

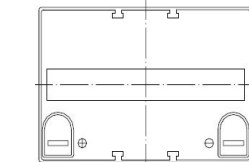
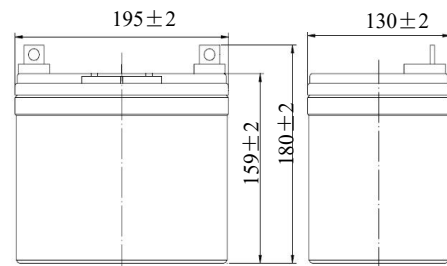
**Specification**

Nominal voltage	12V	
Capacity (25°C)	10HR(10.8V)	33Ah
	5HR(10.5V)	28.7Ah
	1HR(9.6V)	20Ah
Dimension	Length	195±2mm
	Width	130±2mm
	Height	159±2mm
	Total height	180±2mm
Approx. weight	10.3kg±4%	
Internal resistance (Fully charged,25°C)	Approx. 10mΩ	
Capacity affected by temperature(10HR)	40°C	102%
	25°C	100%
	0°C	85%
	-15°C	65%
Self-discharge(25°C)	3 months	Remaining capacity 91%
	6 months	Remaining capacity 82%
	12 months	Remaining capacity 65%
Nominal operating temperature	25±3°C	
Operating temperature range	Discharge	-15°C~50°C
	Charge	-10°C~50°C
	Storage	-20°C~50°C
Float charge voltage(25°C)	13.5V to 13.8V temperature compensation: -18mV/°C	
Cycle charge voltage(25°C)	14.5V to 14.9V temperature compensation: -30mV/°C	
Maximum charge current	9.9A	
Terminal & material	F7/F9; Copper	
Maximum discharge current	330A(5s)	
Designed floating life(20°C)	12 years	

**Feature:** Absorbent Glass Mat technology  
ABS container; Battery recognized by CE  
Sealed and Maintenance-free Operation

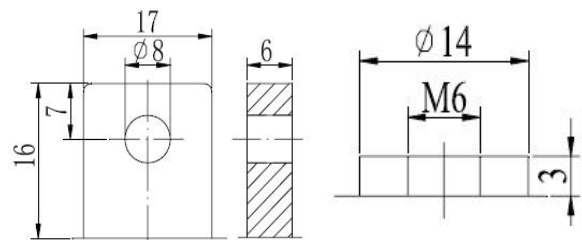


**Dimension:**



**Terminal: F7 terminal**

**F9 terminal**



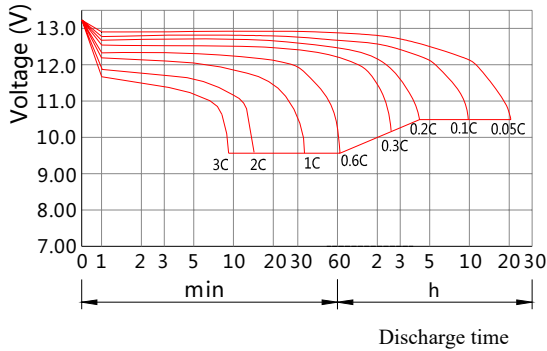
**Constant Current discharge characteristics(A,25°C)**

F.V/TIME	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	69.3	54.5	33.0	20.5	12.1	8.42	6.90	5.89	4.04	3.36	1.76
9.90V	67.2	53.1	32.3	20.2	12.0	8.37	6.86	5.86	4.02	3.35	1.76
10.2V	64.4	51.2	31.4	19.6	11.9	8.31	6.81	5.82	3.99	3.34	1.76
10.5V	61.7	49.4	30.6	19.3	11.7	8.25	6.77	5.74	3.96	3.32	1.74
10.8V	58.2	46.8	29.5	18.7	11.4	8.00	6.56	5.60	3.84	3.30	1.73

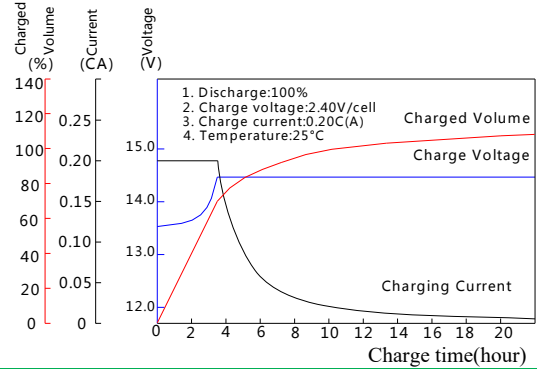
**Constant Power discharge characteristics(W,25°C)**

F.V/TIME	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	748	598	370	233	140	99.0	81.1	69.6	48.0	40.1	21.2
9.90V	726	584	363	230	139	98.4	80.7	69.2	47.7	40.0	21.1
10.2V	696	562	352	224	138	97.7	80.1	68.7	47.4	39.9	21.1
10.5V	666	543	343	219	136	97.0	79.6	68.3	47.0	39.7	20.9
10.8V	629	514	331	213	132	94.1	77.2	66.2	45.6	39.4	20.8

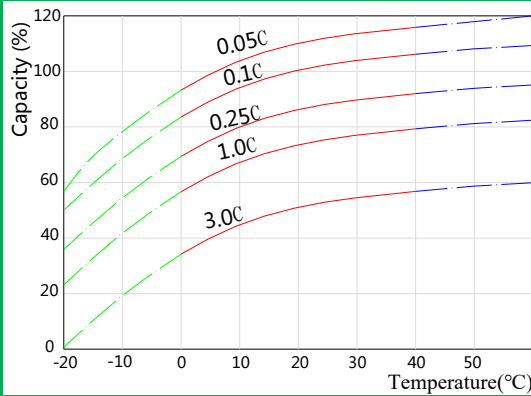
## Discharge Characteristics(25°C)



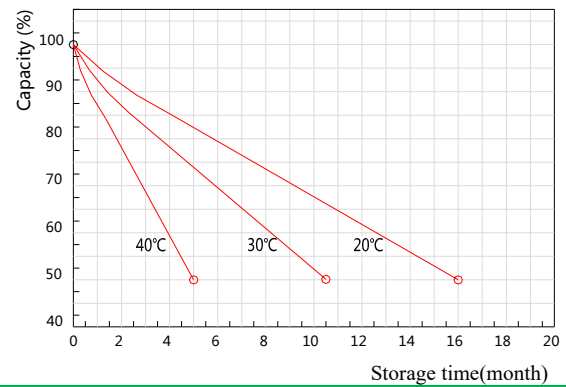
## Charging Characteristics(25°C)



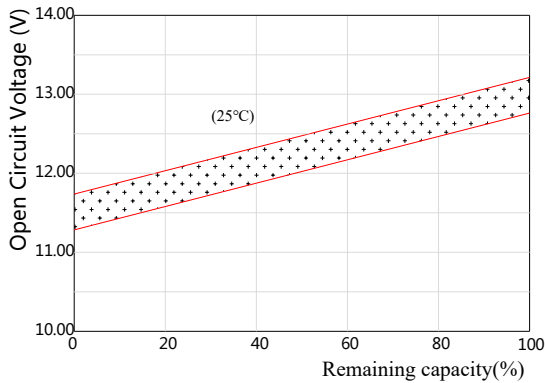
## Effect of Temperature on Capacity



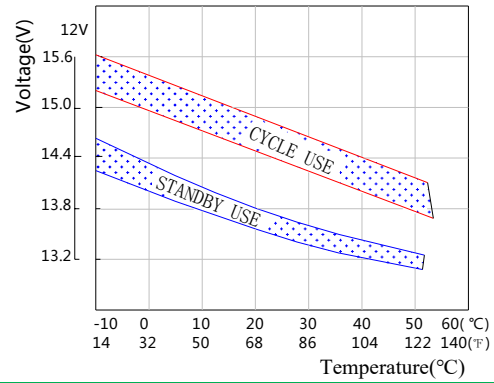
## Self-discharge Characteristics



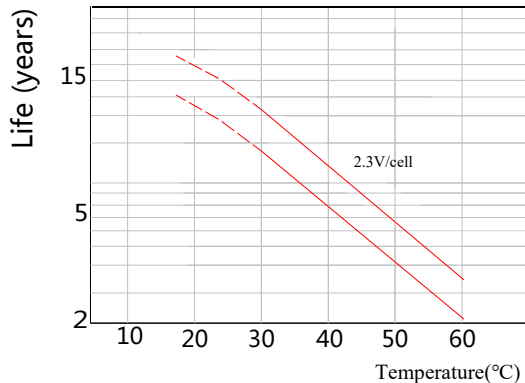
## The Relationship of Open Circuit Voltage and Remaining Capacity (25°C)



## The Relationship of Charge Voltage and Temperature



## Floating Life on Temperature



## Cycle Life on D.O.D(25°C)

