



Introduction to Curved Battery

AEC



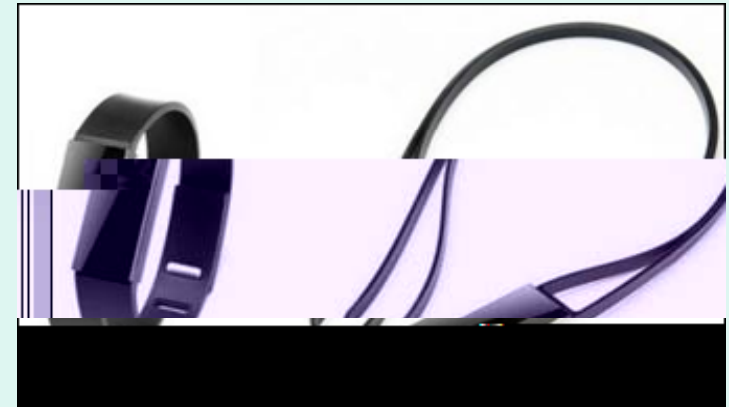
Outline

- ✓ Applications
- ✓ MP Products Details
- ✓ Processes of Curved Battery
- ✓ Performance of Curved Battery

Applications

The market of intelligent wearable products keeps growing recently, which demands batteries to be lighter, thinner and more flexible.

The curved batteries are widely applied to intelligent wearable products, such bracelets, watches and earphones.

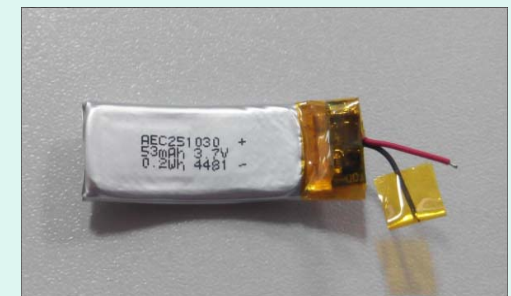
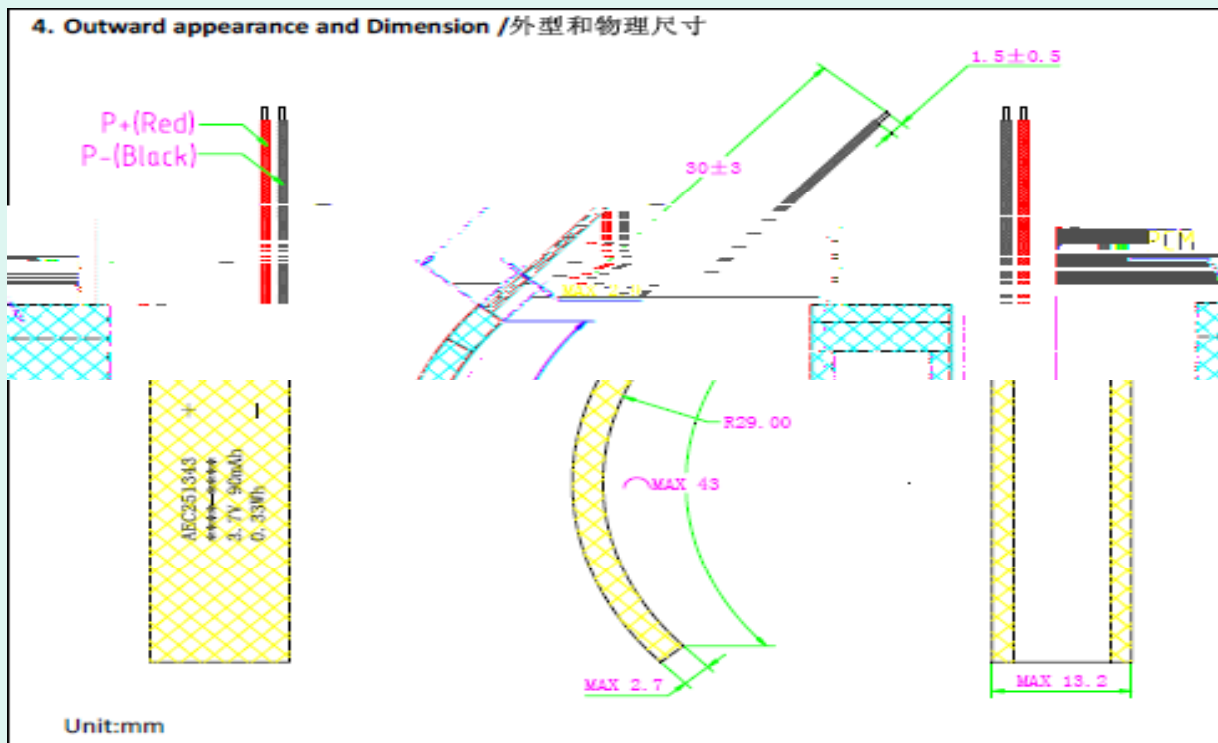


Details of MP Products

1 251343

* * = 2.7 * 13.2 * 43.0mm CPP , 29.0mm, 90mAh

Thickness*Width*Length= 2.7 * 13.2 * 43.0mm (CPP is included), radius of the inner arc=29.0mm, capacity= 90mAh

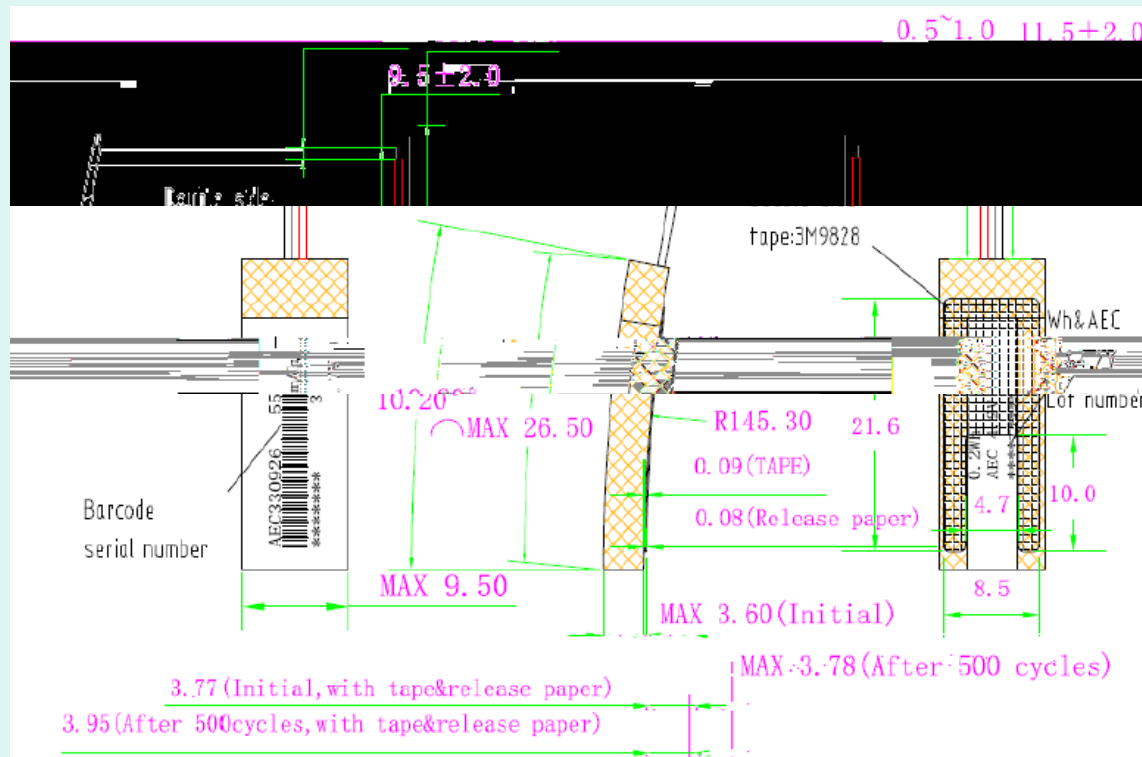


Details of MP Products

2 330926

* * = 3.60 * 9.50 * 26.50mm CPP , 145.3mm, 55mAh

Thickness*Width*Length= 3.60 * 9.50 * 26.50mm (CPP is included), radius of the inner arc=145.3 mm, capacity= 55mAh



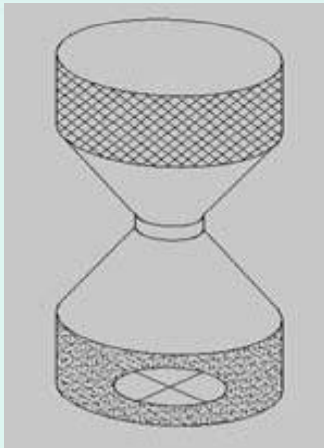
Details of MP Products

3 AEC Dimension ranges of the AEC curved battery

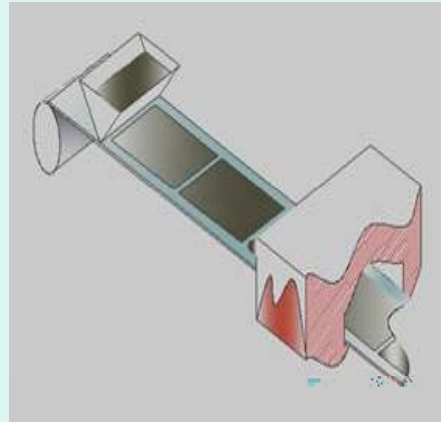
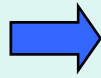
2.0~5.0mm	9~40mm	25~60mm	25~150mm
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Thickness range: 2.0~5.0mm
Width range: 9~40mm
Length range: 25~60mm
Radius range of the curved battery: 25~150mm.

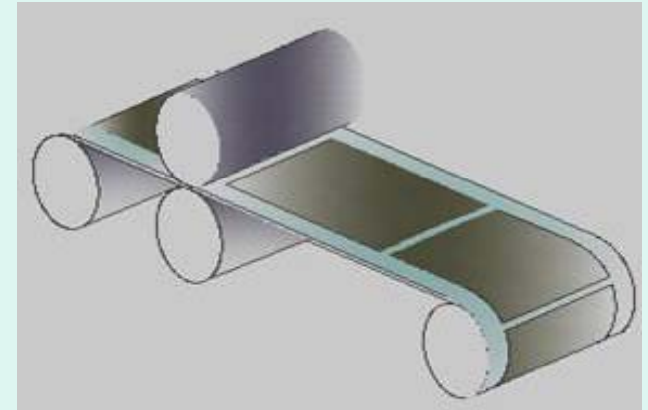
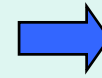
Processes of Curved Battery



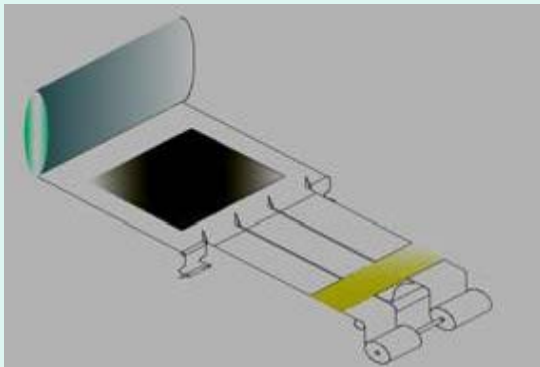
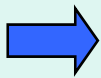
1. Mixing



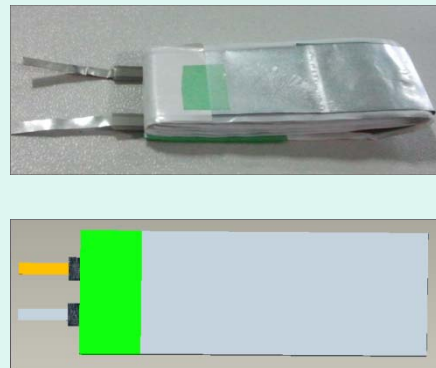
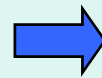
2. Coating



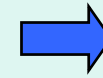
3. Pressing



4. Sitting

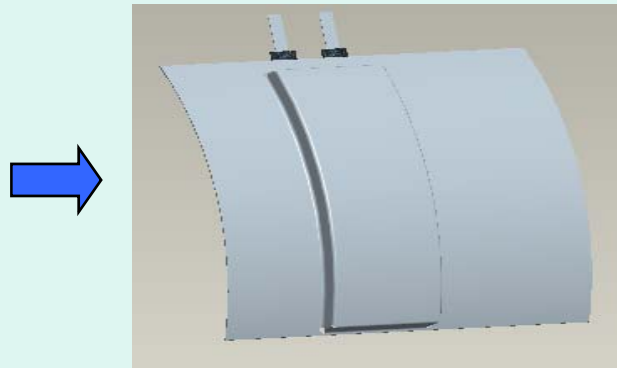


5. Winding and Welding

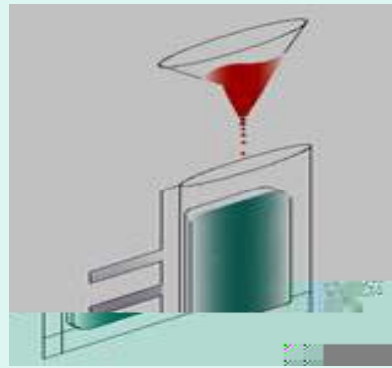


6. Pouch

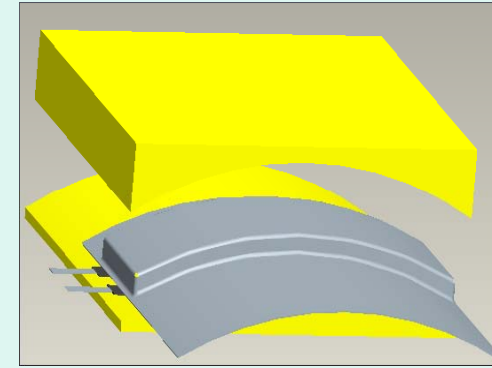
Processes of Curved Battery



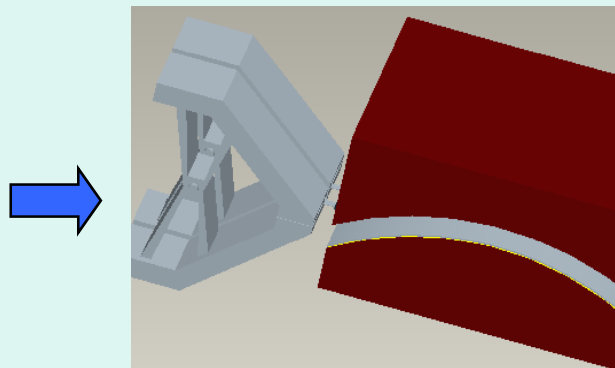
7. Top and side sealing



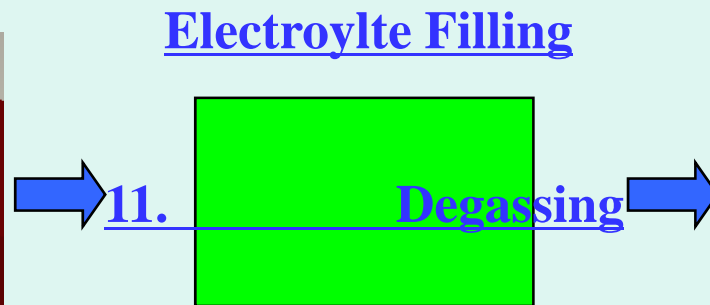
8. _____



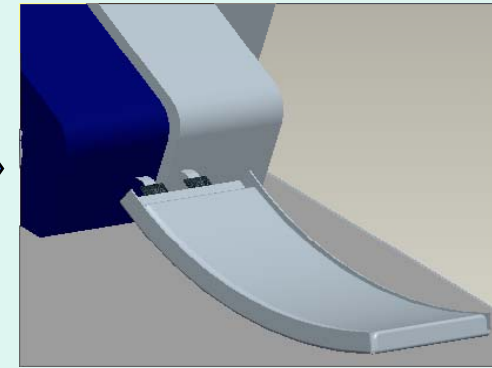
9. Hot Pressing



10. Formation



11. Degassing

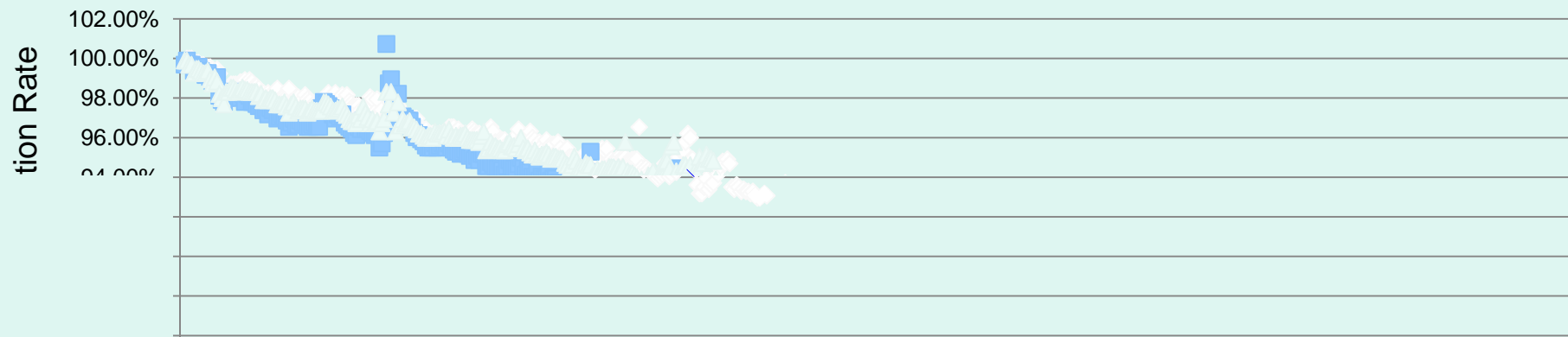


12. Capacity and Aging

Performance of Curved Battery

1

Cycle Curve RT-0.5C/0.5C



2

High Temperature Short-circuit Test

Samples	Initial Voltage/V	Impedance/ Ω	Highest Temp./	Phenomena	Conclusion
13#	4.196	224	102	No fire or explosion	Pass
14#	4.199	217	108	No fire or explosion	Pass
15#	4.195	221	107	No fire or explosion	Pass



3

Impact

Samples	Initial Voltage/V	Impedance/ Ω	Phenomena	Conclusion
16#	4.197	216	No fire or explosion	Pass
17#	4.198	219	No fire or explosion	Pass
18#	4.197	219	No fire or explosion	Pass



3 Crash

Samples	Initial Voltage/V	Impedance/ Ω	Phenomena	Conclusion
19#	4.195	215	No fire or explosion	Pass
20#	4.194	223	No fire or explosion	Pass
21#	4.192	221	No fire or explosion	Pass



4 Thermal abuse

Samples	Initial Voltage/V	Impedance/ Ω	Phenomena	Conclusion
25#	4.197	215	No fire or explosion	Pass
26#	4.198	233	No fire or explosion	Pass
27#	4.198	226	No fire or explosion	Pass



5 Constant Temperature and Humidity Test

Samples	Height of the arc		
	Before(mm)	After(mm)	Change rate of the height
1#	7.89	7.93	0.51%
2#	7.92	7.95	0.38%
3#	7.91	7.99	1.01%

6 85 Storage Test

Samples	Height of the arc		
	Before (mm)	After(mm)	Change rate of the height
4#	7.91	7.97	0.76%
5#	7.94	8.01	0.88%
6#	7.90	7.95	0.63%

