



GP 12200

12V 20.0Ah

GP 12200 is a general purpose battery with 3-5 years in standby service or more than 260 cycles at 100% discharge in cycle service. As with all CSB batteries, all are rechargeable, highly efficient, leak proof and maintenance free.



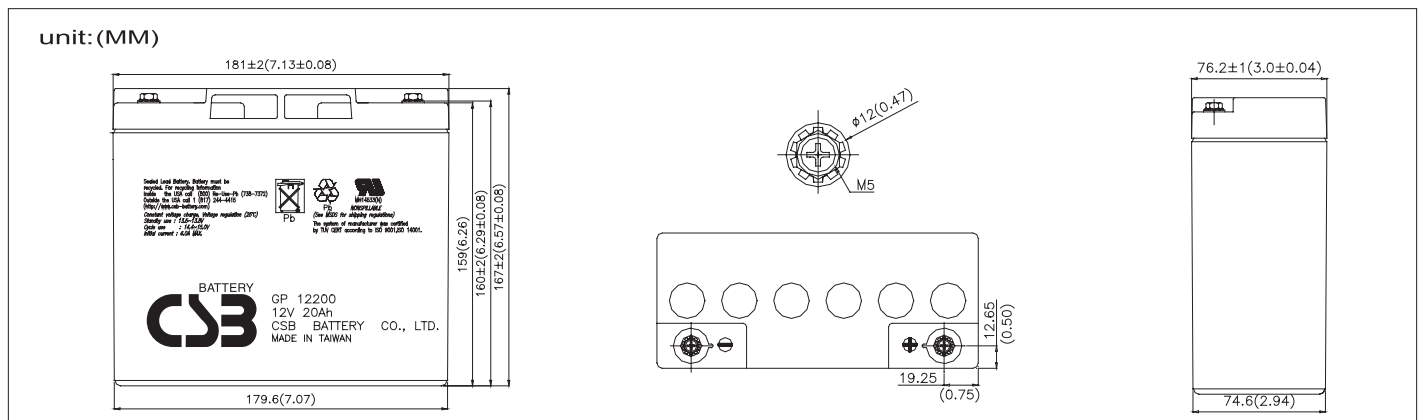
Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	20Ah @ 20hr-rate to 1.75V per cell @25 °C (77°F)
Weight	Approx. 6.5kg (14.4 lbs)
Maximum Discharge Current	230A (5sec)
Internal Resistance	Approx. 13mΩ
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	13.5 to 13.8 VDC/unit Average at 25°C (77°F)
Recommended Maximum Charging	6.0A
Current Limit	
Equalization and Cycle Service	14.4 to 15.0 VDC/unit Average at 25°C (77°F)
Self Discharge	CSB Batteries can be stored for more than 6 months at 25°C (77°F). Please charge batteries before using. For higher temperatures the time interval will be shorter.
Terminal	Thread Insert & Nut
Container Material	-ABS (UL94-HB)*Flammability resistance of UL94-V2 can be available upon request.



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)

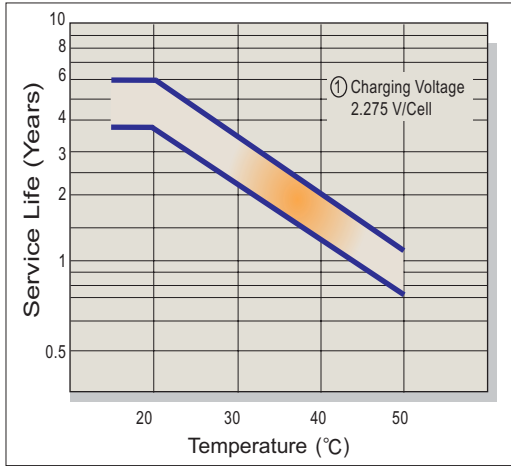
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	87.5	55.5	42.3	25.5	15.1	8.75	6.23	4.92	3.97	2.62	2.10	1.09
1.67V	77.7	51.8	40.1	25.1	15.0	8.69	6.22	4.91	3.94	2.61	2.08	1.05
1.70V	73.5	50.2	39.2	24.9	15.0	8.67	6.22	4.91	3.93	2.60	2.07	1.03
1.75V	66.4	47.0	37.1	24.3	14.8	8.55	6.17	4.87	3.92	2.59	2.04	1.00
1.80V	59.3	43.8	35.1	23.8	14.5	8.42	6.12	4.83	3.91	2.58	2.00	0.960
1.85V	52.2	40.5	33.0	23.2	14.3	8.30	6.07	4.79	3.90	2.57	1.97	0.925

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

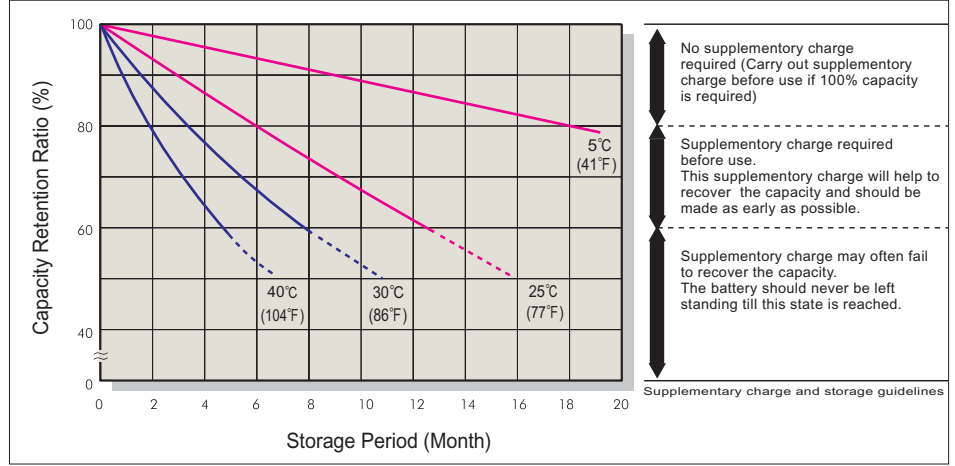
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	1050	666	507	306	181	105	74.7	59.0	47.6	31.4	25.2	13.1
1.67V	932	621	481	301	180	104	74.6	58.9	47.3	31.3	24.9	12.5
1.70V	882	602	470	299	180	104	74.6	58.9	47.2	31.2	24.8	12.3
1.75V	797	564	446	292	177	103	74.0	58.5	47.1	31.1	24.4	11.9
1.80V	712	525	421	285	174	101	73.4	58.0	46.9	31.0	24.0	11.5
1.85V	627	487	397	278	171	100	72.8	57.6	46.8	30.9	23.6	11.1

● All mentioned values are average values.

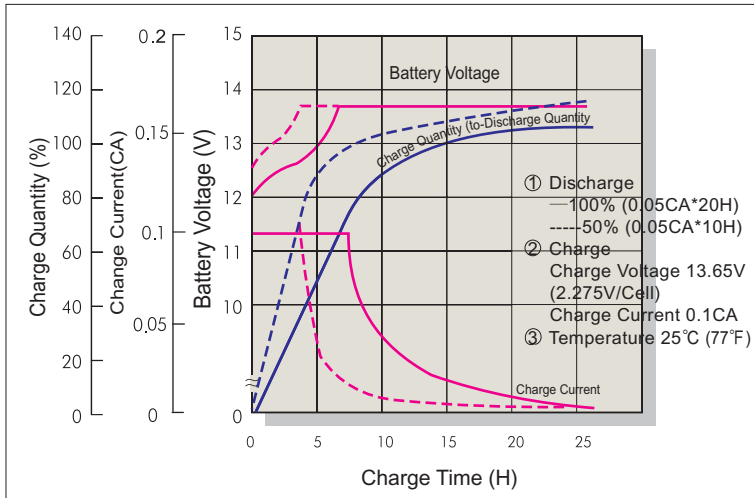
Trickle (or Float) Service Life



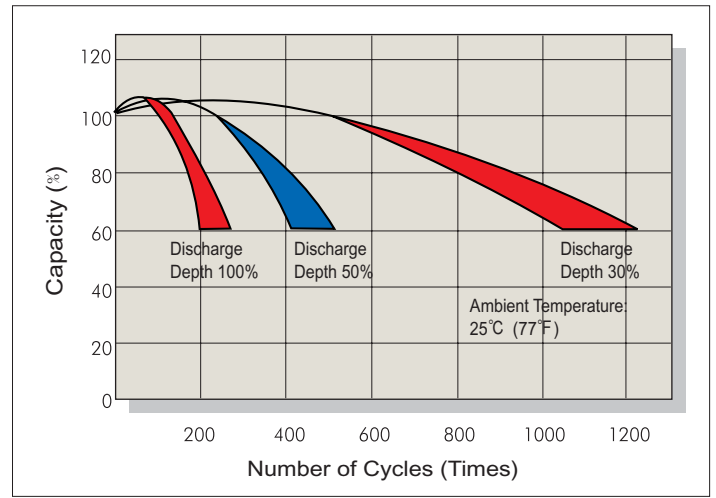
Capacity Retention Characteristic



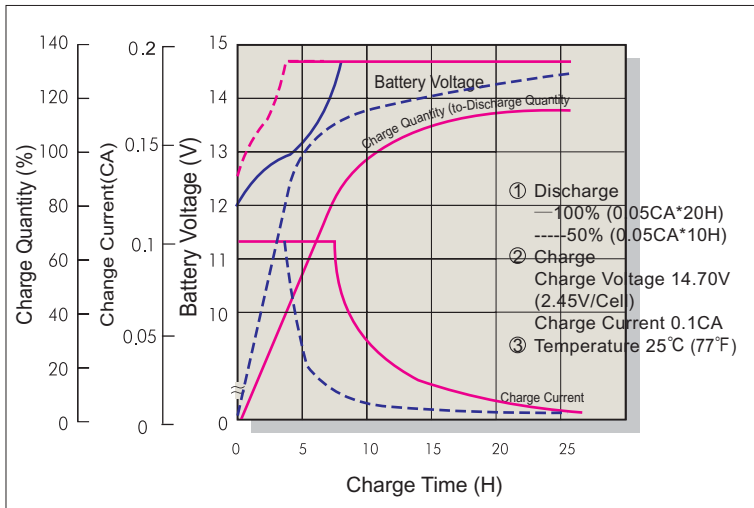
Battery Voltage and Charge Time for Standby Use



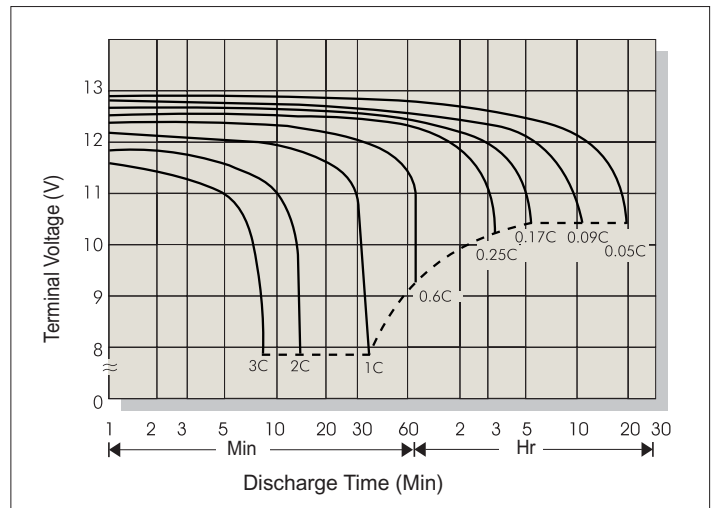
Cycle Service Life



Battery Voltage and Charge Time for Cycle Use



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	
Cycle Use	25°C (77°F)	2.45	2.40~2.50	0.3CA
Standby	25°C (77°F)	2.275	2.25~2.30	

Discharge Current VS. Discharge Voltage

Discharge Current (A)	0.2C > (A)	0.2C < (A) < 0.5C	0.5C < (A) < 1.0C	(A) > 1.0C
Final Discharge Voltage V/Cell	1.75	1.70	1.55	1.30