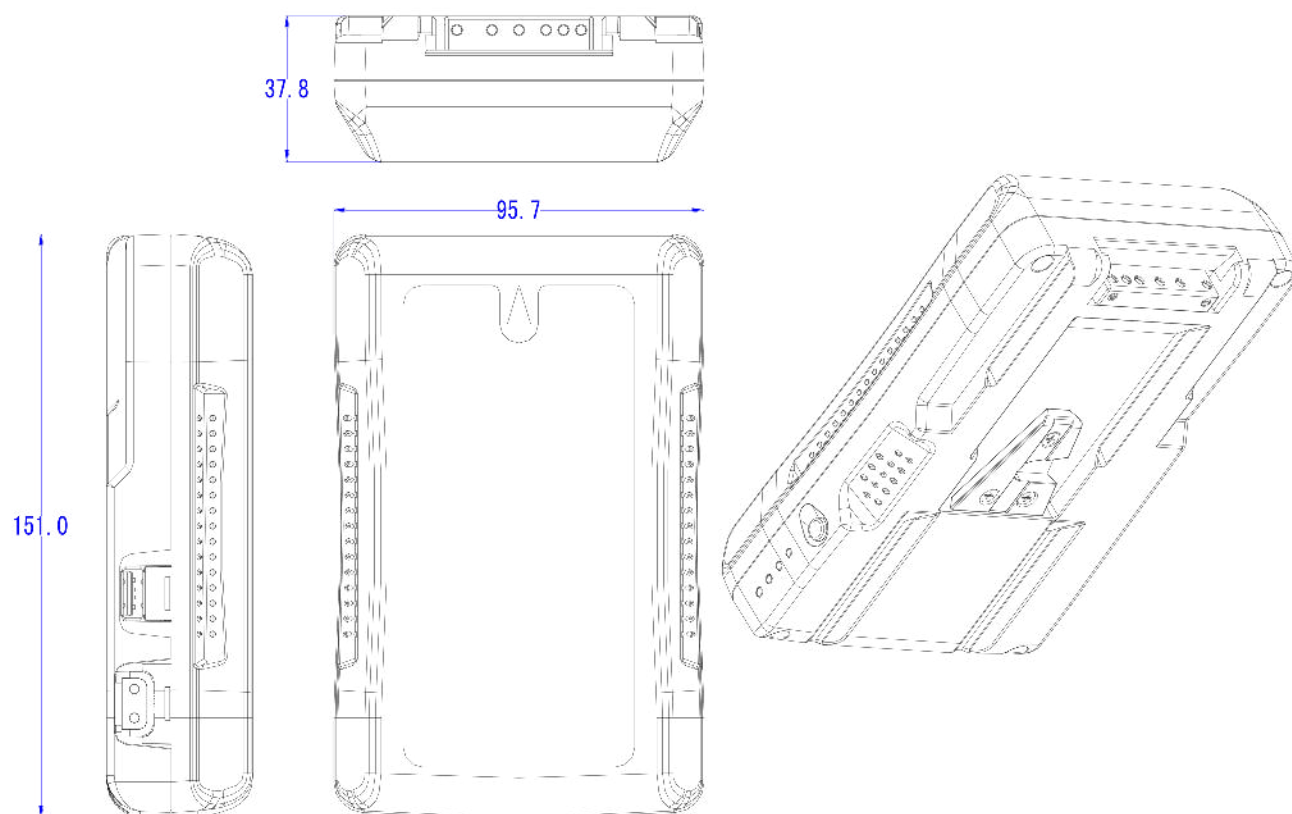
5.2 Wiring diagram



6.0 Appearance of battery



7.0 Mechanical Drawing(mm)



8.0 warning and attention when using

To prevent battery from probable leakage , fever, explosion, please note the following preventive measures:

Warning!

Prohibited being submerged in water or sea water, should be placed in a cool dry environment when not being used.

- Prohibit being placed near the heat source such as fire and the heater
- Please use rechargeable lithium-ion battery charger
- Prohibited being thrown into the fire or the heater。

Prohibited being connected the positive and negative polarization directly with metal anode and make short-circuit occur.

- Prohibited being knocked , thrown,or stamped on batteries

Prohibited being banned on directly or punctured with a nail or other sharp object

Attention!

- Prohibited being used or placed under high temperature (the hot sun or in the car) it could lead to overheating, catching fire , functional failure, or life expectancy reduction
- prohibited being used in strong electrostatic and magnetic field, it is easy to damage the safety protection devices, may cause insecurity.◦
- If the odour, fever, discoloration, deformation.or any irregularity occurs when being used ,stored and charged, remove immediately from the device or charger.