

Powered by



MSV 500 ▶ 2V 500Ah

MSV 500 is a long service life battery up to 15 years expected life under normal float charge. As with all CSB batteries, all are rechargeable, highly efficient, leak proof and maintenance free.

► Specification

Cells Per Unit	1
Voltage Per Unit	2
Capacity	500Ah @ 10hr-rate to 1.80V per cell @25 °C (77°F)
Weight	Approx. 32.2 kg(70.99 lbs)
Maximum Discharge Current	3000A(5sec)
Internal Resistance	Approx. 0.40 mΩ
Operating Temperature Range	Discharge: -20°C~50°C (-4°F~122°F) Charge: 0°C~40°C (32°F~104°F) Storage: -20°C~40°C (-4°F~104°F)
Nominal Operating Temperature Range	25°C±3°C (77°F±5°F)
Float Charging Voltage	2.23±0.02/Cell at 25 °C (77°F) Temp. Coefficient ±3.3mV/°C (±1.8mV/°F)
Recommended Maximum Charging Current Limit	150A
Equalization / Cycle Use Charging Voltage	2.35V Temps coefficient ±3.3mV/°C (±1.8mV/°F)
Terminal	Pb-Ca-Sn Alloy(L / Recessed Terminal)
Container Material	The container and cover are made of flame retardant plastics which meet ABS(UL 94-V0) specifications. The oxygen index level is higher than 28



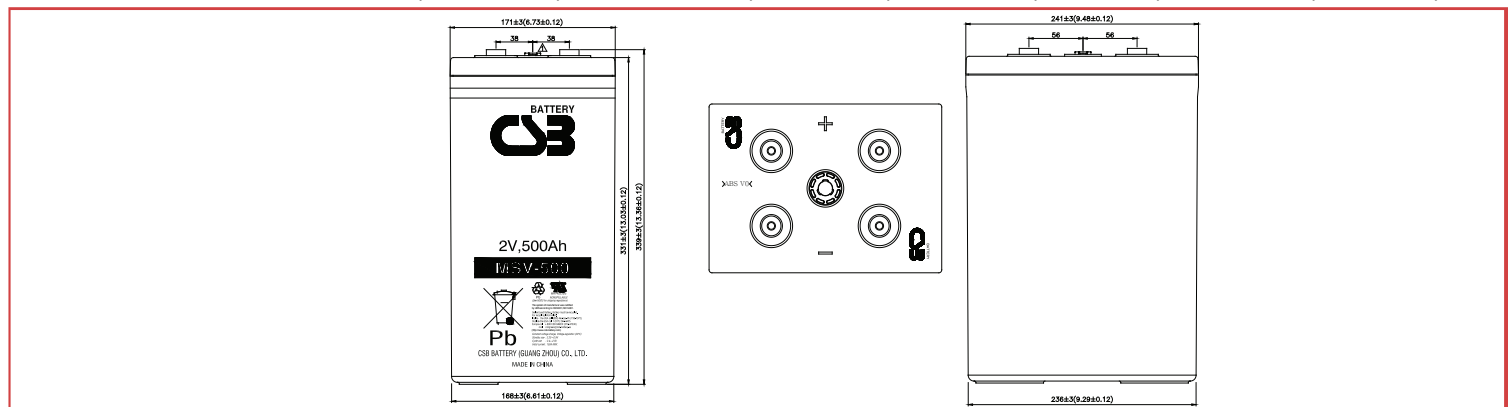
CSB-manufactured **VRLA** (Absorbent Glass Mat type) batteries are UL-recognized components under UL1989.

CSB is also certified by ISO 9001 and ISO 14001.

► Dimensions :

Unit: mm (inch)

Overall Height (H)	Container height (h)	Length (L)	Width (W)
339±3 (13.35±0.12)	331±3 (13.03±0.12)	241±3 (9.48±0.12)	171±3 (6.73±0.12)



Constant Current Discharge Characteristics Unit:A (25°C, 77°F)

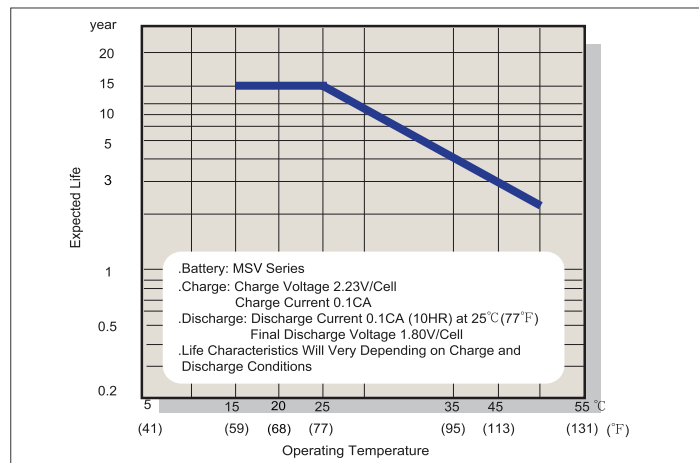
F.V/Time	15MIN	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	732	512	329	194	143	116	96.7	82.8	64.9	52.7
1.67V	664	494	326	191	140	114	96.5	82.6	64.6	52.2
1.70V	639	478	321	189	139	113	95.8	82.1	64.3	51.8
1.75V	577	460	310	186	136	111	94.5	81.2	63.9	51.2
1.80V	512	427	295	177	132	109	91.7	79.1	62.6	50.0
1.83V	442	382	268	163	125	102	88.4	75.9	59.6	47.2

Constant Power Discharge Characteristics Unit:W (25°C, 77°F)

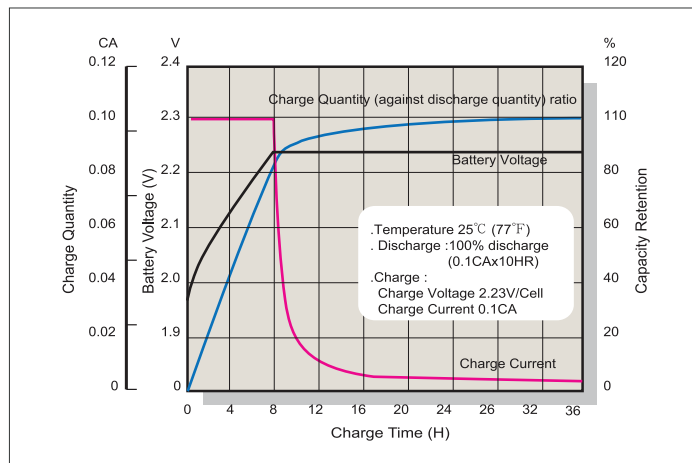
F.V/Time	15MIN	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	1223	894	588	367	274	213	180	156	125	102
1.67V	1149	870	581	364	272	210	178	154	124	101
1.70V	1118	850	575	361	270	209	177	154	123	100
1.75V	1038	810	561	352	267	202	176	153	122	99.2
1.80V	943	774	531	348	263	198	173	150	120	98.2
1.83V	834	699	496	327	248	191	170	147	117	95.9

Ratings are preliminary and subject to change.

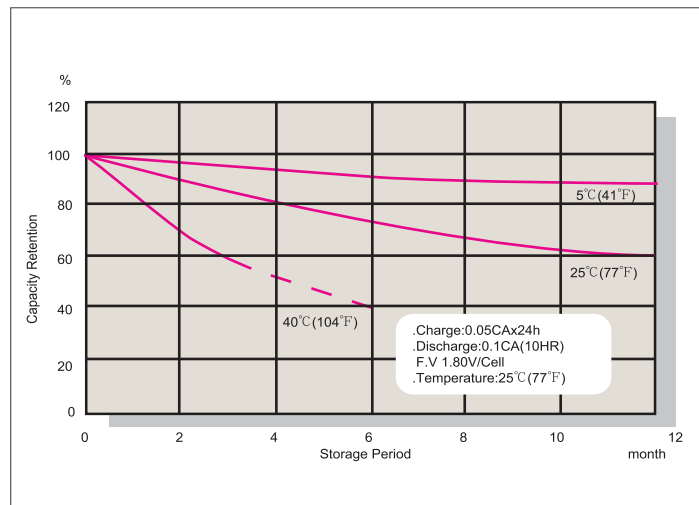
Expected Life V.S Operating Temperature



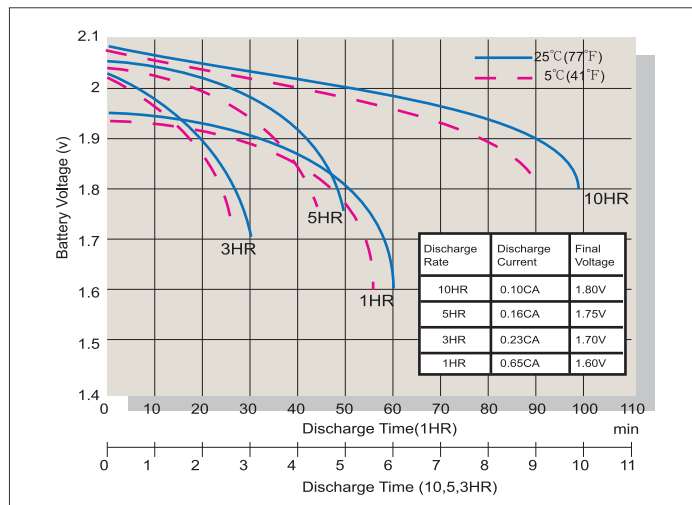
Typical Constant Voltage Charge Characteristics



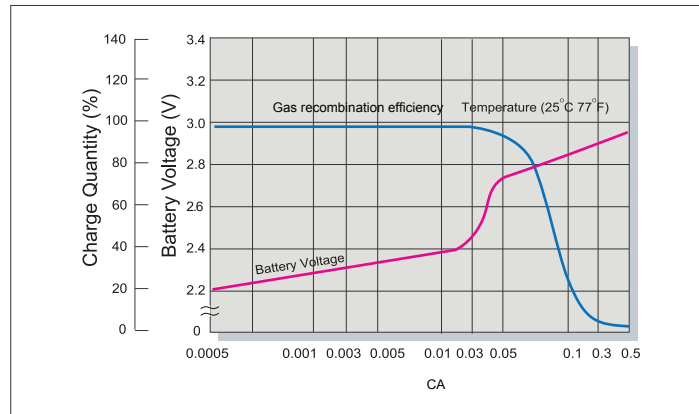
Capacity Retention Characteristics



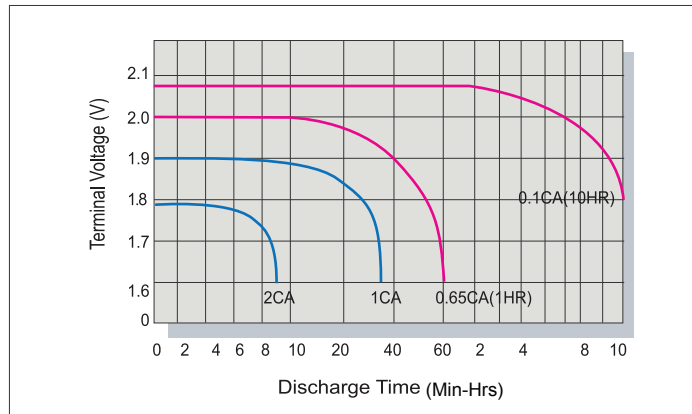
Discharge Characteristics



Oxygen Recombination Efficiency Chart



Terminal Voltage (V) and Discharge Time 25°C (77°F)



Charging Procedures

Application	Charge Voltage (V/Cell)			Max. Charge Current
	Temperature	Set Point	Allowable Range	
Standby	25°C (77°F)	2.23	2.21~2.25	0.3C

Discharge Current VS. Discharge Voltage

Discharge Current (A)	Final Discharge Voltage (V/Cell)
0.05C > A	1.90
0.15C > A ≥ 0.05C	1.80
0.20C > A ≥ 0.15C	1.75
0.40C > A ≥ 0.20C	1.70
A > 0.40C	1.60

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