LEXCELL 6LR61 PRODUCT SPECIFICATION			
Product	**Alkaline battery; 9Volts**	**Page**	**1 of 4**
Size	**IEC 6LR61**		

6LR61 battery specification

1. Type designation: IEC 6LR61

JIS: 6LR61

2.Chemical system:

Electrolyte-zinc-manganese dioxide (mercury & cadmium free)

3.Dimension: Diameter: 24.5-26.5mm

15.5-17.5mm

Height: 46.5-48.5mm

4.Norminal voltage: 9.0Volts

5.Norminal:

The weight of each battery is approximately: ≤**45.0g**

6.Heavy Metal content (%):

Mercury content	Cadmium	Lead
≤1ppm	≤10ppm	≤40ppm

7.Appearance and terminal:

Battery shall be clean and have no dirt, no leakage, and no deformation which may affect their performance and actual use and shall have clearly visible markings.

8.Battery capacity: (Test environment：20℃±2,60%±15%R.H)

(Load resistance:**620 ohms**, Daily period:**24h/d**, Cut off voltage:**4.8V**； According to as the above the same discharge condition, the capacity of each battery is approximately:**550mAh)**

9.Storage characteristics:

After 12 months storage at 20℃, 90% capacitance of fresh cells.

After 24 months storage at 20℃, 85% capacitance of fresh cells.

10.Electrical characteristics:

(Test environment:20℃±2,60%±15%R.H)(Load resistance: **180 ohms,** Measure time**: 0.3S**)

(All samples shall be normalized for a minimum of 8 hours at the above environment prior to measurement)

	OCV (V)	CCV (V)	SCC (A)
Initial	≥9.5	≥9.3	≥4
After 12 months storage	≥9.4	≥9.2	≥3

Remark: OCV: Open Circuit Voltage; CCV: Close Circuit Voltage; SCC: Short Circuit Current

11. Discharge test (service life) (Test environment: 20℃±2,45%--75%R.H)

Load	180Ω	270Ω	620Ω
Discharge mode	24h/d	1h/d	2h/day
End voltage	5.4V	5.4V	5.4V
Initial	11.5h	16.8h	38.5h
After 12 months storage	10.5h	15.2h	35h

Remark: The initial discharge test shall commence within 30 days of manufacture.

The discharge time is the minimum average duration (MAD).

Test quantity: n=9pcs (for per discharge test)

12. Discharge curve:

①180 ohms 24h/d to 5.4V continuous discharge curve (Appendix 1)

②270 ohms 1h/d to 5.4V intermittent discharge curve (Appendix 1)

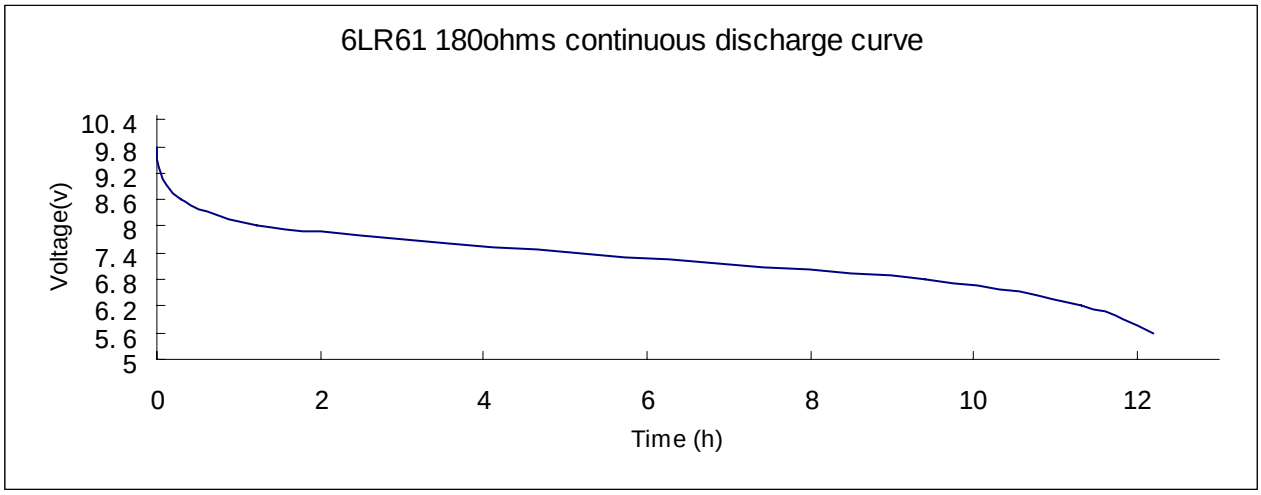
③620ohms, 2h/d to 5.4V intermittent discharge curve (Appendix 1)

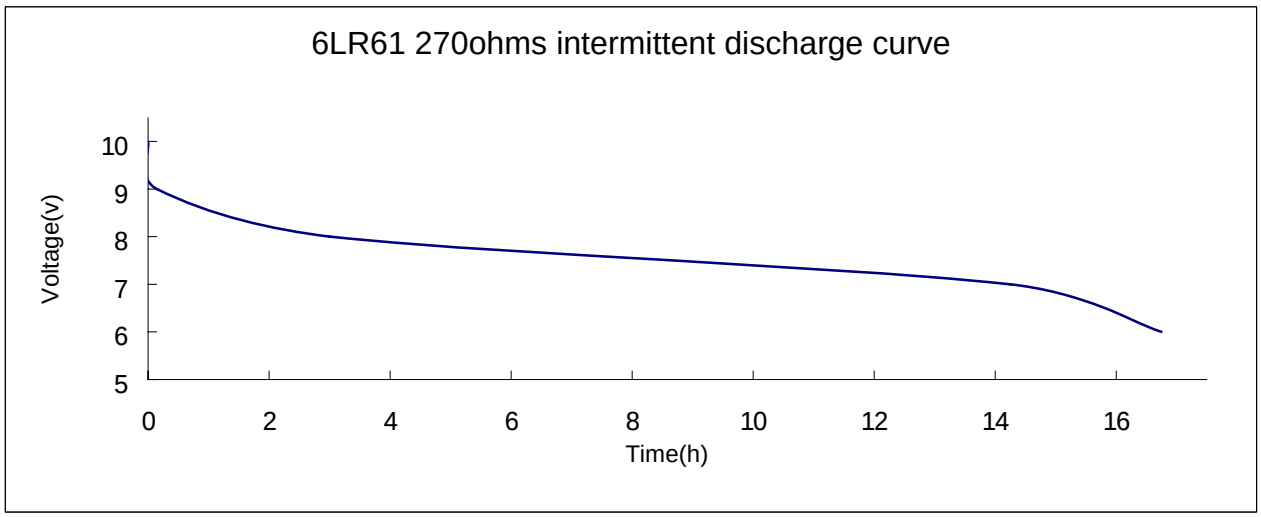
13. Safety test (Test environment: 20℃±2,60%±15%R.H)

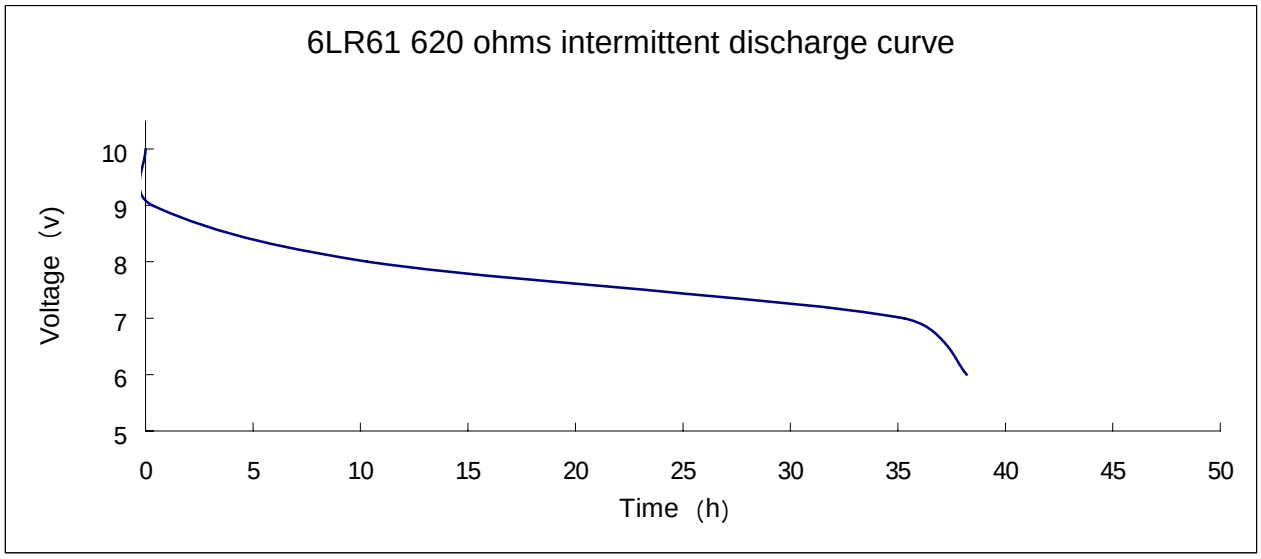
Test item	Test method	Test pcs	Requirements
Over-discharge leakage test	180 ohms (24h/d) 48hours	9pcs	No leakage
	270 ohms (1h/d) to 3.6V	9pcs	No leakage
	620 ohms (2h/d) to 3.6V	9pcs	No leakage
High temperature test	60±2℃,RH:90±5%, after 20 days storage, the cells shall be stored in an ambient temperature of 20±2℃,RH:60±5%, for 4-24hours.	40	No leakage
One piece of battery Short circuit test	The terminal of an un-discharged battery is connected by wire. The circuit is completely for 24hours or until the case temperature has return to environment.	10	No leakage No explosion

Over discharge	One battery discharge 180 ohms to 3.6V, then in series connect with 3 pieces of new battery with 620ohm 24h	36	No explosion
Free fall test	The battery free drops from one-meter height for 6 times, then store for 1h	10	No explosion
Impact under high and low temperature	Un-discharged battery store in test box under 70±2℃ for 24h,then change to -20℃ for 24h, repeat the above condition for 10 cycles.	20	No explosion
Storage after partial discharge	50% discharged battery stored under 45±5℃ for 30days	9	No leakage No explosion

Appendix 1


6LR61 180ohms continuous discharge curve
Voltage(v)
10.4
9.8
9.2
8.6
8
7.4
6.8
6.2
5.6
5
0
2
4
6
8
10
12
Time (h)


6LR61 270ohms intermittent discharge curve
Voltage(v)
10
9
8
7
6
5
0
2
4
6
8
10
12
14
16
Time(h)


6LR61 620 ohms intermittent discharge curve
Voltage (v)
10
9
8
7
6
5
0
5
10
15
20
25
30
35
40
45
50
Time (h)