



### 1. Brief Introduction for ED Series Batteries

The EPBLUE® ED Series Maintenance-free Sealed Lead Acid Battery should be used for solar systems and related storage energy fields, using 4BS paste technology and high temperature curing process to make battery has longer life; unique paste ration to assure battery has super charging and discharging capacity and resilience; plates twins pack technology to guarantee battery performance more stable.

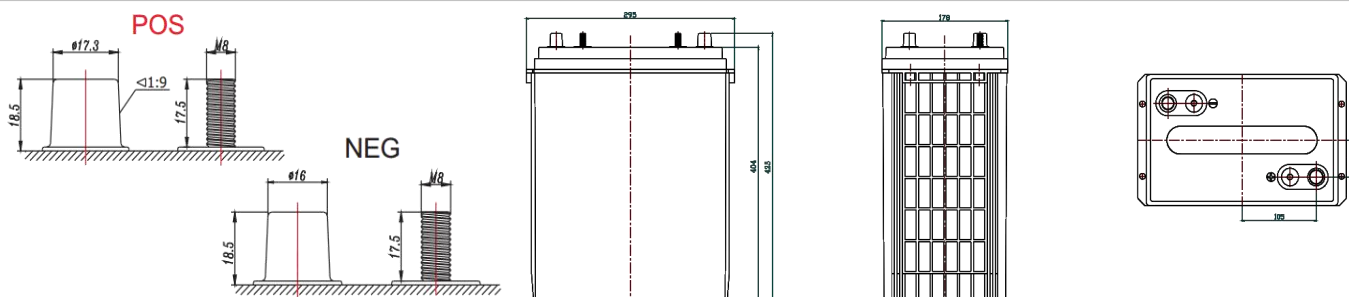
### 2. Construction for ED Series Batteries

Component	Raw material
Positive Plate	Lead dioxide
Negative Plate	Lead
Container & Cover	ABS UL94HB/V0
Safety Valve	Rubber
Terminal	Lead / SAE / Double
Separator	Fiberglass
Electrolyte	Sulfuric acid

### 3. Specifications

Nominal Voltage	6 Volt		
Nominal Capacity (10HR)	400 Ah		
Dimension	Length	295 mm	11.6 in
	Width	178 mm	7.0 in
	Height	404 mm	15.9 in
	Total Height (with terminals)	425 mm	16.7 in
Weight	Approx.	57 kg	125 lbs

### 5. Physical Dimensions: mm



### 6. Constant Current Discharge (Amperes) at 25°C

F.V/Time	5Min	15Min	30Min	1Hr	2Hr	3Hr	5Hr	8Hr	10Hr	20Hr
4.80V	1430.0	776.80	454.80	260.00	158.80	106.80	70.80	51.20	41.60	22.80
5.00V	1388.8	760.80	446.80	254.80	157.60	106.00	70.40	50.40	41.20	22.40
5.10V	1347.6	749.20	438.80	248.40	156.40	104.00	70.00	50.00	40.80	22.00
5.25V	1210.0	713.20	435.20	243.20	155.20	101.60	69.20	49.60	40.40	21.60
5.40V	1092.4	657.20	427.60	236.00	152.40	100.00	68.80	49.20	40.00	21.28
5.55V	932.4	589.60	400.80	227.60	145.60	98.40	66.80	47.20	38.80	19.60

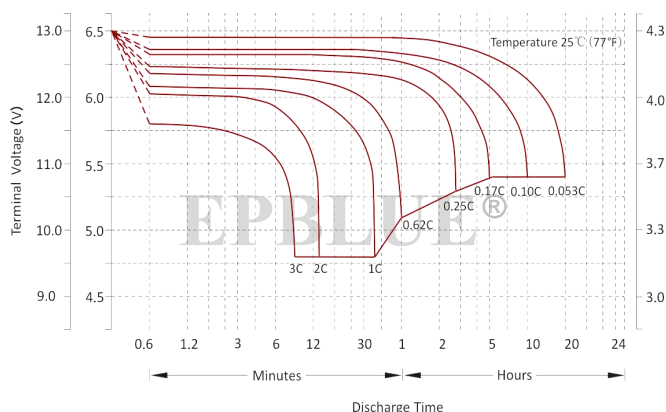
### 4. Characteristics

Rated Capacity 25°C (77°F)	C <sub>20</sub> 1.80V/Cell	412 Ah
	C <sub>10</sub> 1.80V/Cell	400 Ah
	C <sub>5</sub> 1.80V/Cell	336 Ah
	C <sub>1</sub> 1.70V/Cell	240 Ah
Capacity Affected by Temperature (10 HR)	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Internal Resistance		1.1 mΩ
Max. Discharge Current 25°C (77°F)		2000 A (5S)
Nominal Operating Temperature Range		25 ± 3°C (77 ± 5°F)
Operating Temperature Range	Discharge : -15 ~ 50°C (5 ~ 122°F)	
	Charge: 0 ~ 40°C (32 ~ 104°F)	
	Storage: -15 ~ 40°C (5 ~ 104°F)	
Cycle Use		Initial charging current less than 0.3CA. Voltage 7.20V ~ 7.350V at 25°C (77°F) temperature coefficient -15mV/°C.
Standby Use		No limit on Initial charging current, Voltage 6.75V ~ 6.90V at 25°C (77°F) temperature coefficient -10mV/°C.
Self Discharge		The EPBLUE® ED Series batteries may be stored for up to 6 months at 25°C (77°F), and then a freshening charge is required. For higher temperatures the time interval will be shorter.

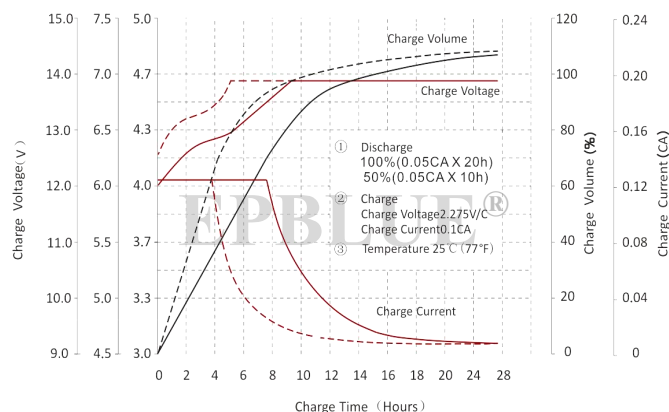
### 7. Constant Power Discharge (Watts) at 25°C

F.V/Time	5Min	15Min	30Min	1Hr	2Hr	3Hr	5Hr	8Hr	10Hr	20Hr
4.80V	7544.4	4297.6	2602.4	1502.4	941.2	633.60	424.40	305.20	249.60	135.60
5.00V	7395.6	4228.8	2571.2	1498.8	938.4	633.20	421.20	303.60	248.00	133.60
5.10V	7311.2	4197.6	2548.8	1487.2	932.8	623.60	420.00	302.00	246.00	130.80
5.25V	6655.6	4068.8	2537.6	1457.6	929.6	610.00	416.00	299.20	244.00	128.40
5.40V	6062.4	3760.0	2517.6	1416.8	915.6	603.20	412.00	294.40	241.20	126.00
5.55V	3451.2	3451.2	2373.2	1366.8	876.4	592.40	402.00	282.00	238.00	122.40

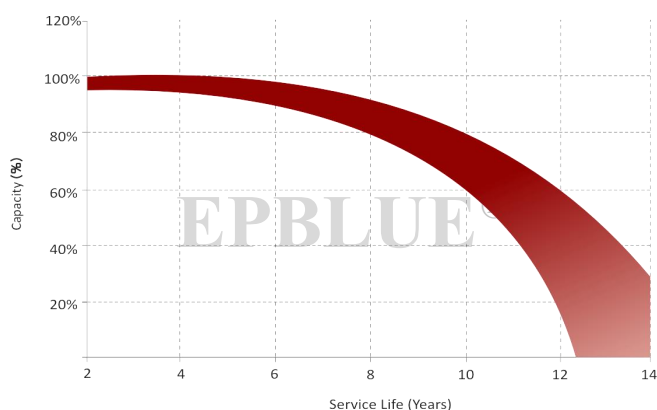
### 8. Discharge Characteristics



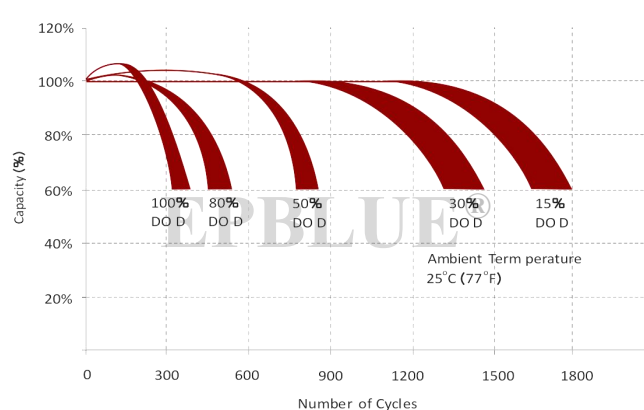
### 9. Float Charging Characteristics



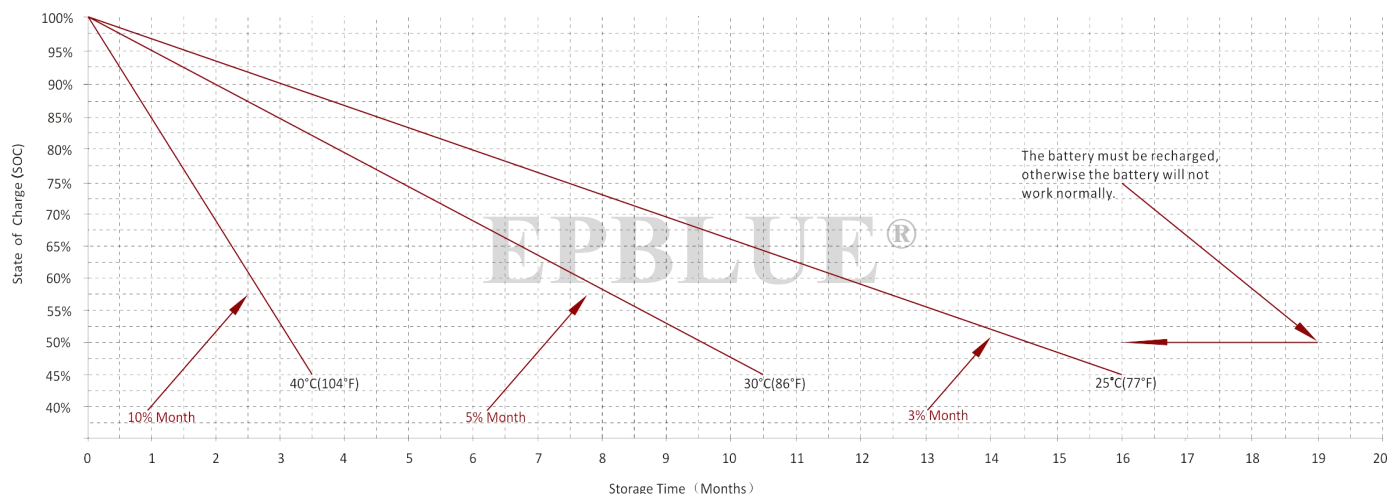
### 10. Float Service Life vs Capacity (%)



### 11. Cycle Life vs Depth of Discharge (DOD%)



### 12. Self Discharge Characteristics



### 13. Maintenance & Cautions

#### Cycle Service:

- > Avoid battery over discharge, especially battery series connection use.
- > Charged with recommend voltage, ensure battery can be full recharged. In general, recharge capacity should be 1.1-1.15 times discharge capacity.
- > Effect of temperature on float charge voltage:  $-4\text{mV}/^{\circ}\text{C}/\text{Cell}$ .

- > There are a number of factors that will affect the length of cyclic service.

The most significant are depth of discharge, ambient temperature, discharge rate, and the manner in which the battery is recharged.

Generally speaking, the most important factors is depth of discharge.