# FirstPower Technology Co., Ltd.

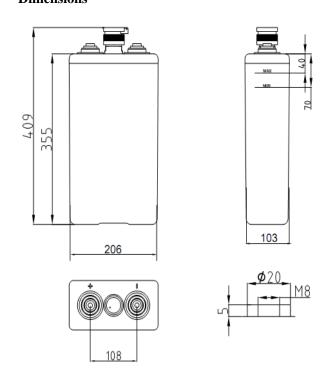
**Specifications** 

БРОСТЕТС		7110							
Nomi	nal V	/oltage	2 V						
G :	10	HR(1.80V)	200 Ah						
Capacity (20°C)	3]	HR(1.75V)	153Ah						
(200)	11	HR(1.60V)	112Ah						
Battery		Dry	13.5kg (29.7lbs)±5%						
Weigh		Wet	17.5kg (38.5lbs)±5%						
Acid Weig	ht (c	l=1.24kg/l)	Approx.4kg (8.8lbs)						
Terminal	type	/material	T10 / Copper						
1111011110		sistance ed, 25°C)	Approx. 1.5 mΩ						
Self-discha	rge	1 month	Remaining Capacity: 86%(20℃)						
	al op pera	erating ture	20°C±5°C(68°F±9°F)						
Operating	<u> </u>	Discharge	-15°C∼50°C(5°F∼122°F)						
temperatu		Charge	10°C~45°C(50°F~113°F)						
range		Storage	10°C ~30°C (50°F ~86°F)						
		Constant current	Charge the battery at $0.05 C_{10}$ for 72h.						
Initial charging		Constant voltage	Charge the battery at 0.1 C <sub>10</sub> to 2.35v/cell; then Charge the battery with 2.35v/cell until the whole charge time up to 100h.						
Mark of		Constant current	The battery voltage and density of electrolyte remain stable over 2h at the end of charging, and strong bubbles generated within the electrolyte  The charging current and density of electrolyte kept constant for more than 3h at the end of the charge; and the charging current is about 0.002~0.005 C10 amp.						
Fully charg	ed	Constant voltage							
Supplem	enta	ry charge	Charge the battery at $0.05 C_{10}$ to fully charged.						
Equaliz	ing (	charging	Charge the battery with 2.40v/cell for 48h.						
Battery	Flo	oat charging	Charge the battery with 2.23V (25°C); Equalizing charging the battery when the abnormal occurs						
operation		Charge& discharge	Equalizing charging the battery after discharged and per 3months						
		Backup	Supplementary charge the battery per 3 or 6 months.						
Maximum	char	ging current	50.0A(0.25C <sub>10</sub> )						
Max. disc	charg	ge current	1000A(5 sec.)						
Design	ed c	ycle life	1600@80% DOD (30℃)						
Designe	d flo	ating life	20 years(20°C)						

#### CHARACTERISTICS:

- ◆ Tubular Positive Plate;
- ◆ Flooded Battery;
- ◆ Porous Rubber and Porous PVC Separator
- ◆ Transparent Container.

#### **Dimensions**



# Constant Current Discharge Characteristics (A, 25°C)

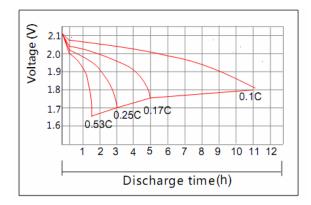
			0			( )							
F.V/TIME	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h	24h	48h	120h
1.70V	156	108	66.0	51.4	41.2	36.2	30.8	23.6	20.2	10.9	9.52		
1.75V	152	105	65.0	51.0	41.0	36.0	30.6	23.4	20.2	10.9	9.46		
1.80V	146	102	63.4	49.4	39.8	35.0	29.6	22.6	20.0	10.8	9.40	4.82	
1.85V	138	96.0	59.6	46.4	37.4	33.0	27.8	21.2	19.0	10.3	8.94	4.82	2.00

# **Constant Power Discharge Characteristics (Watt, 25°C)**

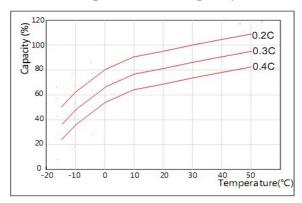
F.V/TIME	30min	60min	2h	3h	4h	5h	6h	8h	10h	20h	24h	48h	120h
1.70V	291	204	127	101	81.0	71.4	60.8	46.6	40.4	21.8	19.1		
1.75V	284	200	125	100	80.4	71.0	60.2	46.4	40.0	21.8	19.0		
1.80V	274	194	122	97.0	78.0	68.8	58.4	45.0	39.8	21.6	18.9	9.78	
1.85V	255	180	114	90.2	72.6	64.0	54.4	41.8	37.0	20.0	18.0	9.78	4.08

Note: The above characteristics data can be obtained within three charge/discharge cycles.

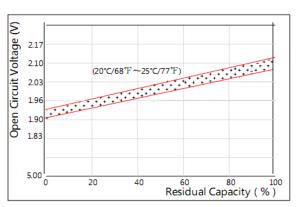
### **Discharge Characteristics**(25°C)



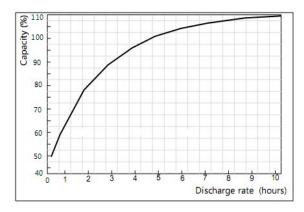
#### **Effect of Temperature on Capacity**



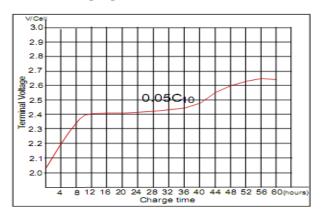
The Relationship for Open Circuit Voltage and Residual Capacity (25°C)



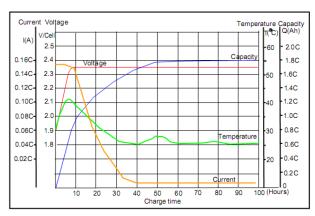
## **Effect of Discharge rate on Capacity**



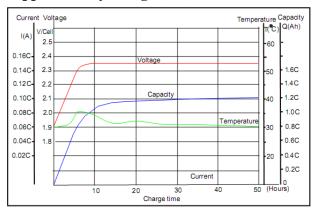
### Initial Charging (CC)Characteristics(25°C)



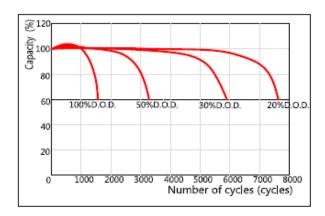
#### **Initial Charging (CV)Characteristics**



#### Supplementary charge (CV) Characteristics



#### Cycle Life on D.O.D(25℃)



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