

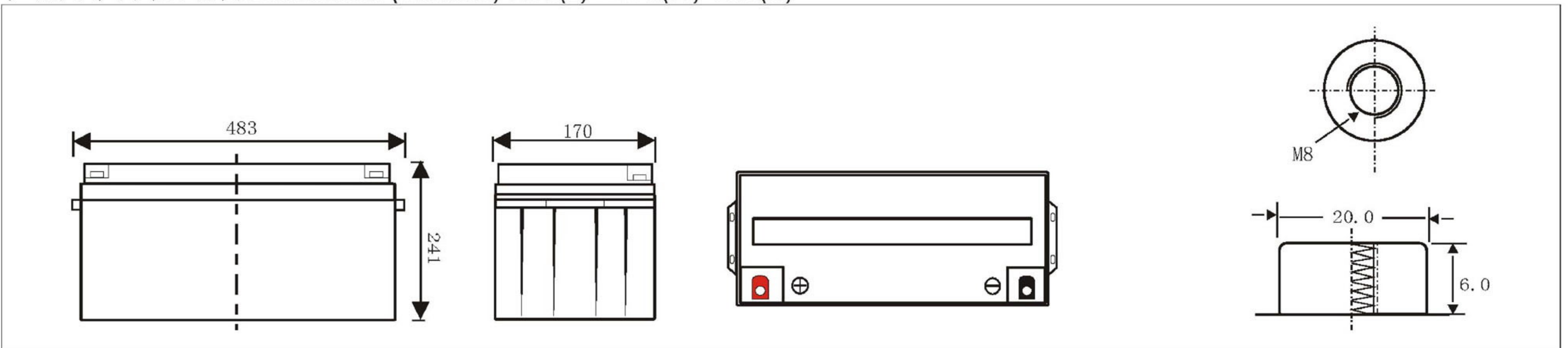
## Specification 基本特性

- ◆Micro millimeter SiO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> technology for Efficient gas recombination of up to 99% and Freedom from electrolyte maintenance or water adding.  
纳米级的二氧化硅-硫酸胶体技术使得气体还原反应效率高达99%以上
- ◆UL-recognized component. 产品通过UL, CE认证
- ◆Can be mounted in any orientation. 除倒置外, 可任意方向安装使用
- ◆Computer designed lead, calcium tin alloy grid for high power density.  
采用高锡铅钙多元合金板栅
- ◆Low self discharge. 自放电低
- ◆low gas escape 低气体析出
- ◆good consistence on deep discharge, long cyclic life. 深度放电时一致性好
- ◆With float charging, the designed service life for the Gel battery is up to 12 years 胶体电池做为后备浮充使用, 设计寿命可达12年
- ◆Solid state electrolyte stratification gel electrolyte can be avoided and reduced corrosivity 固体状态的胶体电解质可避免电解液分层及降低腐蚀性
- ◆Using a special partition can effectively prevent short circuit of battery, and to ensure that the extreme ambient temperature can be used  
采用特殊的隔板可有效防止电池短路, 并确保在极端环境温度下仍可使用
- ◆SPECIFICATION 参数  
Nominal voltage 额定电压 .....12V  
Number of cell 单格数 .....6  
Approx. weight(kg) 净重 .....44.5KG

## Performance Characteristics 性能参数

额定容量 Capacity 77° F (25° C)	10 hour rate(15.0A)	150Ah
	5 hour rate(26.5A)	127.5Ah
	1 hour rate(90A)	90Ah
内阻 Internal Resistance <b>Approx. 6mΩ</b>		
适用温度范围 Operating Temperature Range	<b>Discharge: -30°C~60°C 放电 (温度范围)</b>	
	<b>Charge: -20°C~50°C 充电 (温度范围)</b>	
	<b>Storage: -30°C~60°C 储存 (温度范围)</b>	
标准适用温度范围 Normal Operating Temperature Range: <b>25°C±5°C</b>		
自放电 Self-Discharge	胶体电池, 在常温25摄氏度的环境下至少可以储存12个月 电池在使用之前先充电, 储存时周围环境温度越高, 它的储存周期越短。 GEL batteries can be stored for more than 12 months at 25°C. please charge batteries before using. For higher temperature, the time interval will be shorter.	
每月自放电率 ≤ 1.3% Self discharge rate ≤ 1.3% monthly		
最大放电电流 Max. discharge current 77° F (25° C) : <b>860A(5S)</b>		
恒压充电 Charger (Constant Voltage)	浮充使用 Float charging Voltage	13.6 to 13.8VDC/unit Average at 25°C
	循环使用 Equalization and Cycle Service	14.6 to 14.8VDC/unit Average at 25°C
建议充电最大电流为45A Recommended Maximum Current Limit: 45A		

产品尺寸(单位:毫米) Dimensions (Unit:mm) :483(L)×170(W)×241(H)



## 电池结构 Battery Construction

元件 Component	正极板 positive plate	负极板 negative plate	胶壳 Container	胶盖 Cover	安全阀 Safety valve	端子 Terminal	隔板 Separator	电解质 electrolyte
原料 Raw material	二氧化铅 Lead dioxide	铅 Lead	ABS	ABS	橡胶 Rubber	铜 Copper	玻璃纤维/PE Fiberglass/PE	硅溶胶 colloidal silicon

## 恒流放电特性 Constant current discharge characteristics Unit:A(20°C)

F. V/TIME	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	228	144	90.0	54.0	36.7	29.1	25.4	18.1	15.3	7.86
9.90V	223	141	88.7	53.7	36.5	28.9	25.2	17.9	15.2	7.85
10.2V	214	137	86.4	53.3	36.3	28.7	25.1	17.8	15.2	7.83
10.5V	207	133	84.7	52.5	36.0	28.5	24.9	17.7	15.1	7.78
10.8V	196	129	82.1	51.1	34.9	27.6	24.2	17.2	15.0	7.73

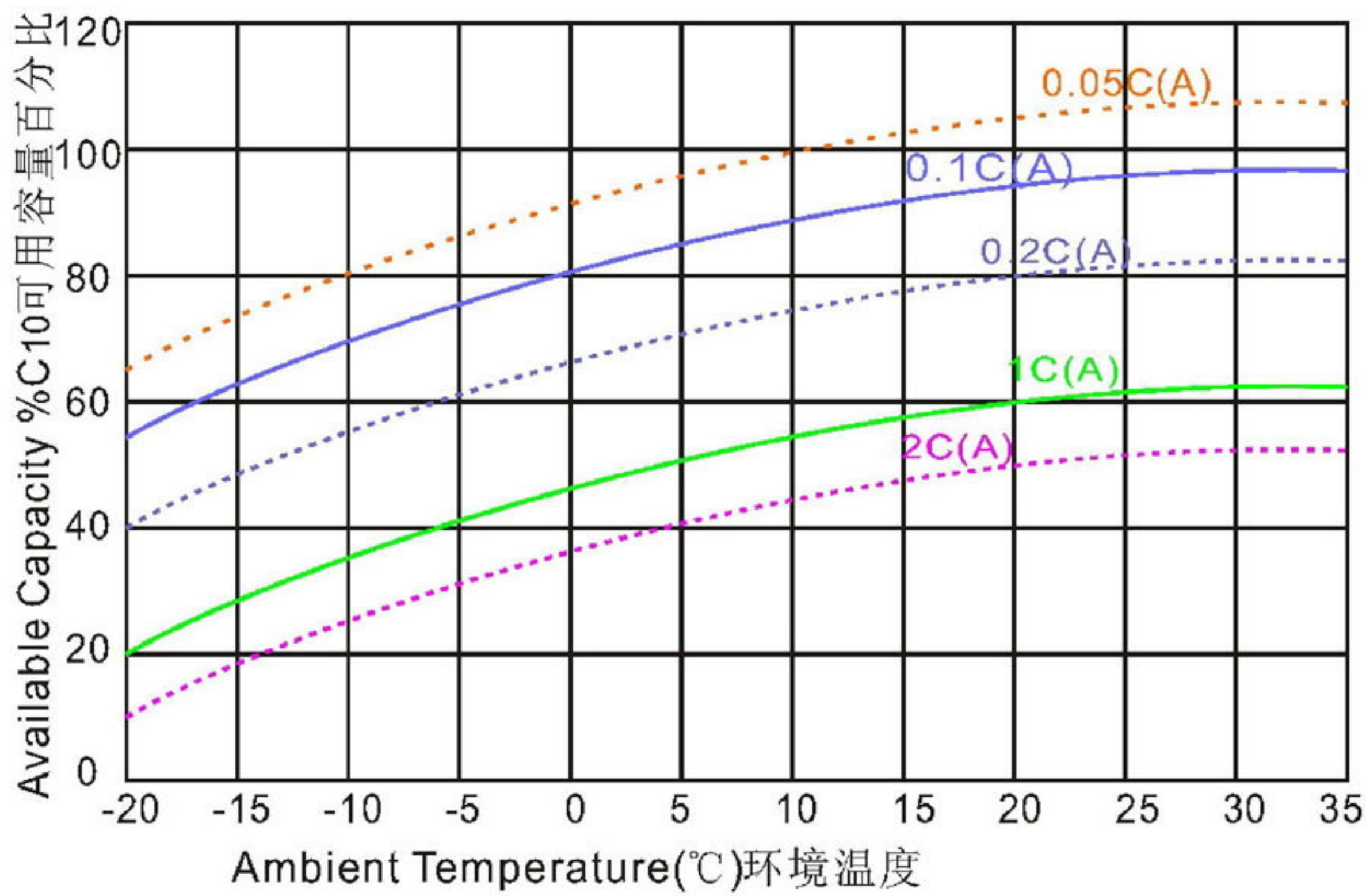
## 恒功率放电特性 Constant power discharge characteristics Unit:W(20°C)

F. V/TIME	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	2503	1616	1026	626	432	342	300	214	182	94.4
9.90V	2443	1583	1011	622	429	340	298	213	182	94.2
10.2V	2353	1535	985	617	426	338	296	212	181	93.9
10.5V	2273	1498	965	607	423	335	294	210	180	93.3
10.8V	2153	1443	936	592	411	325	285	204	179	92.7

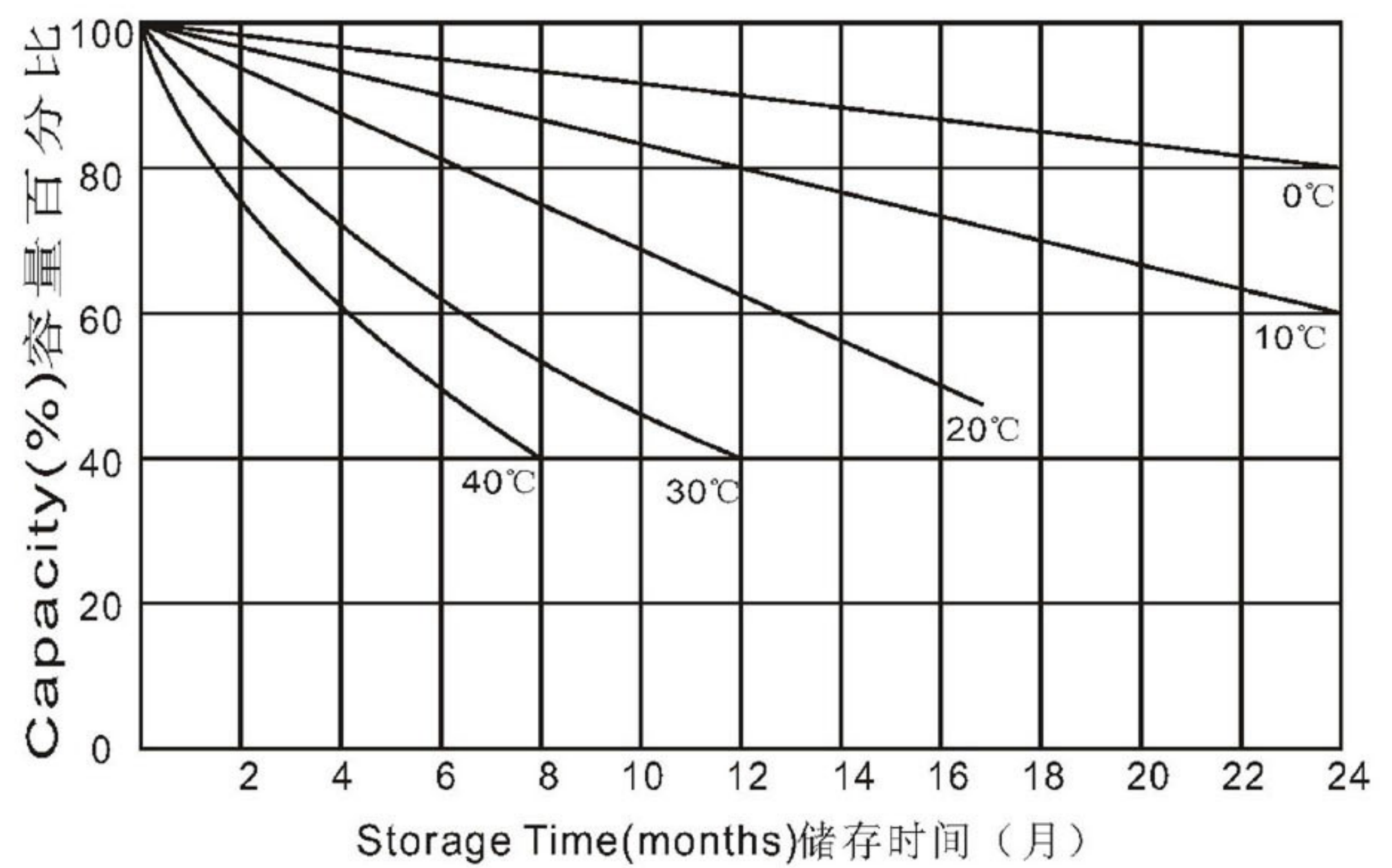
All mentioned values are average values



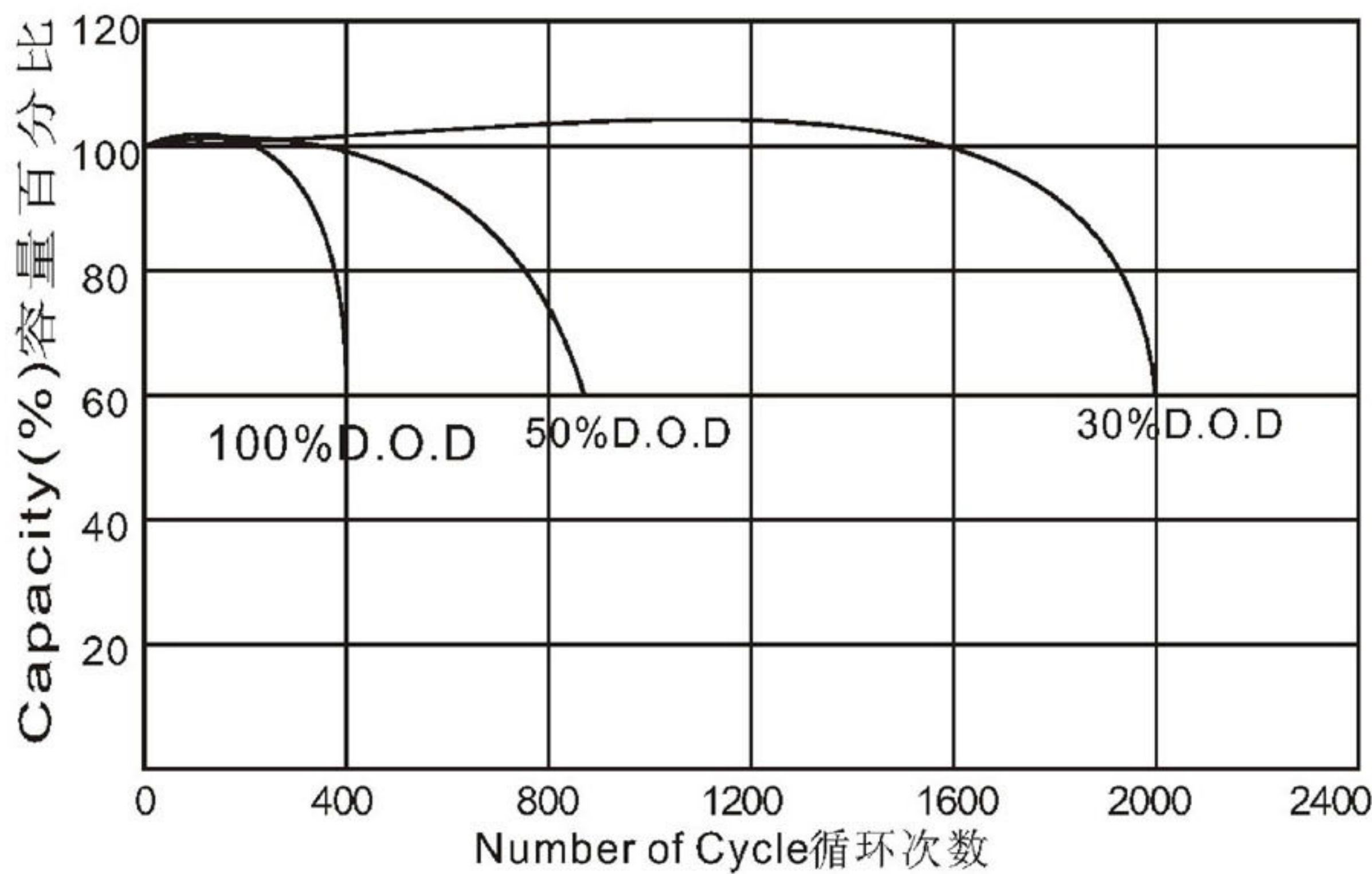
温度影响曲线图  
Temperature effects curve



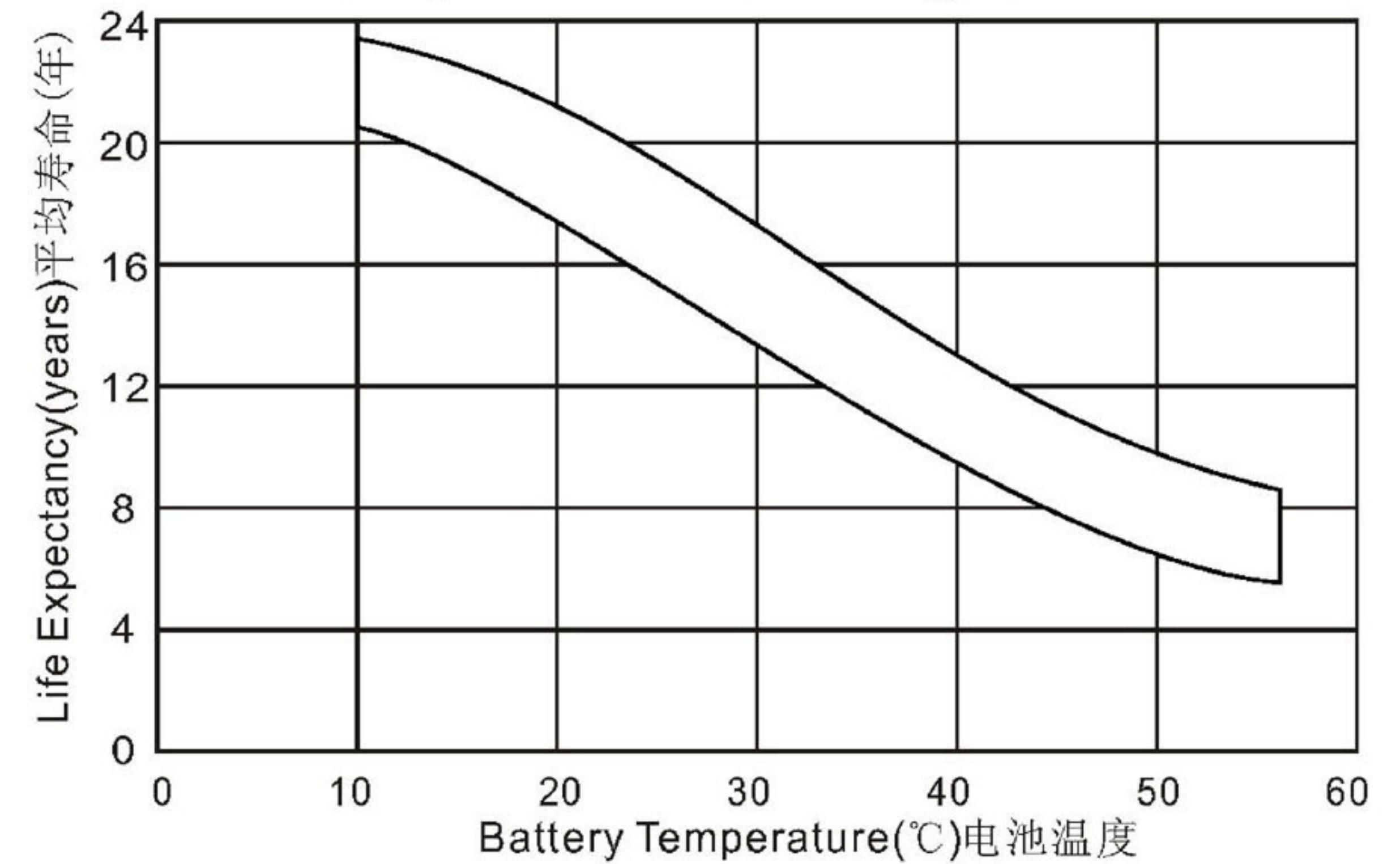
储存特性  
Storage characteristic



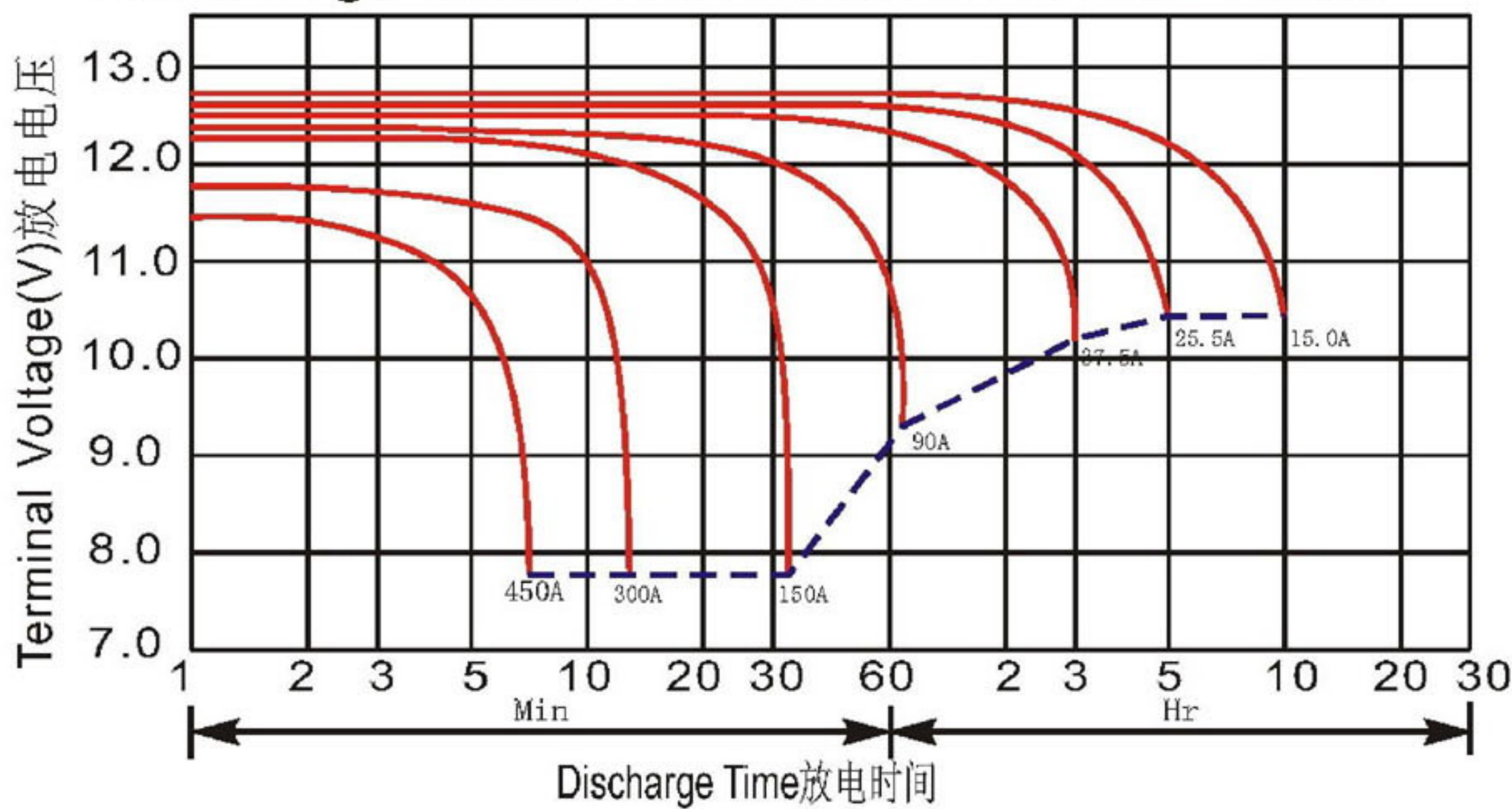
循环使用寿命  
Life characteristics of cyclic use



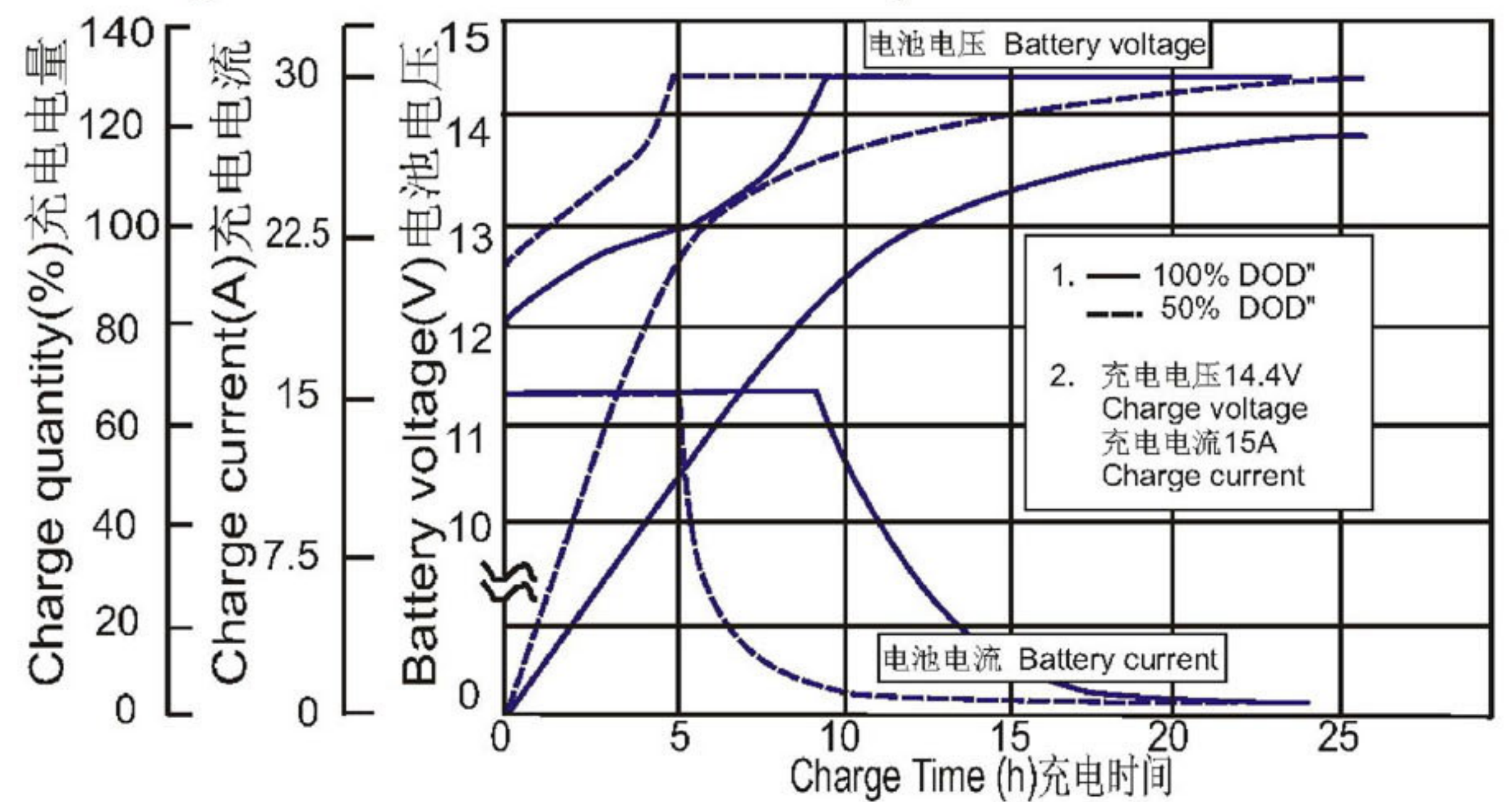
温度对长期浮充使用寿命的影响  
Effect of temperature on long term float life



放电特征曲线  
Discharge characteristics at various rates



充电特征曲线(循环使用)  
Charge characteristics for cycle use



充电方法  
Charging Procedures(12V series)

方法 Application	Charge Voltage(V) 充电电压			最大电流 Max. Charge Current
	温度 Temperature	设置电压 Set point	允许使用范围 Allowable range	
Cycle use	25°C	14.8	14.6~14.8	0.3C
Standby	25°C	13.7	13.6~13.8	0.3C

放电电流与放电电压  
Discharge Current VS. Discharge Voltage

终止电压 Final Discharge Voltage V/cell	1.75V	1.70V	1.60V
放电电流 Discharge Current(A)	(A) ≤ 0.2C	0.2C < (A) < 1.0C	(A) ≥ 1.0C