



MSV360

2V 360Ah

MSV360 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.



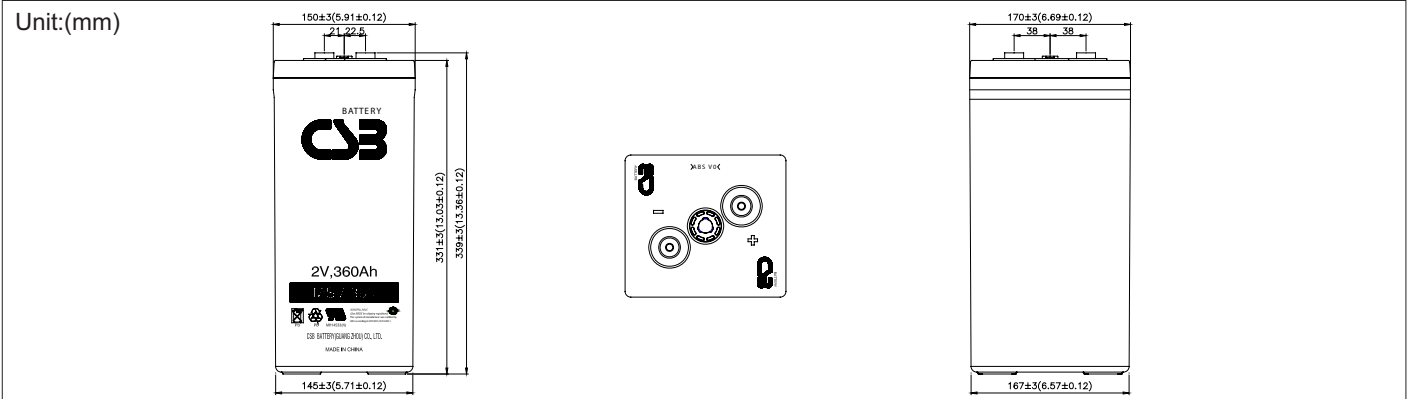
Specification

Cells Per Unit	1
Voltage Per Unit	2
Capacity	360Ah @ 10hr-rate to 1.80V per cell @25 °C (77°F)
Weight	Approx. 20.2 kg(44.53 lbs)
Maximum Discharge Current	2160A(5sec)
Internal Resistance	Approx. 0.38 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	108A
Equalization and Cycle Service	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/File E88637) specifications. The oxygen index level is higher than 28



CSB-manufactured batteries are UL-recognized components under UL924 and UL1989. CSB is also certified by ISO 9001 and ISO 14001.

Dimensions



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

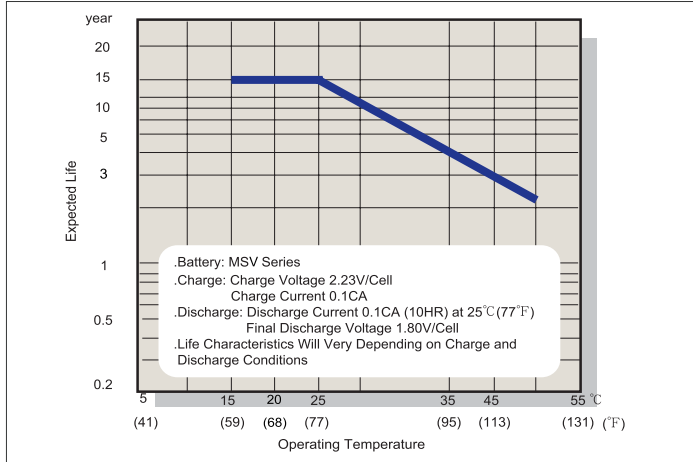
F.V/Time	15MIN	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	571	379	232	138	103	82.0	69.1	59.7	48.2	40.3
1.65V	543	364	222	133	98.6	79.2	66.2	58.3	46.1	38.9
1.70V	507	343	218	131	96.4	78.4	65.5	56.8	45.3	38.1
1.75V	450	305	201	124	91.4	74.2	62.6	54.0	43.9	37.4
1.80V	387	281	189	118	87.8	73.4	60.4	53.3	43.2	36.0
1.83V	327	253	175	112	83.5	67.6	57.6	50.4	41.0	34.5

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

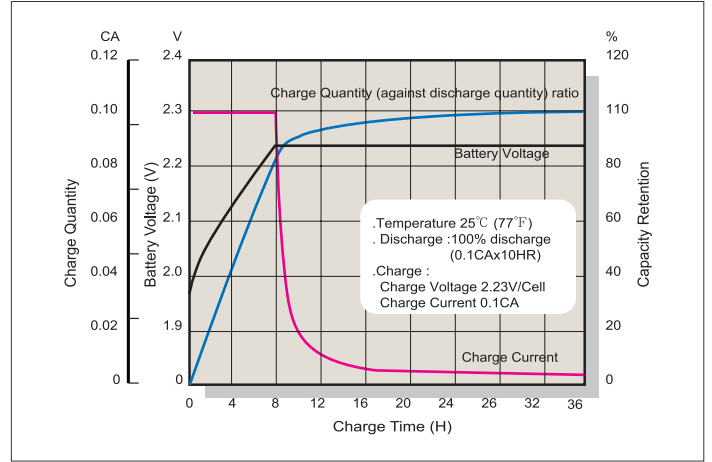
F.V/Time	15MIN	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	1000	674	415	250	187	150	127	113	90.0	76.3
1.65V	991	671	414	246	186	149	126	112	89.2	75.6
1.70V	912	624	401	243	181	147	124	109	87.8	74.8
1.75V	820	562	374	232	174	142	119	104	85.6	72.7
1.80V	705	518	353	222	167	137	116	102	82.8	70.5
1.83V	597	467	325	209	159	127	111	96.4	79.2	68.4

- All mentioned values are average values.
- Cycle Information : 300-400 cycles@DOD80%, 600-700 cycles@DOD50%, 900-1200 cycles@DOD30%

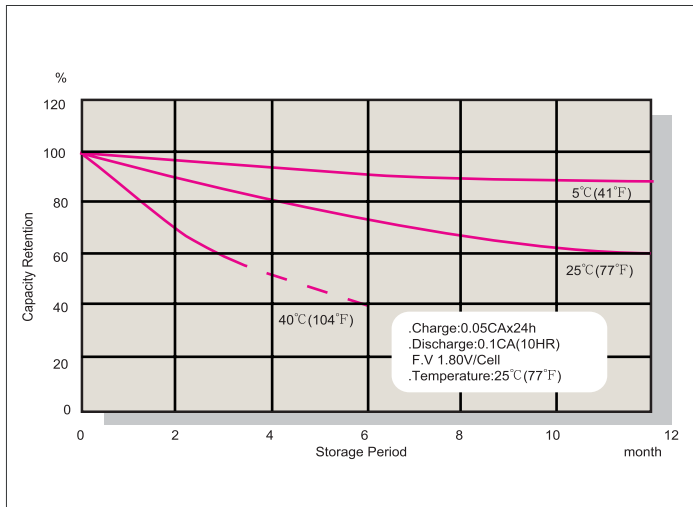
Expected Life V.S Operating Temperature



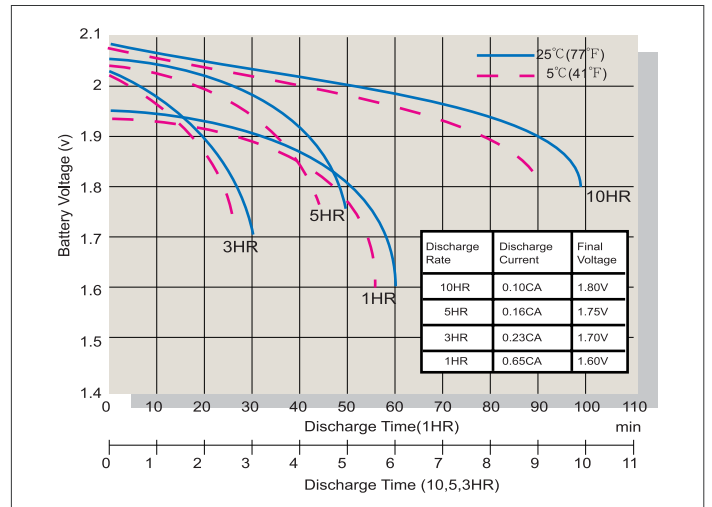
Typical Constant Voltage Charge Characteristics



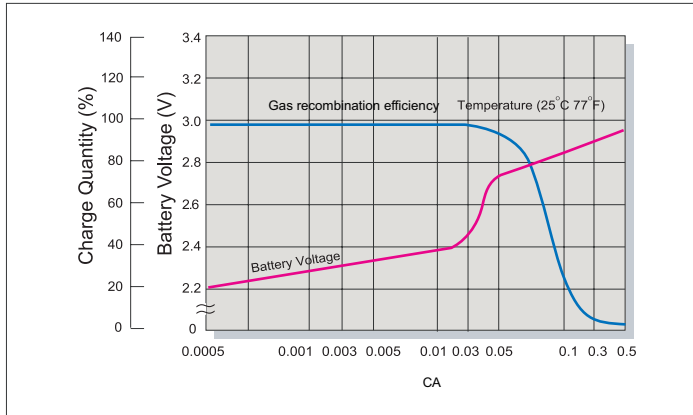
Capacity Retention Characteristics



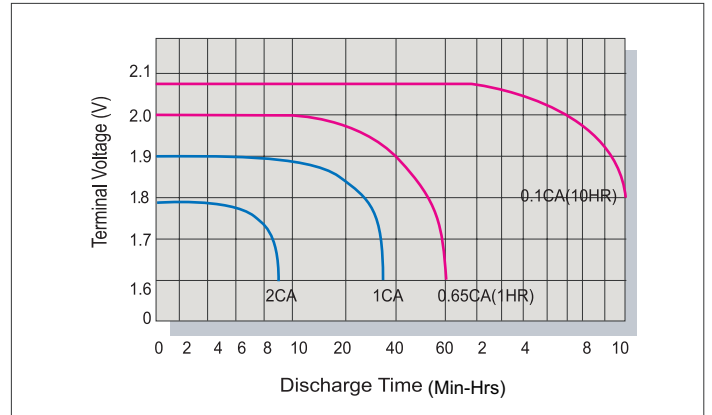
Discharge Characteristics



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
0.20 C > A ≥ 0.15C	1.75
0.40 C > A ≥ 0.20 C	1.70
A > 0.40 C	1.60

Sales Office URL: WWW.CSB-BATTERY.COM

CSB BATTERY CO., LTD.
 TAIWAN OFFICE
 Tel: +886-2-2555-5600
 Fax: +886-2-2555-3300
 E-mail: service@csb-battery.com.tw

CSB BATTERY LOGISTICS (SHANGHAI) CO., LTD.
 SHANGHAI OFFICE
 Tel: +86-21-5046-1622, 5046-0833
 Fax: +86-21-5064-3314
 E-mail: chinasl@csb-battery.com

CSB BATTERY TECHNOLOGIES, INC
 USA OFFICE
 Tel: +1-817-244-7777/1-8003 CSBUSA(272872)
 Fax: +1-817-244-4445
 E-mail: csb@csb-battery.com

CSB BATTERY LOGISTICS (SHANGHAI) CO., LTD.
 BEIJING OFFICE
 Tel: +86-10-6597-8060, 6597-8070
 Fax: +86-10-6597-8050
 E-mail: chinasl@csb-battery.com

CSB BATTERY OF NETHERLANDS B.V
 NETHERLANDS OFFICE
 Tel: +31(0) 180 418 140
 Fax: +31(0) 180 418 327
 E-mail: eurosales@csb-battery.com

CSB BATTERY LOGISTICS (SHANGHAI) CO., LTD.
 SHENZHEN OFFICE
 Tel: +86-755-8831-6488/6396/16356
 Fax: +86-755-8831-6548
 E-mail: she@csb-battery.com.cn