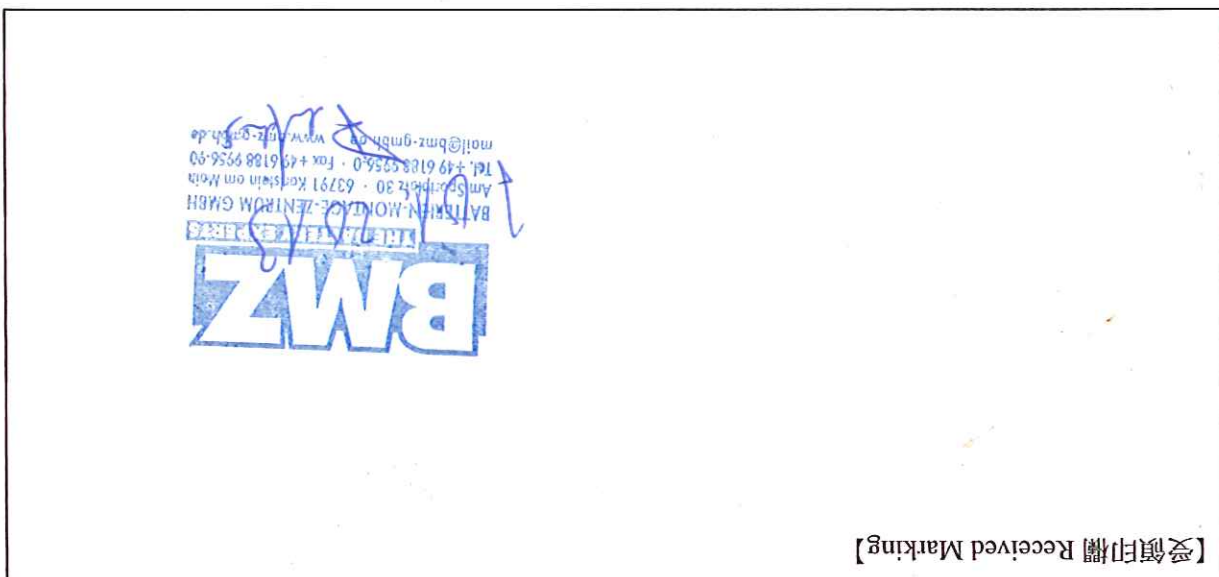


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納入者 Supplier
 ソニー株式会社
 コンシューマー・プロフェッショナル&デバイスグループ
 デバイスソリューション事業本部
 Sony Corporation Consumer, Professional & Devices Group
 Device Solutions Business Group
 〒108-0075
 東京都港区港南 1-7-1
 1-7-1 Konan, Minato-ku, Tokyo, 108-0075 Japan

申請年月日 2012年 11月 27日
 Date of application (Y/M/D)
 責任者名
 Manager
 技術担当名 S.Sasaki
 Engineer
 営業担当名 A.Sano
 Salesman



[受領印欄 Received Marking]

貴社部品名
 Customer's parts Name
 貴社部品番号
 Customer's parts number
 USS142BMVVR2(AE)
 弊社部品名
 Supplier's parts name
 弊社部品番号
 Supplier's parts number
 F-4992-283-0

新規 (部品追加を含む)
 New application (including addition to approved parts)
 仕様変更 (□貴社、□納入者)
 Specification revision (by customer of [] by supplier)

納入仕様書
 Product Specifications

FOR RETURN

御中 Batterien-Montage-Zentrum GmbH

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承認	Approved by	
確認	Checked by	
作成	Prepared by	

貴社名 : 貴社名
Customer's name : Customer's name

貴社部品名 : 貴社部品名
Customer's parts name : Customer's parts name

貴社部品番号 : 貴社部品番号
Customer's parts number : Customer's parts number

ソニー部品名 : 貴社部品名
SONY parts name : Customer's parts name

ソニー部品番号 : F-4992-283-0
SONY parts number : Customer's parts number

納入仕様書
Product Specifications

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Item	Rating	Note
3.1 Nominal Capacity	715mAh(Typ) 680mAh(Min)	0.21A (136mA) Discharge, 3.0V/cell cut off Rated Charge
3.2 Nominal Voltage	3.6V	
3.3 Discharge cut-off voltage	3.0V	
3.4 Charge Current(Standard)	0.68A	
3.5 Charge Voltage	4.20±0.05V	Max: 4.25V
3.6 Charge Time	Approx 2.5h	Charge Current: 0.68A
3.7 Continuous maximum charge current	2.0A	
3.8 Continuous maximum discharge current	2.0A	(at 23°C)
3.9 Weight	19.3g +/-0.8g	
3.10 Operating temperature range	Charge	0~+45°C
	Discharge	-20~+60°C
3.11 Storage temperature range	Storage	-20~+45°C
	Long Storage	20°C
		Recommended

2 Rating

- 1 General
- 1.1 Scope
- This specification is applicable to Lithium-Ion Battery provided by Sony.
- 1.2 Product Category
Lithium-Ion Battery
- 1.3 Sony parts name
USS142BMVR2 F-4992-283-0
- 1.4 Cell Type
US14500VR2
- 1.5 Applicable Safety Standard
UL1642

Lithium-Ion Battery Specifications

Item	Condition	Specification
4.5.1 Open-Circuit Voltage	Shipping condition	More than 3.62V Less than 3.67V And the same lot is within 0.05V.
4.5.2 Impedance	After standard charge within 3 days.(1KHz)	More than 50mΩ Less than 100mΩ
4.5.3.1 Capacity	After standard charging, discharge at 0.2ItA(136mA) cut-off voltage 3.0V	680mAh or more
4.5.3.2 Capacity(2)	After standard charging, standard discharging.	646mAh or more
4.5.3.3 Capacity(3)	After standard charging, discharge at 1.0ItA(680mA) cut-off voltage 3.0V	612mAh or more
4.5.4 Charge/Discharge Cycle	Standard charging ⇔ Discharge at 0.68A, 3.0V After 300cycles	510mAh or more
	Standard charging ⇔ Discharge at 0.68A, 3.0V After 500cycles	408mAh or more

4.5 Electrical Performance

Discharging at a constant current of 0.340A down to 3.0V in 23°C±2°C atmosphere.

4.4 Standard Discharge

of 0.680A for 2.5hours in 23°C±2°C atmosphere.

Standard charging is defined as charging at a constant voltage of 4.20V(+/-0.005V) and a constant current

4.3 Standard Charge

Impedance shall be measured by a sinusoidal alternating current method (1KHz LCR meter).

4.2.3 Impedance Meter

(Indication Electric Instrument LevelV0.1).

Volmeters and ammeters shall be equal or more precision instruments specified by JIS C 1102

4.2.2 Voltmeter and Ammeter

of 0.01mm specified by JIS B 7502(outside micrometer) or JIS B 7503(dial gauge).

The dimension measurement shall be implemented by instruments with equal or more precision scale

4.2.1 Dimension Measuring Instrument

4.2 Testing Instrument or Apparatus

acceptable as far as the test reliability is assured.

Temperature 23±2°C, Humidity 65±20%, However, temperature 15~30°C, humidity 25~85% is also

4.1 Standard Test Condition

4 Performance

deformation. It shall be clean, and have equality and product value.

It shall be free from any defects such as remarkable scratches, breaks, cracks, discoloration, leakage, or

3.2 Appearance

As shown in Outline drawing

3.1 Form and dimensions

3 Form, dimensions and appearance

Item	Condition	Specification
4.6.1 Heat cycle test	After standard charging, 75°C, 6h => -40°C, 6h For 10 cycles, then storage at 20+/-5°C, 24h	No leakage, No interception
4.6.2 Shock test	After standard charging, P-tile from height of 1.2m. Dropped in each X, Y and Z for 3 times, with guide like as tube. Standard discharging capacity of the 2 nd times.	No leakage 578mAh or more
4.6.3 Vibration test	After standard charging, vibration is to be applied. Standard discharging capacity of the 2 nd time. Sinusoidal Oscillation 10~60Hz, 20.6m/s ² 60~80Hz, 13.7m/s ² 80~100Hz, 6.9m/s ² 100~125Hz, 3.9m/s ² 5min sweep, each XYZ for 1h	No leakage 578mAh or more

4.6 Reliability

4.5.5 Storage Characteristics	After standard charging, stored at 23°C for 28days. Remaining capacity measured by standard discharging. After above measurement, recovery capacity measured by standard charging and standard discharging. 612mAh or more	612mAh or more
4.5.6 Long-term storage characteristics	After standard charging, stored at 23°C for 365days. Recovery capacity measured by standard discharging. 612mAh or more	612mAh or more
4.5.7 Discharging temperature characteristics	The capacity discharged under the ambient temperature listed below after standard charge Discharge Temperature Capacity -10°C 476mAh or more 0°C 544mAh or more 23°C 646mAh or more 45°C 646mAh or more	Refer to the left table.
4.5.8 Charging temperature characteristics	The capacity charged under the ambient temperature listed below after standard discharge Charge Temperature Capacity 0°C 544mAh or more 23°C 646mAh or more 45°C 646mAh or more	Refer to the left table.

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- 7.5 Rated Capacity (Fig. 1: xxxx mAh)
680 mAh
- 7.4 Factory (Fig. 1: A)
G: Sony Electronics(Singapore) Pte.Ltd.
Specification (Fig.1:HH)
R2 (Printing:R2)
- 7.3 Manufacturer (Fig.1: SE)
SE: For UL standard (Trade name for Sony Energy Devices Corporation)
- 7.2 Model name (Fig.1: USxxxxxxx)
US1450VR2
- 7.1 Lot number (Manufacturing date of cells) (Fig.1: YMDDS)
ZZZZZ : Serial No.
WW : Winder No.
Y : Year ('02='1'03='J'04='K'...)
M : Month (Jan.=A Feb.=B...Sep.=I Oct.=J Nov.=K Dec.=L)
DD : Day (01,02,...29,30,31)
S : Electrode History (A, B, C .., Z)

Fig.1



The code is on the surface of the cell by three steps. (Fig.1)

- 7 Identification and Marking
It shall be discharged approx. 55%.
- 6 Delivery condition
PTC: Trip is by 10A and about 7s (Reference value)
- 5 Protector
Current interception equipment: When pressure rises in the cell, the current is intercepted.
Explosion Protective Value: When pressure rises in the cell, pressure is opened.

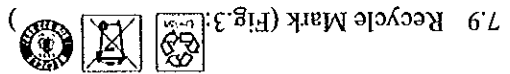
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8 Caution

Warning for Using the Lithium Ion Rechargeable Battery

- 8.1 Observe the following in using the battery
- Do not heat or throw into the fire.
 - Do not disassemble.
 - Do not set up or leave in high temperature (60°C or more) in device.
 - Do not short Positive (+) terminal and Negative (-) terminal with a metal.
 - Do not wet in the water.
 - Do not give a hard shock or drop.
 - Do not solder with the cell directly.
 - Do not solder with PTC or Thermal Protector directly.
- 8.2 Charging
- Charge within the limits of 0°C ~ +45°C temperature.
 - Do not charge reversal.
 - Charge only with charger exclusively designed for this battery.
- 8.3 Discharging
- Discharge within the limits of -20°C ~ +60°C temperature.
 - Avoid discharging below 3.0 V. Do not over-discharge below 1.0 V.
 - Discharge within a designated current.
 - Use only as a power source for a designated device.

Display on the surface of the tube.



Refer to 7.6

7.8 Rated capacity (Fig.2: xxxx mAh)

Refer to 7.1

7.7 Lot number (Fig.2: YMDDS)

7.6 2D Dimensional code (Fig.2)

Fig.3

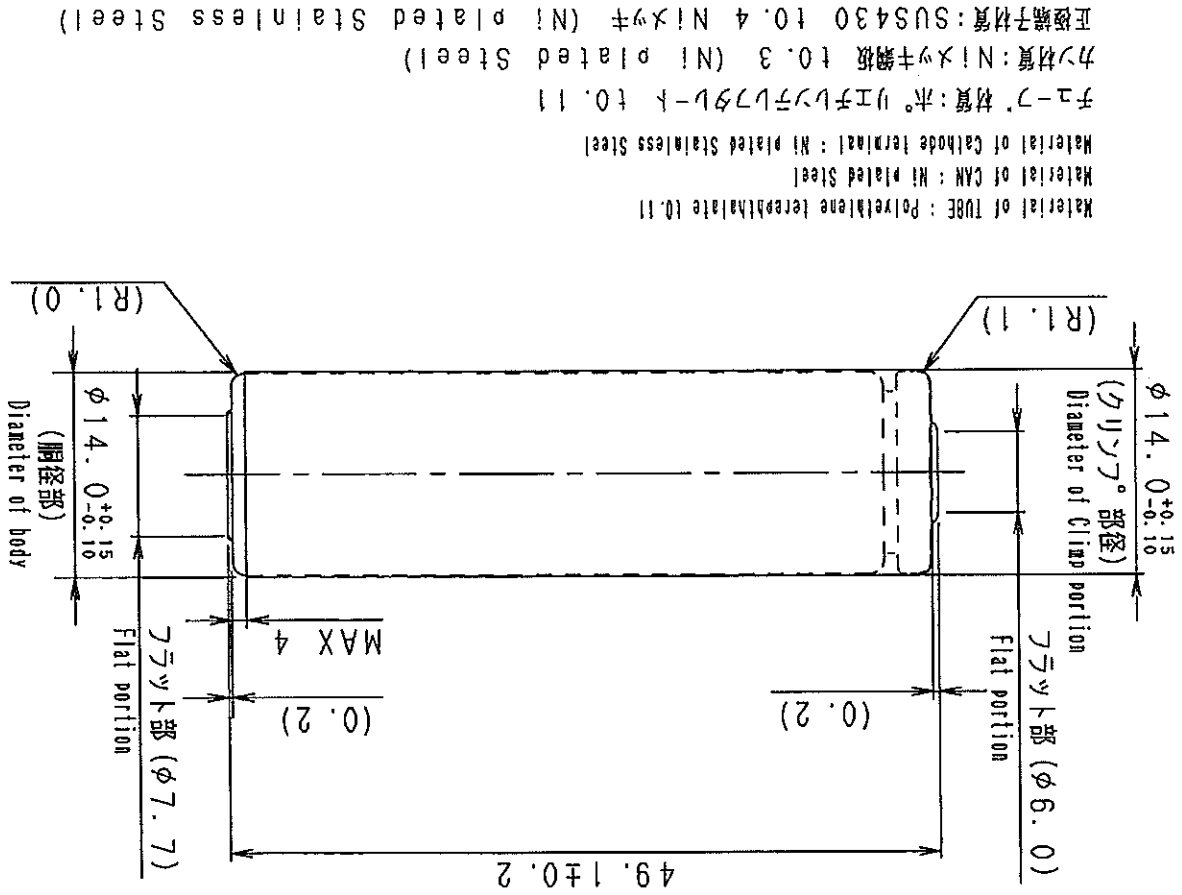


Fig.2



The code is on the surface of the tube. (Fig.2, Fig.3)

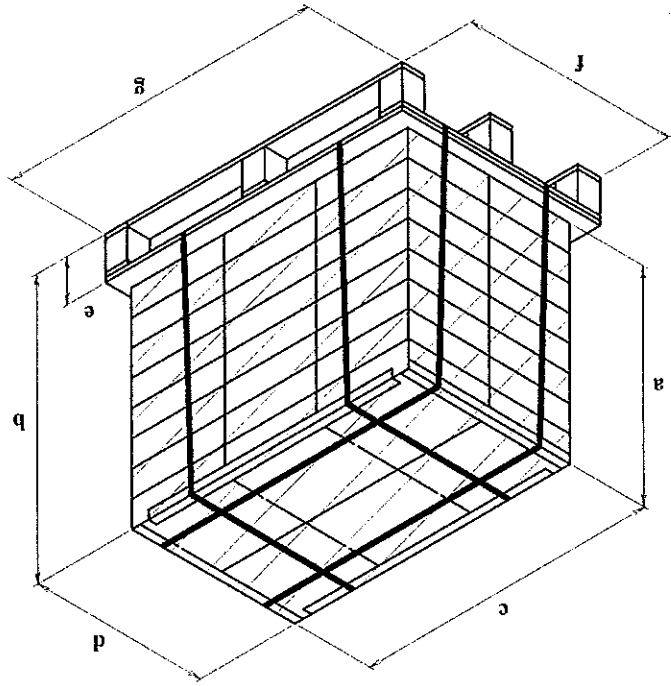
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9 Dimension Drawing

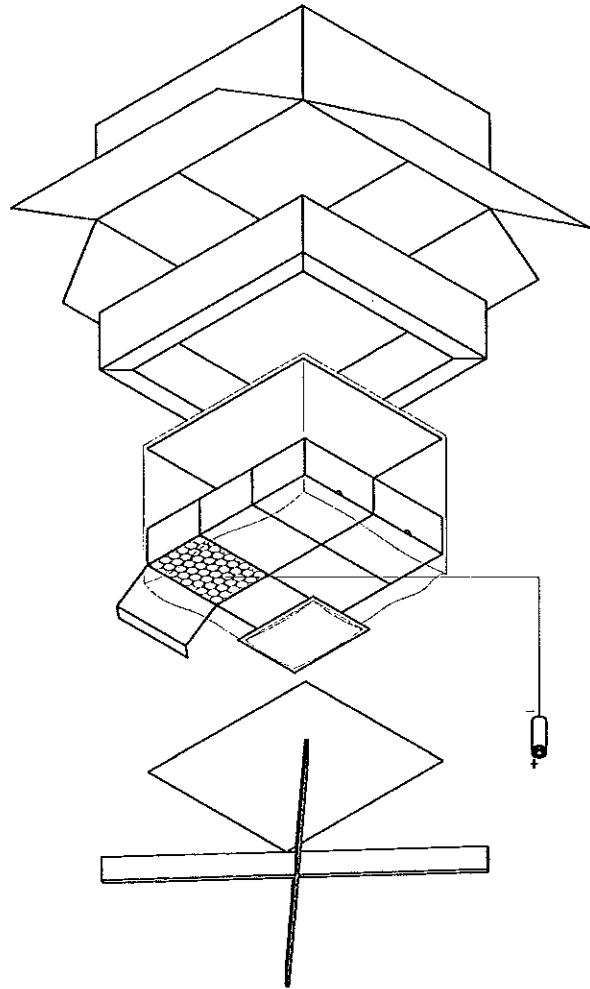
8.5 Note
 If any doubt or inconvenience on this specification arises, modification and revision shall be made per mutual agreement.

8.4 Storage
 • Discharge enough for the long-term storage.
 • Store dry and low temperature area. Do not store in a high temperature area.

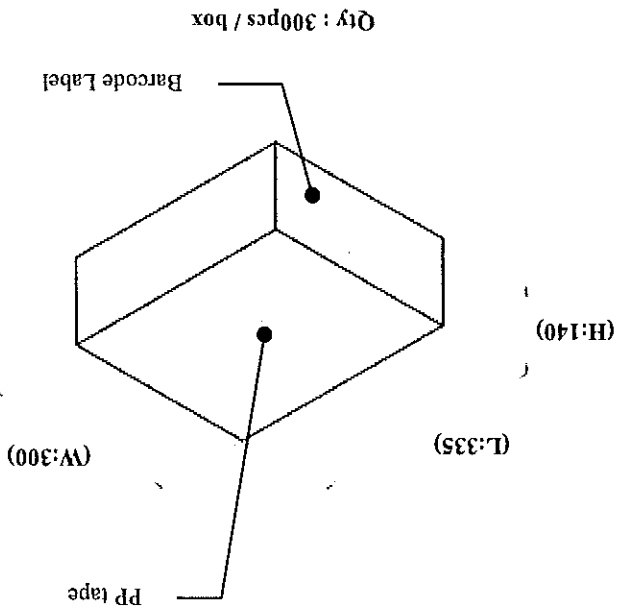


Size (mm)
 a : 1120
 b : 1246
 c : 1005
 d : 600
 e : 126
 f : 800
 g : 1200

11 Packing instructions, pallet




10 Packing Instruction



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CUSTOMER PARTS CODE		
MODEL NAME (Sony)	US9142BMR2 (AE)	
PARTS CODE (Sony)	F49922830	
CELL NAME (Sony)	US14500VR2	
SUPPLIER	Sony Corporation	
CELL LOT NO. & QTY		
LOT NO.		
CARTON NO.		
QUANTITY	300PCS	
REMARKS:		

A part name is marked on the bar code label of master carton. This bar code label is stuck to two places of the master carton.

Parts name marking