

MU1500S												
Constant Current Discharge Characteristics Unit: A (25°C, 77°F)												
F.V/Time	30MIN	60MIN	90MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR	20HR	24HR
1.60V	1630	1017	763	625	470	369	308	263	205	169	84.5	70.4
1.67V	1563	993	746	610	459	362	301	258	201	165	82.5	68.8
1.70V	1475	956	725	591	442	353	291	251	195	160	80.0	66.7
1.75V	1351	904	688	566	425	341	282	243	190	156	78.0	65.0
1.80V	1210	830	641	533	401	324	269	232	183	150	75.0	62.5
1.83V	1071	754	591	497	375	305	254	220	175	143	71.5	59.6
Constant Power Discharge Characteristics Unit: W (25°C, 77°F)												
F.V/Time	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR	20HR	24HR	
1.60V	2559	1759	1328	1100	832	657	554	476	373	309	155	129
1.67V	2516	1728	1306	1086	822	652	548	472	370	305	153	127
1.70V	2463	1683	1283	1064	800	646	535	467	365	301	151	125
1.75V	2310	1600	1225	1024	774	627	522	454	357	295	148	123
1.80V	2130	1486	1154	975	738	603	503	436	346	285	143	119
1.83V	1960	1380	1087	929	705	580	485	420	336	276	138	115

Please refer to the official site for the latest rating confirmation. URL: www.csb-battery.com

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Large Capacity
Up to 20 years
Space Saving Design
Stability, Dependability and Reliability
ENERGY OF INFINITY ▶

MU series

BATTERY
CSB



MU series



Applications :

- UPS
- Telecom systems
- Emergency lighting
- Solar battery systems
- Power equipment operation
- Fire alarms and security systems
- Switching mode rectifier power supply
- Back-up Power for testing and measuring equipment
- Replacement for open-type stationary lead acid battery

Features and Benefits :

- Single-cell batteries
- High-quake resistance mounted storage batteries with cover made of flame retardant plastic (UL 94-V0).
- Up to 20 years design life in float service at 25°C (77°F) through newly formulated Pb-Ca-Sn alloy grid with high corrosion resistance.
- MU series battery is in line with EUROBAT specifications for >12 YEARS VERY LONG LIFE.
- Batteries are housed in an iron frame, it can be combined up to the necessary capacity; No battery rack requirement. This can reduce installation space 40-50% and cut installation time in half.
- The MU series battery can be installed horizontally. With terminals lining up on the front side, it brings in spection and voltage readings easier and shortened inspection time.
- With new VRLA technology, there are no requirements on water adding, specific gravity measurements and equalization charge, which reduce the expenses of TCO (Total Cost of Ownership).
- The MU series battery is manufactured in accordance with JIS C 8704 and is qualified by the Battery Equipment Approval Committee of Japan for use in fire alarms, security systems and emergency lighting system.

Reliability :

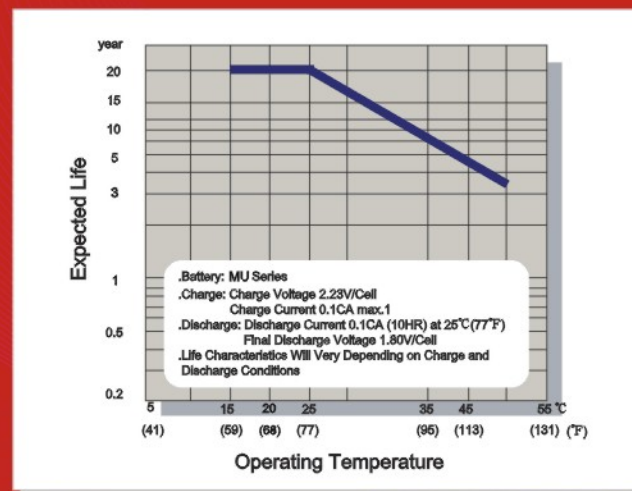
- Our batteries are 100% 2-cycle tested by computer charge and discharge System (CCDS).
- Our batteries are UL-recognized components under UL 1989. (File Number with MH 14533)
- ISO 9001/14001/18001 certified.

Specifications

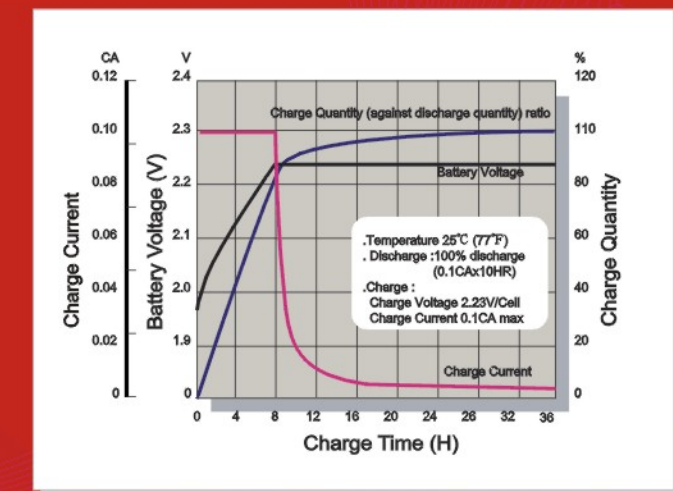
Battery Type	Nominal Voltage (V)	Nominal Capacity (Ah)*	Weight (Approx. Kg)	Internal Resistance (Approx. (mΩ))	Short Circuit Current (A)	Max. Discharge Current (5 sec (A))	Dimensions (mm)			Terminal Type	Bolt	Max. Charge Current (A)	Max. Screw Torque Value	
							Length(L)	Width (W)	Depth(D)				Kgf·cm/ lbf·in	N·m
MU1000S	2	1000	62.50	0.37	--	6000	303.0:3.0	172.0:3.0	497.0:3.0	I3	M10	300	612.631	60.0
MU1500S	2	1500	91.50	0.37	--	9000	437.0:3.0	172.0:3.0	497.0:3.0	I3	M10	450	612.631	60.0

*Nominal Capacity 10hr-rate to 1.80V per cell @25°C (77°F)
 • Float Charge: 2.23±0.02 V/Cell at 25°C (77°F) ; Temp. Coefficient: -3.3mV/°C

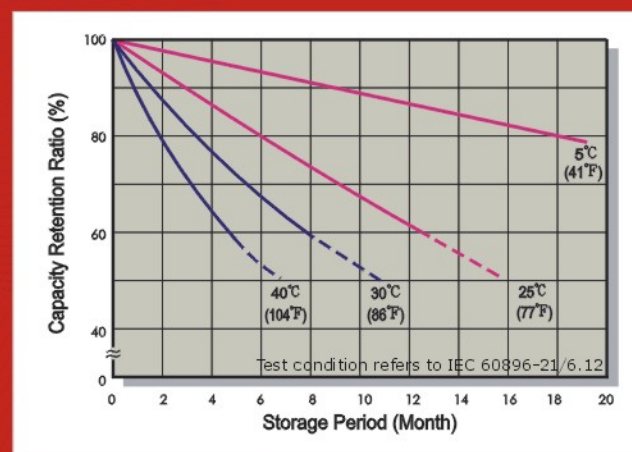
Expected Life vs. Operating Temperature



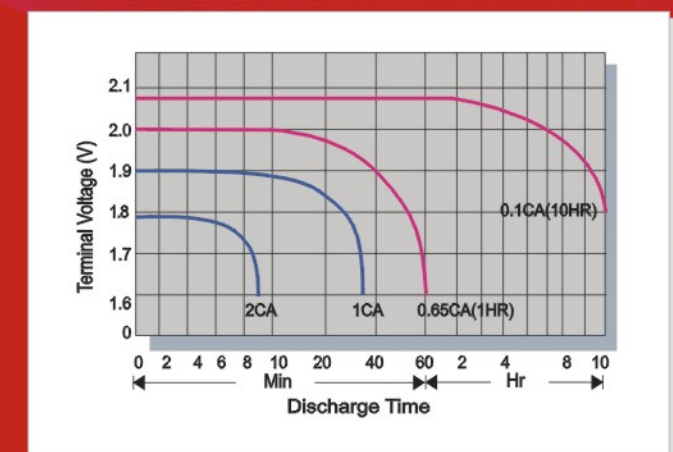
Typical Constant Voltage Charge Characteristics



Capacity Retention Characteristics

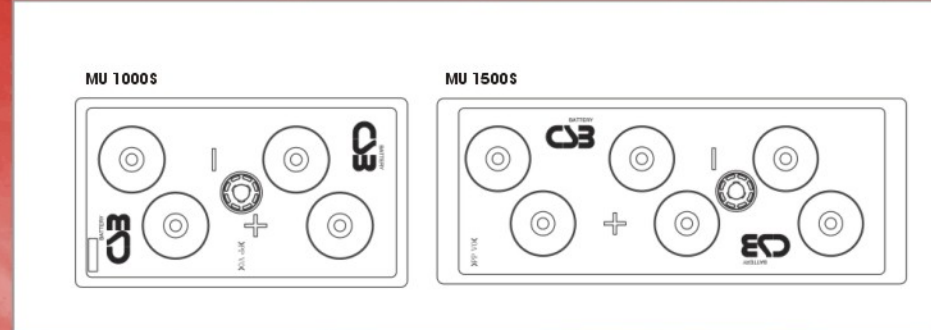


Discharge Characteristics

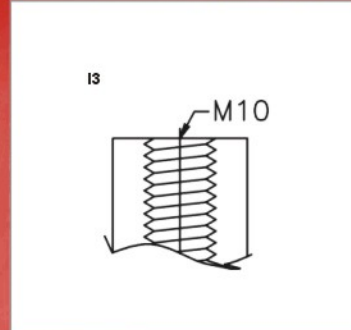


• The above diagrams are typical. For more detailed information, please see the specific product sheets.
 • C is the capacity of 10 hour-rate while the final voltage is 1.80V per cell.
 For example, 1C discharge current of MU1000 is: 1 x 1000 = 1000 (A)

Terminal Position



Terminal Type



MU1000S

Constant Current Discharge Characteristics Unit: A (25°C, 77°F)												
F.V/Time	30MIN	60MIN	90MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR	20HR	24HR
1.60V	1087	678	509	417	313	246	205	175	137	112	56.0	46.7
1.67V	1042	662	498	407	306	242	200	172	134	110	55.0	45.8
1.70V	983	637	483	394	295	235	194	167	130	106	53.0	44.2
1.75V	901	602	459	377	283	227	188	162	127	104	52.0	43.3
1.80V	807	553	427	355	267	216	179	155	122	100	50.0	41.7
1.83V	714	503	394	331	250	204	169	146	117	95.0	47.5	39.6

Constant Power Discharge Characteristics Unit: W (25°C, 77°F)												
F.V/Time	30MIN	60MIN	90MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR	20HR	24HR
1.60V	1707	1173	886	734	554	438	369	317	249	205	103	85.4
1.67V	1678	1152	872	724	548	436	364	315	247	204	102	85.0
1.70V	1642	1121	855	709	534	430	357	311	243	199	99.5	82.9
1.75V	1541	1066	817	682	515	418	348	303	239	197	98.5	82.1
1.80V	1420	990	769	650	491	402	335	291	231	190	95.0	79.2
1.83V	1307	920	725	619	470	388	323	279	225	183	91.5	76.3